Final Report

VOLUME II - FIELD SURVEY FORMS

FEASIBILITY STUDY FOR HVAC UPGRADE
FORT RILEY, KANSAS

ENERGY ENGINEERING ANALYSIS PROGRAM (EEAP)

Prepared for

U.S. Army Corps of Engineers
Kansas City District
Kansas City, Missouri

Under

Contract No. DACA01-94-D-0033
Delivery Order 0005
EMC No. 1406-005

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August 1995

By

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DEPARTMENT OF THE ARMY
CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS
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Marie Wakefield,
Librarian Engineering

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0200 **BLDG NAME:** ADMIN GENERAL PURP

ELECTRIC METER: Y
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 60,690

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-1
AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU:
SERVES AREA: BASEMENT
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,270
CFM-CLG: 11,270
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-2
AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU:
SERVES AREA: NORTH WING 1ST FLR
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,660
CFM-CLG: 6,660
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-3 — AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU: — SERVES AREA: SOUTHWING 1ST FLR
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,910 — CFM-CLG: 5,910
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 2 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-4
AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU:
SERVES AREA: NORTHWING 2ND FLR
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,470
CFM-CLG: 8,470
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-5
AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU:
SERVES AREA: SOUTH WING 2ND FLR
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,480
CFM-CLG: 7,480
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
AHU NUMBER: HP-6
AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU:
SERVES AREA: AUDITORIUM
% OF BLDG AREA HEATED: 27

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 8,000
MIN %OA: 13
MAX %OA: 13

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 4
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
BOILER RM LOCATION: MER BASEMENT

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) [X] BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

[ ] CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE
UNIT MODEL: M-205-KX
BLR CAP OUTPUT (BTUH): 2,050,000
BLR CAP INPUT (BTUH): 2,562,500
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: [Y]
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 50
PUMP MFG: MARATHON
PUMP SERVICE: CONDENSOR WATER PUMP
PUMP MODEL: TJ324TSTDR7001DNW

EMC ENGINEERS, INC.

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EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0200
BOILER RM LOCATION: MER BASEMENT

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE
UNIT MODEL: M-205-KX
BLR CAP OUTPUT (BTUH): 2,050,000
BLR CAP INPUT (BTUH): 2,562,500
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 50
PUMP MFG: MARATHON ELECTRIC
PUMP SERVICE: CONDENSOR WATER PUMP
PUMP MODEL: TJ324TSTDR7001DNW

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0200
BLDG NAME: ADMIN GENERAL PURP

REF. UNIT NUMBER/TAG: CT-1
LOCATION (MER#): EAST OF BLDG.
AHU'S SERVED: ALL HEAT PUMPS

UNIT TYPE: COOLING TOWER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	AIRCOIL COMPANY
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	480
CHILLER V:	0	TOWER FAN AMPS:	3
CHILLER AMPS:	0	TOWER FAN HP:	30
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	US ELECTRIC
PUMP SERVICE:	COOLING TOWER PUMP			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0200 BLDG NAME: ADMIN GENERAL PURP

REF. UNIT NUMBER/TAG: CT-2 LOCATION (MER#): NORTH OF BLDG

AHU'S SERVED: ALL HEAT PUMPS

UNIT TYPE COOLING TOWER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	EVAPCO
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	480
CHILLER V:	0	TOWER FAN AMPS:	3
CHILLER AMPS:	0	TOWER FAN HP:	20
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	CENTURY
PUMP SERVICE:	COND WATER PUMP (CNW)			PUMP MODEL:	8-135802-21

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 200.XLS

BLDG: **200**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	AUDITORIUM STAGE (L) WING				
AHU TYPE:	HEAT PUMP	MFG.:	CLIMATEMASTER		MODEL:	V120-32UASBTCOA	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 200.XLS

BLDG: **200**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CT-1	LOCATION (RM)	EAST OF BUILDING		
REFG. EQUIP. TYPE:	CT	MFG.:	BALTIMORE AIR COIL	MODEL:	VXI1803MR

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: CONDENSER WATER PUMP - OK

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 200.XLS

BLDG: **200**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CT-2	LOCATION (RM)	NORTH OF BUILDING		
REFG. EQUIP. TYPE:	CT	MFG.:	EVAPCO	MODEL:	LSW-43C2

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: CONDENSER WATER PUMP - OK

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 200.XLS

BLDG: **200**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1,2	LOCATION (RM)	MER		
BOILER TYPE:	STEAM	MFG.:	KEWANEE	MODEL:	M-205-KX
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: BOTH BOILERS THE SAME. #2 BOILER IS RUSTED NEAR TOP AND DOWN ONE SIDE.

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 200' @ 2"

COMMENTS: ON CR LINES & 25' @ 2-1/2". STEAM VALVE ABOVE BOILER #2 LEAKING ONTO BOILER CAUSING RUSTING.

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/DEJ

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0222 **BLDG NAME:** ADMIN GEN PURP

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 18,854

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 56

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

REMARKS:

Commissary Administration - North part of building on 1st and 2nd floor. Building contact: Thelma Thompson at Ext 3627. Mobilization Operations - Center part of building. Liquor Store - North central part of building. Cold storage - South part of building. Suspect ACM in MER on HW piping

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/6/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/DEJ

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0222
AHU NUMBER: AHU-1 — AHU LOCATION: ATTIC
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: LIQUOR STORE/OPERATIONS
% OF BLDG AREA HEATED: 60

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,800 — CFM-CLG: 9,800
MIN %OA: 10 — MAX %OA: 100

NAMEPLATE

UNIT MFG: AMERICAN BLOWER — UNIT MODEL: 2A18
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: M3218T — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 56 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 72 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 68 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: HW 2-way valve located in MER

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN/DEJ

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0222
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: BURNHAM
UNIT MODEL: FD/10
BLR CAP OUTPUT (BTUH): 350,000
BLR CAP INPUT (BTUH): 434,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 56
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 165 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.08
PUMP MFG: B & G
PUMP SERVICE: HW PUMP
PUMP MODEL: UQN48517D1088M

HW PUMP

PUMP TAG: 2
PUMP HP: 0.13
PUMP MFG: GE
PUMP SERVICE: HW PUMP
PUMP MODEL: 5KH32E6129AX

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/DEJ

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	3	PUMP HP:	0.08	PUMP MFG:	TACO
PUMP SERVICE:	HW PUMP			PUMP MODEL:	120

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/DEJ

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0222	BLDG NAME:	ADMIN GEN PURP
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	ADMIN OFFICES
SOURCE OF HEATING:	BLR-1	SERVES AREA:	1ST 2ND FLOOR NORTH
RADIATION UNIT TYPE:	HW	% AREA HTG:	17

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.08	PUMP MFG:	BELL AND GOSSETT
				PUMP MODEL:	UQN48517D1088M

SCHEDULE

DAYS SCHEDULE NO:	56	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC		
RADIATION CONTROL:	NONE		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:	3-way pneumatic control valve in MER		

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/DEJ

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0222 BLDG NAME: ADMIN GEN PURP

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): SOUTH OF BLDG

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	30A0C055	# OF TOWER FANS:	4
CHILLER SERIAL NO:	5-93-A26983	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	84	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	30		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 56 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	7	7	7	7	7	10
REQ STOP:	17	17	20	20	20	20	19

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	ZVC182TTDR8026DJ

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 222.XLS

BLDG: **222**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	AMERICAN BLOWER		MODEL:	2A18	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	DAMPERS WIRED & DISCONNECTED FROM ATTENUATOR						DPR-ACT = Damper Actuator
	1 ACTUATOR FOR O.A. & R.A.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 222.XLS

BLDG: **222**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	SOUTH OF BUILDING		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	30AOCD55

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: TYPICAL OF 4
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: NEW PUMP

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 222.XLS

BLDG: **222**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	FD/10
CONVERTER TYPE:	N/A	MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:

COMMENTS: LOOKS GOOD, RUST ON RETURN PIPES, NEW BURNER

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 10' @ 4"

COMMENTS: INSULATION VER OLD ON ALL MER PIPING

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: WIRES EXPOSED ON MOTORS

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN/DEJ

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0302 BLDG NAME: FINANCE ADMIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 16,138

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

Bldg. Contact: Joyce Murrell @ Ext. 6452

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN/DEJ

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0302
AHU NUMBER: AHU-1
AHU LOCATION: mer
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 83

AHU UNIT TYPE: VAV
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,000
CFM-CLG: 12,000
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CCDB17F90G
SUPPLY FAN HP: 15
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	HOT WATER	☒
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 68
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/6/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/DEJ

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0302
AHU NUMBER: AHU-2 — AHU LOCATION: NE CORNER OF BLDG
REFRIG SYS # SRVNG AHU: ACCU-1 — SERVES AREA: OFFICE/STORAGE
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 450 — CFM-CLG: 450
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.33 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	ELECTRIC	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 1 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 72 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/6/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/DEJ

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0302
AHU NUMBER: UH-1-4 — AHU LOCATION: ATTIC STORAGE AREA
REFRIG SYS # SRVNG AHU: N/A — SERVES AREA: ATTIC STORAG/SUPPLY AREA
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 2,520 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: MCQUAY — UNIT MODEL: UDH-040B
SUPPLY FAN HP: 0.33 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 1 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 72 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN/DEJ

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0302
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX
UNIT MODEL: V554744
BLR CAP OUTPUT (BTUH): 600,000
BLR CAP INPUT (BTUH): 750,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: Y
OPERATING SETPOINT: 150 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: B & G
PUMP SERVICE: HW PUMP (STAND BY)
PUMP MODEL: M98558

HW PUMP

PUMP TAG: 2
PUMP HP: 1.5
PUMP MFG: B & G
PUMP SERVICE: HW PUMP (STANDBY)
PUMP MODEL: M98558

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/DEJ

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0302 BLDG NAME: FINANCE ADMIN

REF. UNIT NUMBER/TAG: ACCU-1 LOCATION (MER#): EXTERIOR OF BLDG.

AHU'S SERVED: AHU-2

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	LIEBERT	TOWER MFG:	
CHILLER MODEL:	3024968	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.25
CHILLER PH:	0		
CHILLER CAP (TONS):	3		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN/DEJ

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0302
BLDG NAME: FINANCE ADMIN

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): S. EXTERIOR OF BLDG.
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	TRANE
CHILLER MODEL:	RAUBC265BE00B	# OF TOWER FANS:	3
CHILLER SERIAL NO:	J87C80764	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	4.1
CHILLER AMPS:	91.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **302**
FILE: 302.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:		MFG.:	TRANE		MODEL:	CLIMATE CHANGER	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS: *		COMMENTS:	FAN BEARING IS NOISY (PULLEYSIDE)		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 302.XLS

BLDG: **302**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	RAUBC256BE00B

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: 140

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: DIRTY FINS ON CONDENSER

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 302.XLS

BLDG: **302**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	ACCU-1	LOCATION (RM)	OUTSIDE	
REFG. EQUIP. TYPE:		MFG.:	LIEBERT CORP.	MODEL: 302-1968

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: SERVES CRU WHICH US INACCESSIBLE. IT LOOKS GOOD. AREA SERVED IS APPROX. 25' X 14'.

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 302.XLS

BLDG: **302**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WG-750-D
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK:	REPLACE:

COMMENTS: GASKET LEAKY ON FRONT PLATE
ELECTRIC METER
NO GAS METER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0313 **BLDG NAME:** CIV PERS BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 6,222

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

BLDG. CONTACT: KAREN WEBB @ EXT. 2535

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/6/94
PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0313
AHU NUMBER: AHU-1
AHU LOCATION: BASEMENT
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 4,500
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: MODINE
UNIT MODEL: DJ3005
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: DUCT FURNANCE: INPUT =300,000 BTUH; OUTPUT: 240,000 BTUH

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SETBACK
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 74
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 74
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/6/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0313 BLDG NAME: CIV PERS BLDG

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): S. EXT. OF BLDG

AHU'S SERVED: AHU-1

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	BRYANT	TOWER MFG:	
CHILLER MODEL:	566CPX135000AAAA	# OF TOWER FANS:	2
CHILLER SERIAL NO:	4382G9855	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	3.6
CHILLER AMPS:	46	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	13.5		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 313.XLS

BLDG: **313**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	BASEMENT				
AHU TYPE: RES. TYPE FURNACE		MFG.:	MODINE		MODEL:	DJ300SF	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System			3,000,000 BTU/HR INPUT		
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	20% OUTSIDE AIR WITH NO CONTROL						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	FURNACE RUNNING						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 313.XLS

BLDG: **313**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE BLDG.		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	BRYANT	MODEL:	4382G9755

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE: X	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: FINS ARE SEVERELY DAMAGED

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0500
BLDG NAME: POST HQ BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 65,453

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-1
AHU LOCATION: BSMT SOUTH
REFRIG SYS # SRVNG AHU:
SERVES AREA: BSMT SOUTH
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,960
CFM-CLG: 6,960
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-2
AHU LOCATION: BSMT NORHT

REFRIG SYS # SRVNG AHU:
SERVES AREA: BSMNT NORTH
% OF BLDG AREA HEATED: 17

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,300
CFM-CLG: 8,300
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-3
AHU LOCATION: 1ST FLR SOUTH
REFRIG SYS # SRVNG AHU:
SERVES AREA: 1ST FLR SOUTH
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,440
CFM-CLG: 8,440
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-4
AHU LOCATION: 1ST FLR NORTH
REFRIG SYS # SRVNG AHU:
SERVES AREA: 1ST FLR NORTH
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,760
CFM-CLG: 13,760
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-5 — AHU LOCATION: 2ND FLR
REFRIG SYS # SRVNG AHU: — SERVES AREA: 2ND FLR
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: HEAT PUMP — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,480 — CFM-CLG: 15,480
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
AHU NUMBER: HP-6
AHU LOCATION: 3RD FLR
REFRIG SYS # SRVNG AHU:
SERVES AREA: 3RD FLR
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE: HEAT PUMP
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,750
CFM-CLG: 9,750
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0500
BOILER RM LOCATION: MER BASEMENT

BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: LOW PRESS STEAM (<15#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX
UNIT MODEL: SGXFD-4250
BLR CAP OUTPUT (BTUH): 3,400,000
BLR CAP INPUT (BTUH): 4,250,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 40
PUMP MFG: BALDOR
PUMP SERVICE: CONDENSER WATER PUMP
PUMP MODEL: M2539T

HW PUMP

PUMP TAG: 2
PUMP HP: 40
PUMP MFG: BALDOR
PUMP SERVICE: CONDENSER WATER PUMP
PUMP MODEL: M2539T

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0500
BLDG NAME: POST HQ BLDG

REF. UNIT NUMBER/TAG: CT-2
LOCATION (MER#): MER
AHU'S SERVED: ALL HEAT PUMPS

UNIT TYPE: OTHER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	BALTIMORE
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	30
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	GE
PUMP SERVICE:	COOLING TOWER			PUMP MODEL:	5K182JX27A

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0500
BLDG NAME: POST HQ BLDG

REF. UNIT NUMBER/TAG: CT-1
LOCATION (MER#):
AHU'S SERVED: ALL HEAT PUMPS

UNIT TYPE OTHER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	BALTIMORE
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	30
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	GE
PUMP SERVICE:	COOLING TOWER			PUMP MODEL:	5K182JX27A

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 500.XLS

BLDG: **500**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	HP-1	LOCATION (Rm)	Throughout building
AHU TYPE:	Heat Pum	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 500.XLS

BLDG: **500**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CT-1	LOCATION (RM)	OUTSIDE
REFG. EQUIP. TYPE:	CT	MFG.:	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X		REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: DX UNIT

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 500.XLS

BLDG: **500**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER BASEMENT	
BOILER TYPE:	STM	MFG.:		MODEL:
CONVERTER TYPE:		MFG.:		MODEL:
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTO	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0509 **BLDG NAME:** ADM GEN PURPOSE

ELECTRIC METER: Y
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 10,108

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0509
AHU NUMBER: HP-1 — AHU LOCATION: ZONE PERIMETER
REFRIG SYS # SRVNG AHU: — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: HEAT PUMP — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,440 — CFM-CLG: 8,440
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 509.XLS

BLDG: **509**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	HP-1	LOCATION (Rm)	BASEMENT
AHU TYPE:	HEAT PUMP	MFG.: FHP MFG. DIVISION OF HARROW	MODEL: HE012-1HZN

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: WATER SOURCE HEAT PUMP. WATER SOURCE IS FROM BLDG.
500. COOLING TOWERS NEXT TO BLDG. ARE IN GOOD CONDITION.
HEAT PUMP IS TYPICAL THROUGHOUT BLDG.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/14/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 5000 **BLDG NAME:** FIRE STATION

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 8,400

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Two gas-fired infrared heaters in bay, reverber ray 24" x 24"

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/14/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 5000
AHU NUMBER: AHU-1 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: COMMUNICATIONS/QUARTER
% OF BLDG AREA HEATED: 60

AHU UNIT TYPE: MULTI ZONE — NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 4,155 — CFM-CLG: 4,155
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: VMZ32D
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 120
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 5000
AHU NUMBER: AHU-2
AHU LOCATION: ABOVE CEILING
REFRIG SYS # SRVNG AHU:
SERVES AREA: VEHICLE MAINT. BAY
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,840
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 70
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 5000
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX
UNIT MODEL: WG-750
BLR CAP OUTPUT (BTUH): 600,000
BLR CAP INPUT (BTUH): 750,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 170 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 5000
BLDG NAME: FIRE STATION

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CS10	# OF TOWER FANS:	1
CHILLER SERIAL NO:	9084-2	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	42.8	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 5000.XLS

BLDG: **5000**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:	MZ-5	MFG.:	DUNHAM-BUSH		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 5000.XLS

BLDG: **5000**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1	LOCATION (Rm)	ABOVE CEILING (SERVES BAYS)
AHU TYPE:	H&V	MFG.:	MODEL:
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)	
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System	
DD - Dual Duct	UH - Unit Heater	IND - Induction System	

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 5000.XLS

BLDG: **5000**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	IR-1&2	LOCATION (Rm)					
AHU TYPE: INFRARED HEATER		MFG.:	RE-VERBER-RAY		MODEL:	DR 100 NSPI-8-25V	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TYPICAL OF 2						DPR-ACT = Damper Actuator
	NATURAL GAS FIRED; OPERABLE						RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
SUPPLY FAN MOTOR	OK:	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 5000.XLS

BLDG: **5000**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	502CS10

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 5000.XLS

BLDG: **5000**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WG-750
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK: X	REPLACE:

COMMENTS: BOILER LOOKS OLD. CHEMICAL PILES FROM PAST LEAKS ON SAFETY RELIEF VALVE.

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: .08 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/09/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7178 **BLDG NAME:** MOTOR POOL ADMIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 2,480

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 7

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 11/09/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7178
AHU NUMBER: UH-1 — AHU LOCATION: CEILING MOUNTED
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICES/SHOP
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: GAS FIRED UH — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 600 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: DAYTON FUEL TRIMMER — UNIT MODEL: 3E368A
SUPPLY FAN HP: 0.08 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: BTUH INPUT: 75,000; BTU OUTPUT: 60750

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 7 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/09/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7178
AHU NUMBER: UH-2
AHU LOCATION: CEILING MOUNTED
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICES/SHOP
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: GAS FIRED UH
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 600
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: EM
UNIT MODEL: UH-1100-1-FSP
SUPPLY FAN HP: 0.08
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 7
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 74
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7178.XLS

BLDG: **7178**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-1	LOCATION (Rm)	ONE ROOM BUILDING - IN SPACE				
AHU TYPE:	GAS FIRED UH	MFG.:	DAYTON FUEL-TRIMMER		MODEL:	3E368A	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	BURNER IN GOOD CONDITION						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **7178**
FILE: 7178.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-2	LOCATION (Rm)	ONE ROOM BLDG. - IN SPACE				
AHU TYPE:	GAS FIRED UH	MFG.:	EM		MODEL:	UH-1100-1 FSP	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuato:
							RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
COMMENTS:	BURNER IN GOOD CONDITION							RP-ACT = Replace Actuator
								RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:				
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:				
COMMENTS:								
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:				
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:				
COMMENTS:								

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7178.XLS

BLDG: **7178**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	WAC-3,4,5	LOCATION (Rm)	SOUTH WALL				
AHU TYPE:	WINDOW AC UNIT	MFG.:	FEDDER		MODEL:	N/A	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: TYPICAL OF 3. APPEAR TO BE IN POOR CONDITION

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/93
PREPARED BY: AJN./CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7636
BLDG NAME: REGIMENTAL HQ BLDG

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 9,850

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 9

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Suspect ACM located on pipe fittings

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/93
PREPARED BY: AJN./CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7636
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: 1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 825
CFM-CLG: 825
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: HAH-12-C
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GE
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/93
PREPARED BY: AJN./CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7636
AHU NUMBER: FC-1
AHU LOCATION:
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 80

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,600
CFM-CLG: 8,600
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: CR-4-FC-4-1
SUPPLY FAN HP: 1.7
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/93
PREPARED BY: AJN./CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7636
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 10

BOILER MFG: AJAX
UNIT MODEL: WG-450
BLR CAP OUTPUT (BTUH): 360,000
BLR CAP INPUT (BTUH): 450,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 135 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: B&G
PUMP SERVICE: HW PUMP
PUMP MODEL: M80027K48

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/93
PREPARED BY: AJN./CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7636
BLDG NAME: REGIMENTAL HQ BLDG
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: MER
SOURCE OF HEATING: BLR-1
SERVES AREA: STAIRWAY, HALLWAYS
RADIATION UNIT TYPE: HW
% AREA HTG: 10

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: BELL & GOSSETT
PUMP MODEL: M80027K48

SCHEDULE

DAYS SCHEDULE NO: 4
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/93
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN./CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7636 BLDG NAME: REGIMENTAL HQ BLDG

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED: FC-1, AHU-1

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	30A0CD30	# OF TOWER FANS:	4
CHILLER SERIAL NO:	5-88-13126	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	53	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	29.8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	6333484-01

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7636.XLS

BLDG: **7636**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)					
AHU TYPE:	SZ	MFG.:	DUNHAM-BUSH		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7636.XLS

BLDG: **7636**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	50 2C520

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: COMPRESSOR AND CONDENSER OUTSIDE;
DUAL TEMP. SYSTEM

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: MISSING INSULATION ON PUMP. PIPE FAIRLY RUSTED AT PUMP.

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7636.XLS

BLDG: **7636**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WG-450
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: 3-WAY VALVE ABOVE. SMALL PUMP LEAKING AND ACTUATOR CORRODED.

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3/4 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8056 **BLDG NAME:** DET DAY ROOM

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 2,100

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 6

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8056
AHU NUMBER: AHU-1 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,770 — CFM-CLG: 2,770
MIN %OA: 10 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE — UNIT MODEL: L-6-SR-76E00435
SUPPLY FAN HP: 1.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 2N934K — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 6 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	8
REQ STOP:	0	21	21	21	21	21	11

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8056.XLS

BLDG: **8056**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	L-6	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.						
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	RA & OA INTERLOCKED. WHITE RUST ON GALVANIZED DUCTWORK. RUST ON AHU-CASING						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:	NEW PUMP						
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	ALL INSULATION NEEDS REPLACING, 1-1/2" @ 65'. NOTE: CONDENSATE PUMP DOES NOT WORK. CONDENSATE DRAINING ONTO ELECTRIC MOTOR. NEW STEAM PRV.						

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7243 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 17,829

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Suspect ACM on pipe fittings for chilled water; HW piping has fiberglass insulation. At least one person in each of 6 Admin Support areas 24hr a day. 15 Friedrich AC units "Power Miser". In original building each stroage area has one exhaust fan for ventilation. Perimeter radiation througout original building. Addtional building: storage area has large FC ~ 1/2 HP Htg. only , no control VLV, fan control only.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7243
AHU NUMBER: EF-1 — AHU LOCATION: SUPPORT AREA
REFRIG SYS # SRVNG AHU: N/A — SERVES AREA: SUPORT AREA
% OF BLDG AREA HEATED:

AHU UNIT TYPE: EXH. FAN — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 14,975
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 3 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: Supply Fan HP represents 5 Exhaust Fans, one for each area.

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Exhaust fans have gravity dampers

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7243
AHU NUMBER: FC-1 — AHU LOCATION: ABOVE CEILING
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: ADDITION ADMIN AREA
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,800 — CFM-CLG: 1,800
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: Total for 4 FC Units; Dual Temp.

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: 3-way control valves in MER
CONTROLS COMMENTS: Manual Occupied/ Unoccupied Switch

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7243
AHU NUMBER: H&V-1 — AHU LOCATION: SUPPORT AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPORT AREA ADDITION
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.33 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7243
AHU NUMBER: UH-1
AHU LOCATION: ADDITION STORAGE ROOM

REFRIG SYS # SRVNG AHU:
SERVES AREA: STORAGE ROOM
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 220
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.04
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7243 BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: 4FW-127-50-16
BLR CAP OUTPUT (BTUH): 850,000
BLR CAP INPUT (BTUH): 1,063,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2 MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC RESET CONTROLS: Y
OPERATING SETPOINT: 105 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1 PUMP HP: 0.5 PUMP MFG: ARMSTRONG
PUMP SERVICE: HW PUMP PUMP MODEL: 1QA56B17D77H

HW PUMP

PUMP TAG: 2 PUMP HP: 0.5 PUMP MFG: ARMSTRON
PUMP SERVICE: HW PUMP PUMP MODEL: 1QA56B17D77H

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7243
BLDG NAME: ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: PERIMETER BLDG
SOURCE OF HEATING: BLR-1
SERVES AREA: ORIG BLDG
RADIATION UNIT TYPE: HW
% AREA HTG: 78

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: BELL & GOSSETT
PUMP MODEL:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: ELECTRIC CONTROL ON PUMPS

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7243 BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER

AHU'S SERVED: FC-1

UNIT TYPE CENTRAL PLANT

NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	ARMSTRONG
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	1QA56B17D77H

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7243.XLS

BLDG: **7243**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	WAC-1	LOCATION (Rm)	ADMIN. OFFICES - WINDOW OPENINGS				
AHU TYPE:	WINDOW AC UNIT	MFG.:	FRIEDRICH		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TYPICAL OF 15 AC UNITS; 3 WAC'S PER ADMIN/SUPPORT UNIT.						DPR-ACT = Damper Actuator
	WAC'S ARE FAIR TO POOR CONDITION.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7243.XLS

BLDG: **7243**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ABOVE CEILING PANEL IN ADDITION
AHU TYPE:	FC 2P	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: THESE ARE IN NEW ADDITION ONLY. WINDOW AC UNITS IN 5 COMPANY AREAS.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: DIRTY FILTERS

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: DUAL TEMP. CONTROL

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7243.XLS

BLDG: **7243**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	EF-1	LOCATION (Rm)	SUPPORT AREA
AHU TYPE:	EXH. FAN	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: GRAVITY DAMPERS - OK

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7243.XLS

BLDG: **7243**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CWP-1	LOCATION (RM)	MER	
REFG. EQUIP. TYPE:		MFG.:	ARMSTRONG	MODEL: 1QA56B17D77H

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7243.XLS

BLDG: **7243**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	4FW-127-50-LB
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER LOOKS GOOD. DUAL TEMP. SYSTEM. ELECTRIC CONTROLS

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 25' @ 1-1/2"

COMMENTS: CORROSION ON PIPE

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: SEALS HAVE BEEN BAD IN THE PAST. PUMPS UN-INSULATED. SOME CORROSION ON PIPES CONNECTED TO PUMPS

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7432
BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 13,500

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 3

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: FC-1 — AHU LOCATION: ABOVE CEILING
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: ADMIN AREA
% OF BLDG AREA HEATED: 35

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,000 — CFM-CLG: 12,000
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: TRANE — UNIT MODEL: UNITRANE
SUPPLY FAN HP: 2 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: Total of 20 FCs in Admin. Area

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 3 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	17	17	17	17	17	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: DUAL SETPOINT
PRESENT TEMP WINTR OCC: 68 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 73 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: Y
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: HV-1
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA 1
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: HV-2
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA 2
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: HV-3
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA 3
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: HV-4 — AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY AREA 4
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
AHU NUMBER: HV-5 — AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY AREA 5
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7432
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: 4FW-107-40-1B
BLR CAP OUTPUT (BTUH): 895,000
BLR CAP INPUT (BTUH): 1,119,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 160 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 5
PUMP MFG: BALDOR
PUMP SERVICE: HW PUMP
PUMP MODEL: M3613T

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7432
BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: FC-1

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	CGABC206AF013	# OF TOWER FANS:	2
CHILLER SERIAL NO:	J87A80095	TOWER FAN V:	0
CHILLER V:	200	TOWER FAN AMPS:	0
CHILLER AMPS:	98	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	20		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	ARMSTRONG
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7432.XLS

BLDG: **7432**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1	LOCATION (Rm)	SUPPLY AREA
AHU TYPE:	H&V	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: OA & RA INTERLINKED; TYPICAL OF 5

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: X	RP-BD: X
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: LEAKING 3-WAY VALVE

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7432.XLS

BLDG: **7432**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ABOVE CEILING				
AHU TYPE:	FC 2P	MFG.:	TRANE UNITRANE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TYPICAL OF 20						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	CONTROL VALVE MODULATES WHEN T-STAT CALLES FOR HEATING						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7432.XLS

BLDG: **7432**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	COMPRESSOR/CONDENSOR UNIT OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	CGABC206AF013

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 200 VOLTS 72.2 RLA
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 200 VOLTS 4.1 RLA
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: PIPE NEEDLES ALL OVER TOP OF UNIT AND IN FANS.
UNIT PRODUCES CHILLED WATER.

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE: X	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: CHILLED WATER PUMP LOOKS RUSTED. IT HAS HAD BAD SEALS IN THE PAST.
BACK FLOW PREVENTER FOR MAKE-UP WATER IS LEAKING ON TO THE FLOOR.

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7432.XLS

BLDG: **7432**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	4FW-107-40-LB
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: MUCH CORROSION ON PIPES AT CONNECTIONS TO PUMP MOTOR AND PUMP NOT BOLTED TO PAD.

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 25' @2"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: HOT WATER PIPE LEAKING AT ELBOW ABOVE LIGHT FIXTURE.

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7602 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,520

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Locations of Suspect ACM: Pipe fittings, boiler

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
AHU NUMBER: AHU-1 — AHU LOCATION: STORAGE AREA
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: OFFICE AREA 1
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: GC1921146 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
AHU NUMBER: AHU-2
AHU LOCATION: STORAGE AREA
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: OFFICE AREA 2
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: GC1921146
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
AHU NUMBER: AHU-3 — AHU LOCATION: STORAGE AREA
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: OFFICE AREA 3
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: GC1921146 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
AHU NUMBER: AHU-4
AHU LOCATION: STORAGE AREA
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: OFFICE AREA 4
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: GC1021146
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
AHU NUMBER: AHU-5 — AHU LOCATION: STORAGE AREA
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: OFFICE AREA 5
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: GC1921146 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7602
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE
UNIT MODEL: 40-5-201

BLR CAP OUTPUT (BTUH): 800,000
BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7602	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERIMETER OF BLDG.
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	CENTURY
				PUMP MODEL:	SC-18262-KCA-6

SCHEDULE

DAYS SCHEDULE NO:	2	MONTHS SCHEDULE NO:	1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:			
RADIATION CONTROL:	NONE		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:	3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER		

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7602
BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1, 2, 3, 4, & 5

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	LARKIN
CHILLER MODEL:	SC2C515	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-1	TOWER FAN V:	208
CHILLER V:	230	TOWER FAN AMPS:	9.2
CHILLER AMPS:	62	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	15		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	SC-182-KMA

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7602.XLS

BLDG: **7602**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	SUPPLY
AHU TYPE:	SZ	MFG.: -	MODEL: -

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: TYPICAL OF 5

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7602.XLS

BLDG: **7602**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2C515

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 15'-2"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: NEW SEAL 10-14-93

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7602.XLS

BLDG: **7602**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	ACCU-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	ACCU	MFG.:	LARKIN	MODEL:	FCA16

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7602.XLS

BLDG: **7602**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	OSAGE	MODEL:	40-5-201
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK: X	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK: X	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: ASBESTOS ON FLUE & ELBOWS

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE: 3/4 HP CENTURY
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: PUMP UNINSULATED

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7608 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,520

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Suspect ACM is located on pipe fittings and boiler.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/11/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
AHU NUMBER: AHU-1
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 1
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL ELECT
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K42HG2571
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
AHU NUMBER: AHU-2
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 2
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL ELECT
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K42HG2571
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
AHU NUMBER: AHU-3 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA 3
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL ELECT — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K42HG2571 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 4 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
AHU NUMBER: AHU-4
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 4
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL ELECT
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K42HG2571
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
AHU NUMBER: AHU-5 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA 5
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL ELECT — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K42HG2571 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 4 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7608
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: PERIMETER RADIATION

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE
UNIT MODEL: 40-5-201
BLR CAP OUTPUT (BTUH): 800,000
BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 4
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7608
BLDG NAME: ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: PERIMETER OF BLDG
SOURCE OF HEATING: BLR-1
SERVES AREA: ALL
RADIATION UNIT TYPE: HW
% AREA HTG: 100

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: RELIANCE
PUMP MODEL: Y214669A5

SCHEDULE

DAYS SCHEDULE NO: 4
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7608
BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1, 2, 3, 4, & 5

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	LARKIN
CHILLER MODEL:	SC2CS15	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	9.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	15		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 4
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	SC-182-KMA

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7608.XLS

BLDG: **7608**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	STORAGE AREA
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: PERIMETER RADIATION IN STORAGE AREA AND OFFICE AREA.
5 AHU'S SERVE OFFICE AREAS - COOLING ONLY.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7608.XLS

BLDG: **7608**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2CS15

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	LARKIN MOD: FCA-16
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	2 @ 1/2 HP
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: COMPRESSOR IN MER TOWER OUTSIDE

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:	
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:	

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	15' @ 2-1/2"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	1 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: INSULATION MISSING ON PIPE ~ 5' @ 2-1/2". PUMP UNINSULATED.

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7608.XLS

BLDG: **7608**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	OSAGE	MODEL:	40-5-201
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: PUMP UNINSULATED AND PIPES TO PUMP ARE RUSTY

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: BOILER HAS SOME RUST ON IT. ASBESTOS ON FLUE.

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7652
BLDG NAME: ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,520

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Suspect ACM is located on pipe fittings and boiler.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
AHU NUMBER: AHU-1
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 1
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C`92M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
AHU NUMBER: AHU-2 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA 2
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C'92M47 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
AHU NUMBER: AHU-3
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 3
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C'92M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE:
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
AHU NUMBER: AHU-4
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 4
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C'92M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
AHU NUMBER: AHU-5 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C'92M47 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7652
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE
UNIT MODEL: 40-5-201
BLR CAP OUTPUT (BTUH): 800,000
BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 5
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 130 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7652
BLDG NAME: ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: PERIMETER OF BLDG
SOURCE OF HEATING: BLR-1
SERVES AREA: ALL
RADIATION UNIT TYPE: HW
% AREA HTG: 100

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: MAGNETEK
PUMP MODEL: 8-165775-01

SCHEDULE

DAYS SCHEDULE NO: 5
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7652
BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1, 2, 3, 4, & 5

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CS15	# OF TOWER FANS:	2
CHILLER SERIAL NO:	9129-7	TOWER FAN V:	230
CHILLER V:	230	TOWER FAN AMPS:	2.2
CHILLER AMPS:	62	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	15		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 5
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7652.XLS

BLDG: **7652**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	STORAGE AREA				
AHU TYPE:		MFG.:	DUNHAM BUSH		MODEL:	VAH-22	

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: TYPICAL FOR 5 AHU'S, VERY OLD AND RUN DOWN

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: DAMAGED - REPLACE ~ 30'-1-1/2"

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7652.XLS

BLDG: **7652**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2C315

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 20' @ 2-1/2"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: PIPING NEAR PUMP IS RUSTED AND HAS A SMALL LEAK FROM COCK NEAR PUMP, PUMP UNINSULATED, 4' @ 2-1/2".

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7652.XLS

BLDG: **7652**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER	
BOILER TYPE:	HW	MFG.:		MODEL:
CONVERTER TYPE:		MFG.:		MODEL:
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor	
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor	
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:
COMMENTS:	PERIMETER RADIATION WITH MANUAL CONTROL VALVES AND MANUAL SHUT-OFF VALVES. RUSTED INTO POSITION. (ASBESTOS) CONTROL VALVES OK.			

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	NOT BOLTED TO PAD			
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7658 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,520

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 5

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Building Contact: Sgt. Thornton @ Ext. 5213. suspect ACM is located on pipe fittings and boiler.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
AHU NUMBER: AHU-1 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA 1
% OF BLDG AREA HEATED: 37

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C192M47 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Thermostat modulates control valve.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
AHU NUMBER: AHU-2
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 2
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: BAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP:
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C192M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC:
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Thermostat modulates control valve.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
AHU NUMBER: AHU-3
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 3
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG:
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C192M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Thermostat modulates control valve.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
AHU NUMBER: AHU-4
AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICE AREA 4
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 940
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C192M47
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Thermostat modulates control valve.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
AHU NUMBER: AHU-5 — AHU LOCATION: STORAGE ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: OFFICE AREA 5
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0 — CFM-CLG: 940
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: VAH-22
SUPPLY FAN HP: 0.75 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C192M47 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 5 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Thermostat modulates control valve.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7658
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: OSAGE
UNIT MODEL: 40-5-201
BLR CAP OUTPUT (BTUH): 800,000
BLR CAP INPUT (BTUH): 1,000,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 5
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 130 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7658	BLDG NAME:	ADMIN & SUPPORT BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	PERMIETER OF BLDG.
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	100

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	P14G3161M-FT

SCHEDULE

DAYS SCHEDULE NO:	5	MONTHS SCHEDULE NO:	1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:

RADIATION CONTROL: NONE

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0

RESET CONTROL: N

CONTROL COMMENTS: 3-WAY PNEUMATIC CONTROL VALVE LOCATED IN MER

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7658 BLDG NAME: ADMIN & SUPPORT BLDG

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU-1, 2, 3, 4, & 5

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	AIRCON MCQUAY
CHILLER MODEL:	9RS1-1500-THC	# OF TOWER FANS:	3
CHILLER SERIAL NO:	CTC821-01206	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	62	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	15		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 5 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	45	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	SC-184-KMH-6-302053

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7658.XLS

BLDG: **7658**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	STORAGE				
AHU TYPE:	SZ	MFG.:	DUNHAM BUSH		MODEL:	VAH-22	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	AHU IS OLD, DIRTY. TYPICAL OF 5						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: *	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*LOOSE PNEUMATIC LINE TO CW CONTROL VALVE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		3'-1-1/4"	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7658.XLS

BLDG: **7658**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER	
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	COPELAMETIC	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 8' @ 3"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: PIPING AT PUMP UNINSULATED AND HIGHLY RUSTED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7658.XLS

BLDG: **7658**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	OSAGE	MODEL:	40-5-201
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8021 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 23,676

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 9

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: FC-1 — AHU LOCATION: ABOVE CEILING
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: ADMINISTRATIVE OFFICES
% OF BLDG AREA HEATED: 37

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,000 — CFM-CLG: 18,000
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 9 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: HV-1
AHU LOCATION: SUPPLY ROOM
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY ROOM
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: HV-2 — AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 9 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: HV-3
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: HV-4 — AHU LOCATION: SUPPLY ROOM
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY ROOM
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 9 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
AHU NUMBER: HV-5
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HTHW
CONV HT SOURCE: STEAM FROM CENTRAL PLANT

● CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 450,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: 160 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS: O.A. TEMP HW RESET

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8021
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

● CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: MARATHON
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: WVM143TTDR5336AA

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **8021**

FILE: 8021.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	CFC-1	LOCATION (Rm)	
AHU TYPE:	2P FC	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 4' @ ~1"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8021.XLS

BLDG: **8021**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1-5	LOCATION (Rm)	
AHU TYPE:	H&V	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: TYPICAL OF 5 H&V'S

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: 3/8" - 1/2" LINE FEEDING COIL

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 8'
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8021.XLS

BLDG: **8021**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER	
BOILER TYPE:		MFG.:		MODEL:
CONVERTER TYPE:	STM/HW	MFG.:	OLD DOMINION STEE	MODEL: HE-2084-MZ: SERIAL 1976

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 8" DIA, 6' LONG CONVERTER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: MANUAL AIR VENT ON CONVERTER HAS SMALL LEAK; CHILLED WATER VALVE IS GOOD; PRV IS GOOD; 3-WAY CONTROL VALVE GOOD (SUMMER/WINTER CHANGEOVER)

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 3' OF 2"

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8057 **BLDG NAME:** ADMIN & SUPPORT BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 23,676

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: FC-1 — AHU LOCATION: ABOVE CEILING
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: ADMIN OFFICES
% OF BLDG AREA HEATED: 37

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,000 — CFM-CLG: 18,000
MIN %OA: 20 — MAX %OA: 20

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 4 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: HV-1 — AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 4 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: HV-2
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/11/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: HV-3
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: HV-4 — AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU: — SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 4 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
AHU NUMBER: HV-5
AHU LOCATION: SUPPLY AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: SUPPLY AREA
% OF BLDG AREA HEATED: 12.6

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 4
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

( ) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: STEAM FROM CENTRAL PLANT

(●) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 450,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 4
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: 160 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8057
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 4
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1
PUMP MFG: MARATHON
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: WVM143TTDR5336AA

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **8057**
FILE: 8057.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1-5	LOCATION (Rm)	SUPPLY AREA				
AHU TYPE:	H&V	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	O.A. & F.A. INTERLOCKED DAMPERS. TYPICAL OF 5 H&V'S IN BUILDING.						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:1/2"	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		6'	
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8057.XLS

BLDG: **8057**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ABOVE CEILING
AHU TYPE:	2P FC	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A:	OK: X*	REPLACE:	SIZE:	CNTLVLV	N/A	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: *DUAL TEMP. COIL; NO CONTROL VALVE; BALANCING VALVES @ EACH FAN COIL UNIT

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **8057**
FILE: 8057.XLS

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:	STM/HW	MFG.:		MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
COMMENTS:	CONTROL VALVE FOR CHILLED WATER, OK.				
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
COMMENTS:	DUAL TEMP. CONTROL VALVE FOR CHILLED WATER, OK @ 3"				
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	3' ON PUMP
COMMENTS:					3' ON CW PIPE

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0227 **BLDG NAME:** ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 32,303

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
AHU NUMBER: AHU-1
AHU LOCATION: MER 2ND FLR EAST
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST AND 2ND FLR-EAST
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,120
CFM-CLG: 10,120
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
AHU NUMBER: AHU-2
AHU LOCATION: 2ND FLR MER WAST
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST AND 2ND WEST FLOORS
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 10,039
CFM-CLG: 10,039
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: M3218T
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
AHU NUMBER: AHU-3
AHU LOCATION: MER BASEMENT
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST AND 2ND SOUTH BASEME
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,100
CFM-CLG: 1,100
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Controls are in poor condition

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
AHU NUMBER: AHU-4
AHU LOCATION: MER BASEMENT
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST AND 2ND SOUTH BASEME
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,100
CFM-CLG: 1,100
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
AHU NUMBER: AHU-5
AHU LOCATION: BASEMENT MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: BASEMENT NE
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800
CFM-CLG: 2,800
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANNEE
UNIT MODEL: TYPE C
BLR CAP OUTPUT (BTUH): 758,400
BLR CAP INPUT (BTUH): 948,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0227
BOILER RM LOCATION: MER-WEST

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE
UNIT MODEL: TYPE C
BLR CAP OUTPUT (BTUH): 758,400
BLR CAP INPUT (BTUH): 948,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0227
BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1,2,3,4,5

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	VRB0655B	# OF TOWER FANS:	2
CHILLER SERIAL NO:	BCI8097	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	16.2
CHILLER AMPS:	118	TOWER FAN HP:	5
CHILLER PH:	3		
CHILLER CAP (TONS):	65		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	Y	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	BASEMENT MER, EAST				
AHU TYPE:	SZ	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	**RP- ACT:X** / **RP-BD:X**
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	EAST BASEMENT MER
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	**SIZE: 1-1/2"**	CNTLVLV	OK:	**RP- ACT:X**	**RP-BD:X**
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	REPLACE	ESTIMATED QUANTITY:	10' @ 2"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	1ST FLOOR WEST
AHU TYPE:	MZ-5	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:

COMMENTS: ONE ZONE DAMPER NOT HOOKED UP, LINKAGE DISCONNECTED.
TWO DOWN & 3 UP

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK:	REPLACE: X	COMMENTS: 5 HP MARATHON ELEC.
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: AHU TYPICAL OF TWO. EXCEPT EAST 1ST FLOOR HAS ALL ZONE
ACTUATORS HOOKED TO THE DAMPERS AND THIS UNIT HAS
3 ZONES DOWN & 2 UP.

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-4	LOCATION (Rm)	WEST BASEMENT				
AHU TYPE:	SZ	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	CLEAN	SIZE: 1"	CNTLVLV	OK:	**RP- ACT:X** / **RP-BD:X**
HEATING COIL	N/A:	OK: X	CLEAN	SIZE:	CNTLVLV	OK: X	RP- ACT: / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		8' @ 1-1/2"	
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER EAST		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	BOHN	MODEL:	ACWC 54D

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	5 HP
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	5 HP
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: 140

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:	
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:	

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	6' @ 4"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	3 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: PUMP UNINSULATED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	WEST MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	TYPE C
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: CONVERTED COAL BOILER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 227.XLS

BLDG: **227**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	EAST MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	TYPE C
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	

COMMENTS: BOILER IS NOT ON

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0402
BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 35,718

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0402
AHU NUMBER: AHU-1
AHU LOCATION: 2ND FLR MER WEST
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST AND 2ND WEST
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 9,325
CFM-CLG: 9,325
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: N/A
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: BVD213TTDR7359
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 90
HOT DECK DEG F: 90
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 61
PRESENT TEMP SUM OCC: 61
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0402
AHU NUMBER: AHU-2
AHU LOCATION: 2ND FLR MER W&E
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST & 2ND EAST
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 11,800
CFM-CLG: 11,800
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: N/A
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 90
HOT DECK DEG F: 90
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 61
PRESENT TEMP SUM OCC: 61
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0402
AHU NUMBER: AHU-3
AHU LOCATION: BASEMENT MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: BASEMENT NORTH
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,300
CFM-CLG: 1,300
MIN %OA: 25
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0402
BOILER RM LOCATION: BASEMENT

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: EL60GPF
BLR CAP OUTPUT (BTUH): 2,102,000
BLR CAP INPUT (BTUH): 2,627,500
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0402 BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1,2,3

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	BOHN	TOWER MFG:	
CHILLER MODEL:	ACWC47D	# OF TOWER FANS:	2
CHILLER SERIAL NO:	BCH8160	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	100
CHILLER AMPS:	100	TOWER FAN HP:	5
CHILLER PH:	0		
CHILLER CAP (TONS):	65		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	Y	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 402.XLS

BLDG: **402**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	SOUTH 2ND FLOOR MER
AHU TYPE:	MZ-5	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:

COMMENTS: RA & OA LINKED

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:
SIMILAR TO 227

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	MARATHON 5 HP
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: AHU-1 IS THE SAME AS AHU-2

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 402.XLS

BLDG: **402**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-4	LOCATION (Rm)	BASEMENT				
AHU TYPE:	SZ	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	OA & RA INTERLOCKED						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:	3/4 HP MARATHON		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	PERIMETER RADIATION IN HALLWAYS & BASEMENT						
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:1-1/2"	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	1.5 MARATHON		
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	RUSTED, CHILLED WATER		
COMMENTS:	PUMP UN-INSULATED						
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		5' @ 2"	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 402.XLS

BLDG: **402**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE NORTH OF BLDG.		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	BOHN	MODEL:	VRB0655B

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 5 HP FANS
2 - 30 HP COMPRESSORS

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 402.XLS

BLDG: **402**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	EC-60-G-PF
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: NEWER LOOKING BOILER
GAS METER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 15' @ 6"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0410 **BLDG NAME:** ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 32,883

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
AHU NUMBER: AHU-1 — AHU LOCATION: BASEMENT
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: BSMT REC AREA
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE: MULTI ZONE — NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 1,950 — CFM-CLG: 1,950
MIN %OA: 14 — MAX %OA: 100

NAMEPLATE

UNIT MFG: N/A — UNIT MODEL: N/A
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: E143TTDR7350AK — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 55
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
AHU NUMBER: AHU-2
AHU LOCATION:
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST FLR S.E. WING
% OF BLDG AREA HEATED: 29

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 2

CFM-HTG: 12,375
CFM-CLG: 12,375
MIN %OA: 14
MAX %OA: 100

NAMEPLATE

UNIT MFG: N/A
UNIT MODEL: N/A
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
AHU NUMBER: AHU-3 — AHU LOCATION: MER 2ND FLR
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: 1ST AND 2ND FLOR N.W. WING
% OF BLDG AREA HEATED: 29

AHU UNIT TYPE: MULTI ZONE — NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 12,375 — CFM-CLG: 12,375
MIN %OA: 14 — MAX %OA: 100

NAMEPLATE

UNIT MFG: N/A — UNIT MODEL: N/A
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 65 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 55
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
AHU NUMBER: UH-1
AHU LOCATION: BASEMENT
REFRIG SYS # SRVNG AHU: N/A
SERVES AREA: BSMT N.W. WING
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,260
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: N/A
UNIT MODEL: N/A
SUPPLY FAN HP: 0.16
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE:
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
AHU NUMBER: UH-2 — AHU LOCATION: BASEMENT
REFRIG SYS # SRVNG AHU: — SERVES AREA: BSMT. S.E. WING
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,270 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: N/A — UNIT MODEL:
SUPPLY FAN HP: 0.33 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE:
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0410
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: BURHAM
UNIT MODEL: 4FL20940LB

BLR CAP OUTPUT (BTUH): 1,749,000
BLR CAP INPUT (BTUH): 2,186,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 7.5 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0410
BLDG NAME: ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION:
SOURCE OF HEATING: BOILER
SERVES AREA: HALLWAYS/STAIRS
RADIATION UNIT TYPE: STEAM
% AREA HTG: 20

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC
RADIATION CONTROL: 2-WAY VALVE, MANUAL O
OCC HT SPACE SP: 65
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0410
BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1, 2, & 3

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	SE2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	0	TOWER FAN AMPS:	48
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	BALDOR
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	M3211T

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 410.XLS

BLDG: **410**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1,2	LOCATION (Rm)	2ND FLOOR MER
AHU TYPE:	MZ-4(3),MZ-6(2)	MFG.:	MODEL:

SZ - Single Zone | H&V - Heating & Vntltng. | FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone | VAV - Variable Air Vol. | RHT - Reheat System
DD - Dual Duct | UH - Unit Heater | IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: EXHAUST AIR DAMPER NOT SEEN ON UNIT #2

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X (#3)	**REPLACE FAN BEARINGS: X (#2)**	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 25' @ 4"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 410.XLS

BLDG: **410**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	MER BASEMENT
AHU TYPE:	MZ-2	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:

COMMENTS: 1ST FLOOR AHU TYPICAL (CENTER OF BLDG)

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE: 1"	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	10' @ 1-1/2"
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 410.XLS

BLDG: **410**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE (NORTH OF BLDG)		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	30A0CD70

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: LOOKS NEWLY INSTALLED
6 CONDENSER FANS

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: MARATHON, 3 HP

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 410.XLS

BLDG: **410**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	BASEMENT MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	PF-510
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: SMELL GAS, BOILER COLD

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 25' @ 5"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0540 **BLDG NAME:** OFF QTRS MILIT

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 14,528

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/12/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 16,530 — CFM-CLG: 16,530
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 10 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 37 FAN COIL UNITS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-200GAWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-3
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-4
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-5
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-6
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-7
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: DHW

● ☒ BOILER
BOILER TAG: BLR-8
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: PGX-2006AWNI
BLR CAP OUTPUT (BTUH): 138,000
BLR CAP INPUT (BTUH): 164,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.04
PUMP MFG: TACO
PUMP SERVICE: HW PUMP
PUMP MODEL: 007-F4

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0540
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: MARATHON
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

HW PUMP

PUMP TAG: 2
PUMP HP: 2
PUMP MFG: MARATHON
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0540 BLDG NAME: OFF QTRS MILIT

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED: FAN COIL UNITS

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE-044-510	# OF TOWER FANS:	4
CHILLER SERIAL NO:	2190F18047	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	76	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	40		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 540.XLS

BLDG: **540**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	IN FOYER				
AHU TYPE:	2P	MFG.:	INTERNATIONAL ENVIRONMENTAL CORP.	MODEL:	FXY-10 AYC2 L5CXX		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	1/2 HP EA TWO MOTORS. THIS FAN COIL IS LARGER THAN ROOM						DPR-ACT = Damper Actuator
	FAN COILS (ESTIMATED). WE WERE UNABLE TO ACCESS ROOMS.						RP-ACT = Replace Actuator
	ASSUME A SMALLER FAN COIL FOR ROOMS.						
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	DUAL TEMP.						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 540.XLS

BLDG: **540**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)			
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	CARRIER	MODEL:	38AE-044-510

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 4

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 2 HP MARATHON, 2 EACH

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 540.XLS

BLDG: **540**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)			
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	PXG-2006A-WNI
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 164,000 BTU/HR INPUT
120,000 BTU/HR OUTPUT
HIGH EFFICIENCY
TYPICAL OF 6. THERE ARE 2 MORE UNITS FOR DHW

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/25 HP ON EACH BOILER
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: MANUAL SWITCHOVER FROM HEATING TO COOLING.
DUAL TEMP. SYSTEM WITH NO AUTOMATIC CONTROL VALVES.
SYSTEM FAIRLY NEW, 1984 PLANS

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: HART & COOLEY ULTRAVENT SPECIAL GAS VENT (PLASTIC)
FOR CAT. III OR IV APPLIANCES, UL LISTED 5350 #091189 ON PIPE

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJNCWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7404 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N **CONDITIONED SQFT:** 50,967

GAS METER: N

SUSPECT ACM: N

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Suspect ACM located on AHU duct flex joints.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJNCWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7404
AHU NUMBER: AHU-1 — AHU LOCATION: BSMT MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: SOUTH HALF OF BLDG
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: MULTI ZONE — NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 0 — CFM-CLG: 29,135
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM BUSH — UNIT MODEL: MZ-320-D
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR: NO CONTROL VALVE ON CHILLED WATER
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJNCWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7404
AHU NUMBER: AHU-2
AHU LOCATION: AHU ROOM N. BSMT
REFRIG SYS # SRVNG AHU:
SERVES AREA: NORTH HALF OF BLDG
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 0
CFM-CLG: 28,225
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM BUSH
UNIT MODEL: MZ-320-D
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR: NO CONTROL VALVE ON CHILLED WATER
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJNCWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7404
BOILER RM LOCATION: NORTH MER EAST

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG: BURNHAM
UNIT MODEL: 4FL-345-45-LB
BLR CAP OUTPUT (BTUH): 2,568,000
BLR CAP INPUT (BTUH): 3,210,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJNCWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7404 BOILER RM LOCATION: NORTH MER WEST

BOILER UNIT

SOURCE OF BLDG HEAT — BLR/CONVERTER SERVES AREA OR SERVICE: DHW

(●) ☒ BOILER
- BOILER TAG: BLR-2
- BOILER TYPE: MED PRESS STEAM (15# TO 125#)
- FUEL TYPE: NAT. GAS

☐ CONVERTER
- CONVERTER TAG:
- CONVERTER TYPE:
- CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:	KEWANEE	BLR CAP OUTPUT (BTUH):	650,000
UNIT MODEL:	M-65-KG	BLR CAP INPUT (BTUH):	813,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTH SECHDULE NO: 3

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC RESET CONTROLS: N

OPERATING SETPOINT: 12 DEG F or PSIG

TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJNCWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7404
BLDG NAME: ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: NORTH MER SOUTH
SOURCE OF HEATING: BLR-1
SERVES AREA: ALL
RADIATION UNIT TYPE: HW
% AREA HTG: 100

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: MARATHON ELECTRIC
PUMP MODEL: YVD 145...

RADIATION PUMP

PUMP TAG: 2
PUMP HP: 2
PUMP MFG: MARATHON ELECTRIC
PUMP MODEL: PC56T

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC
RADIATION CONTROL: 3-WAY VALVE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7404.XLS

BLDG: **7404**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER BASEMENT				
AHU TYPE:	MZ	MFG.:	DUNHAM BUSH		MODEL:	MZ-320-D	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:	TYPICAL OF 6 ZONE DAMPERS						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7404.XLS

BLDG: **7404**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER BASEMENT				
AHU TYPE:	MZ	MFG.:	DUNHAM BUSH		MODEL:	MZ-320-D	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:	TYPICAL OF 6 ZONE DAMPERS						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **7404**

FILE: 7404.XLS

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	4-FL-345-45-LB
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 28'@ 6" DIA.

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP (NOT BOLTED TO PAD)
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE: 1/25 HP
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7404.XLS

BLDG: **7404**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	M-65-KG
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: DOMESTIC HW USE ONLY FEEDS 2 LARGE CONV/STOR TANKS

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/25 HP
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7612 **BLDG NAME:** ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 41,892

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Suspect ACM located on pipe fittings

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
AHU NUMBER: AHU-2
AHU LOCATION: MER 1ST FLR
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 3N450
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 70

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,400
CFM-CLG: 41,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 92 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE:
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWNNEE
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 2,350,000
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE
UNIT MODEL: 60-15
BLR CAP OUTPUT (BTUH): 1,939,200
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7612
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: SC-184-KMA

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1.5
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: SC-164-KMA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	DTWP-3	PUMP HP:	1.5	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	SC-164 KMA

HW PUMP

PUMP TAG:	DTWP-4	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	SC-213-FMA

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7612
BLDG NAME: ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES, TOILETS
SOURCE OF HEATING: BLR-1
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 20

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: RELIANCE
PUMP MODEL: 442775-GT

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IN MER

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7612
BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: ALL

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	55	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7612.XLS

BLDG: **7612**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	IN EACH ROOM				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TYPICAL OF 92 FAN COIL UNITS						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7612.XLS

BLDG: **7612**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	1ST FLOOR MER				
AHU TYPE:	SZ	MFG.:	CENTRAL AIR		MODEL:	L0815	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **7612**

FILE: 7612.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	1ST FLOOR MER				
AHU TYPE:	SZ	MFG.:	CENTRAL AIRE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	REFERENCE PHOTO FOR AHU-1						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7612.XLS

BLDG: **7612**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER BASEMENT/ACCU OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI/TSI	MODEL:	SC2CD70/TAC-73

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 5 ACCU FAN MOTORS

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: NEW PUMP INSULATION NEEDED
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7612.XLS

BLDG: **7612**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	KEWANEE	MODEL:	M-235-KX
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER HAS RUST ON EXTERIOR.

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP UNINSULATED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP RUSTED, UNINSULATED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP RUSTED, LEAKING, UNINSULATED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: .5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP RUSTED, UNINSULATED, PAD BROKEN

COMMENTS:

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: VALVE BODY RUSTED ON 3-WAY ABOVE
COMPRESSORS

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7612.XLS

BLDG: **7612**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	OSAGE	MODEL:	60-15
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: DOMESTIC HW CONVERTERS TYPICAL OF 7616 & 7618, HOWEVER THESE HAVE NEW INSULATION/ ASBESTOS ABATED

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7614 **BLDG NAME:** ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 41,892

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Bldg. Contact @ Ext. 5367 Suspect ACM located on boiler flue and DHW storage tanks

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
AHU NUMBER: AHU-1 — AHU LOCATION: MER. NORTH
REFRIG SYS # SRVNG AHU: ch-1 — SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 — CFM-CLG: 3,500
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM — UNIT MODEL: L0815
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
AHU NUMBER: AHU-2 — AHU LOCATION: MER SOUTH
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 — CFM-CLG: 3,500
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM — UNIT MODEL: L0815
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUR BLDG
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 70

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,400
CFM-CLG: 41,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 92 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE:
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE
UNIT MODEL: M-235-KX
BLR CAP OUTPUT (BTUH): 2,350,000
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE
UNIT MODEL: 60-15
BLR CAP OUTPUT (BTUH): 1,939,200
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7614
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	DTWP-3	PUMP HP:	2	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	5C-184-KMA

HW PUMP

PUMP TAG:	DTWP-4	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7614	BLDG NAME:	ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	VESTIBULES, TOILETS
SOURCE OF HEATING:	BLR-1	SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	RELIANCE
				PUMP MODEL:	442775-GT

SCHEDULE

DAYS SCHEDULE NO:	10	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:			
RADIATION CONTROL:	NONE		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:	3 WAY PNEUMATIC CONTROL VALVE IN MER		

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7614 BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU'S & FC'S

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	300	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	1ST FLOOR MER				
AHU TYPE:	SZ	MFG.:	CENTRAL AIRE		MODEL:	L0815	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	1ST FLOOR MER SOUTH				
AHU TYPE:	SZ	MFG.:	CENTRAL AIRE		MODEL:	L0815	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER / ACCU OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI / BOHN	MODEL:	SC2CD70 (CHILLER)

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: TYPICAL OF 4, 2 UNITS
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 140

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: DAMAGED INSULATION ON CHW PUMP

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	KEWANEE	MODEL:	M-235-KX
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER RUSTED AROUND BASE

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	2 HP, PUMP UNINSULATED
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	PIPING TO PUMP RUSTY
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	2 HP PUMP UNINSULATED, RUSTED
HW PUMP SEALS	N/A:	OK:	REPLACE: X	SIZE:	
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	2 HP, LEAKING, RUSED, UNINSULATED
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	3/4 HP, RUSTED, UNINSULATED
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	NOT BOLTED TO PAD

COMMENTS: 3-WAY VALVE ABOVE #4 & #5 RUSTED ALSO

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	OSAGE	MODEL:	60-15
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: RUSTED AROUND BASE.

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 15' @ 3"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7614.XLS

BLDG: **7614**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:	TYPICAL OF 2	MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	ASBESTOS ON TANKS				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:	CONTROL VALVES OK			
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 20' @ 2-1/2"
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7616
BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 41,892

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Suspect ACM located on boiler flues and DHW storage tanks.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
AHU NUMBER: AHU-1
AHU LOCATION: MER 1ST FLOOR EAST
REFRIG SYS # SRVNG AHU: ch-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
AHU NUMBER: AHU-2 — AHU LOCATION: MER 1ST FLOOR WEST
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 — CFM-CLG: 3,500
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 70

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,400 — CFM-CLG: 41,400
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:		☐
HUMIDIFIER:	NONE	☐
COOLING COIL:		☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE:
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE
UNIT MODEL: CAT. M-235-KX
BLR CAP OUTPUT (BTUH): 2,350,000
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) [X] BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

[ ] CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: OSAGE
UNIT MODEL: 6015
BLR CAP OUTPUT (BTUH): 1,939,200
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7616
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: SC-148-KMA

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: SC-148-KMA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	DTWP-3	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	SC-215-FMA

HW PUMP

PUMP TAG:	DTWP-4	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	SC-213-FMA

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7616
BLDG NAME: ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES, TOILETS
SOURCE OF HEATING: BLR-1
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 20

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: RELIANCE
PUMP MODEL: 442775-ET

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IN MER

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7616 BLDG NAME: ENL BARRACKS W/AS

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: FC'S AND AHU'S

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2C070	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-2	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	45	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER 1ST FLOOR (WEST)
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER (EAST)				
AHU TYPE:	SZ	MFG.:	CENTRALAIRE		MODEL:	L0815	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	DAMPER IS SHUT OFF, F & B IN OPEN POSITION TO COIL						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER / ACCU OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI / BOHN	MODEL:	SC2CD70

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: TYP OF 4; 2 UNITS
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 140

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: DAMAGED INSULATION ON CHW PUMP

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:	KEWANEE	MODEL:	M-235-KX
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	
COMMENTS:	ASBESTOS ON TANKS; TYPICAL OF TWO TANKS.				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP UN-INSULATED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP UN-INSULATED, RUSTED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP UN-INSULATED
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: PUMP UN-INSULATED, RUSTED
COMMENTS:				

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE: 1/12 HP
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:	10' OF INSULATION @ 4" MISSING EACH PUMP (2 VALVES & 1 STRAINER)			

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 20' @ 3"
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	OSAGE	MODEL:	60-15
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 10' @ 3"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE: 1/12 HP
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7616.XLS

BLDG: **7616**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.		HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/12 HP	
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	20' @ 3"
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/CWW/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7810 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 41,843

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

Suspect ACM located on DHW storage tanks

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/10/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
AHU NUMBER: AHU-1
AHU LOCATION: MER NORTH
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: L0815
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1260-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
AHU NUMBER: AHU-2
AHU LOCATION: MER SOUTH
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 0

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: L0815
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 70

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,400 — CFM-CLG: 41,400
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE
UNIT MODEL: M-235-KX
BLR CAP OUTPUT (BTUH): 2,350,000
BLR CAP INPUT (BTUH): 2,938,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE
UNIT MODEL: 60-15
BLR CAP OUTPUT (BTUH): 1,939,200
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7810
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	DTWP-3	PUMP HP:	2	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	5C-184-KMA

HW PUMP

PUMP TAG:	DTWP-4	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7810
BLDG NAME: ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES, TOILETS
SOURCE OF HEATING: BLR-1
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 20

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: RELIANCE
PUMP MODEL: 442775-GT

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IM MER

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/CWW/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7810 BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU'S & FC'S

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	300	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7810.XLS

BLDG: **7810**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	2P FC	MFG.:	TRANE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:	FILTERS ARE EXTREMELY DIRTY ON BOTH AHU'S						
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7810.XLS

BLDG: **7810**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER	
REFG. EQUIP. TYPE:		MFG.:	TSI	MODEL: SC2CD70

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X*	REPLACE:	SIZE:

COMMENTS: *TYPICAL OF 6

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 35' @ 6"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7810.XLS

BLDG: **7810**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1&2	LOCATION (RM)	MER		
BOILER TYPE:	(1)=HW, (2)=STM	MFG.:	OSAGE, OSAGE	MODEL:	3-5-508, 3-5-265
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam
HW - Hot Water
STM/HW - Steam to Hot Water Conv.
HTHW/HW - High Temp. HW to HW Cv.
HTHW/STM - High Temp HW to Steam Convertor
DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:

COMMENTS: PUMP #3 & 4 LOST THEIR SEALS, LEAKING
3-WAY VALVE BODY ABOVE PUMP #6 CORRODED
OTHER VALVES OK.

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: FIRE ALARM PANEL HAS AN ALARM SOUNDING

BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: ALL PUMPS UNINSULATED. BOILERS OK.

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7814 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 41,843

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

ACM abatement has been completed.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
AHU NUMBER: AHU-1 — AHU LOCATION: MER NORTH
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500 — CFM-CLG: 3,500
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM — UNIT MODEL: L0815
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1260-03 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP. WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
AHU NUMBER: AHU-2
AHU LOCATION: MER SOUTH
REFRIG SYS # SRVNG AHU: CH-2
SERVES AREA: HALLWAYS
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: L0815
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-331260-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 70

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 41,400
CFM-CLG: 41,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE:
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: KEWANEE
UNIT MODEL: M-235-KX
BLR CAP OUTPUT (BTUH): 2,350,000
BLR CAP INPUT (BTUH): 2,938,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE
UNIT MODEL: 60-15
BLR CAP OUTPUT (BTUH): 1,939,200
BLR CAP INPUT (BTUH): 2,424,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7814
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 5C-184-KMA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

HW PUMP

PUMP TAG:	DTWP-3	PUMP HP:	2	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	5C-184-KMA

HW PUMP

PUMP TAG:	DTWP-4	PUMP HP:	3	PUMP MFG:	CENTURY
PUMP SERVICE:	DUAL TEMP PUMP			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7814
BLDG NAME: ENL BARRACKS W/O DIN
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES, TOILETS
SOURCE OF HEATING: BLR-1
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 20

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: RELIANCE
PUMP MODEL: 442775-GT

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY PNEUMATIC CONTROL VALVE IN MER

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7814 BLDG NAME: ENL BARRACKS W/O DIN

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU'S & FC'S

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	BOHN
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	4
CHILLER SERIAL NO:	9836-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	7.2
CHILLER AMPS:	300	TOWER FAN HP:	1.5
CHILLER PH:	0		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	AURORA
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7814.XLS

BLDG: **7814**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	1ST FLOOR (NORTH)				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	L10	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: *
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	*LINKAGE IS DISCONNECTED FROM ACTUATOR						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7814.XLS

BLDG: **7814**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	1ST FLOOR (SOUTH)				
AHU TYPE:	SZ	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	SAME AS AHU-1 EXCEPT LINKAGE IS CONNECTED TO ACTUATOR						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK:	REPLACE:		COMMENTS:			
INLET VANES	N/A:	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7814.XLS

BLDG: **7814**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2CD70

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A: X	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
COMP. MOTOR	N/A: X	OK: X	REPLACE:	SIZE:	OK: X
CT/ACCU FAN MTR	N/A: X	OK: X	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	TYPICAL OF 6 FANS

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7814.XLS

BLDG: **7814**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1,2	LOCATION (RM)	MER		
BOILER TYPE:	1-HW, 2-STM	MFG.:	OSAGE, OSAGE	MODEL:	3-5-508, 3-5-265
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:	
COMMENTS:					

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:	PUMP #1 MISSING;			
	PUMP #3 NEEDS PUMP SEALS			
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	ALL PUMPS UNINSULATED			
	30' @ 3" INSULATION NEEDED			
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	DOMESTIC HW CONVERTERS = OK			
	REPLACE 8' OF 6" PIPE INSULATION			

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7050
BLDG NAME: ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 39,675

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/13/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
AHU NUMBER: AHU-1
AHU LOCATION: KITCHEN
REFRIG SYS # SRVNG AHU: CENTRAL PLANT
SERVES AREA: DINING HALL
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,330
CFM-CLG: 7,330
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 10
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 57
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 57
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/13/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: BARRACKS
% OF BLDG AREA HEATED: 89

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 37,200 — CFM-CLG: 37,200
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 93 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/13/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
AHU NUMBER: HV-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: N/A
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

SOURCE OF BLDG HEAT

- (●) ☒ BOILER
  - BOILER TAG: BLR-1
  - BOILER TYPE: HW (UP TO 250 DEG)
  - FUEL TYPE: NAT. GAS
- ☐ CONVERTER
  - CONVERTER TAG:
  - CONVERTER TYPE:
  - CONV HT SOURCE:
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: KW-40-192-G
BLR CAP OUTPUT (BTUH): 1,749,000
BLR CAP INPUT (BTUH): 2,186,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 185 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT

SOURCE OF BLDG HEAT

- (●) ☒ BOILER
  - BOILER TAG: BLR-2
  - BOILER TYPE: HW (UP TO 250 DEG)
  - FUEL TYPE: NAT. GAS
- ☐ CONVERTER
  - CONVERTER TAG:
  - CONVERTER TYPE:
  - CONV HT SOURCE:
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: KW-40-192-G
BLR CAP OUTPUT (BTUH): 1,749,000
BLR CAP INPUT (BTUH): 2,186,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 185 DEG F or PSIG
TYPE OF BURNER CONTROLS: ALL
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: KITCHEN

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-3
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: KEWANEE
UNIT MODEL: KS-40-166-G
BLR CAP OUTPUT (BTUH): 1,204,800
BLR CAP INPUT (BTUH): 1,506,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: KITCHEN

SOURCE OF BLDG HEAT

- ( ) ☐ BOILER
  - BOILER TAG:
  - BOILER TYPE:
  - FUEL TYPE:
- ☒ CONVERTER
  - CONVERTER TAG: CV-1
  - CONVERTER TYPE: STM TO HTHW
  - CONV HT SOURCE: BLR-3
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 900,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: OTHER

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE: BLR-1 & BLR-2

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: UNIMOUNT 1;25
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F040 TYPE: UT

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: UNIMOUNT 1;25
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F040 TYPE: UT

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7050
BOILER RM LOCATION: DHW

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

- (●) ☒ BOILER
  - BOILER TAG: BLR-4
  - BOILER TYPE:
  - FUEL TYPE: NAT. GAS
- ☐ CONVERTER
  - CONVERTER TAG:
  - CONVERTER TYPE:
  - CONV HT SOURCE:
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE
UNIT MODEL: PW1200IN09CIA
BLR CAP OUTPUT (BTUH): 972,000
BLR CAP INPUT (BTUH): 1,200,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DHW-1
PUMP HP: 0.167
PUMP MFG: MARATHON ELECTRIC
PUMP SERVICE: DHW
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7050
BLDG NAME: ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES, LATRINES
SOURCE OF HEATING:
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 8

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: UNIMOUNT
PUMP MODEL: F012A TYPE UT

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY VALVE IN MER

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7050.XLS

BLDG: **7050**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	KITCHEN
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7050.XLS

BLDG: **7050**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	THROUGHOUT BUILDING
AHU TYPE:	FC 2D	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: 3 SPEED FAN CONTROL
PERIMETER RADIATION IN EACH ROOM

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7050.XLS

BLDG: **7050**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	HV-1	LOCATION (Rm)	MER (SERVES KITCHEN AREA)					
AHU TYPE:	H & V	MFG.:			MODEL:			
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)						
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System						
DD - Dual Duct	UH - Unit Heater	IND - Induction System						
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
COMMENTS:	15' OFF OF MER FLOOR						DPR-ACT = Damper Actuator	
							RP-ACT = Replace Actuator	
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:				
COMMENTS:								
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:				
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	OLD ~ 3HP			
INLET VANES	N/A: X	OK:	COMMENTS:					
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:				
COMMENTS:								
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
COMMENTS:							RP-ACT = Replace Actuator	
							RP-BD = Replace Body	
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:				
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:				
COMMENTS:								
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:			10' @ 3-1/2"	
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:				
COMMENTS:								

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7050.XLS

BLDG: **7050**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR 1-4	LOCATION (RM)	MER		
BOILER TYPE:	HW & STM	MFG.:	KEWANEE	MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	
COMMENTS:	GOOD CONDITION - NEW BOILERS				

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7053 **BLDG NAME:** ENL BARRACKS W/AS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 39,675

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/13/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7053
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: BARRACKS
% OF BLDG AREA HEATED: 92

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 37,200 — CFM-CLG: 37,200
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7053
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: KW-40-192-G
BLR CAP OUTPUT (BTUH): 1,749,000
BLR CAP INPUT (BTUH): 2,186,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 185 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7053
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

- (●) ☒ BOILER
  - BOILER TAG: BLR-2
  - BOILER TYPE: HW (UP TO 250 DEG)
  - FUEL TYPE: NAT. GAS
- ☐ CONVERTER
  - CONVERTER TAG:
  - CONVERTER TYPE:
  - CONV HT SOURCE:
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: KW-40-192-G
BLR CAP OUTPUT (BTUH): 1,749,000
BLR CAP INPUT (BTUH): 2,186,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 185 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7053
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE: BLR-1, BLR-2

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 2
PUMP MFG: UNIMOUNT 1;25
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F040 TYPE: UT

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 2
PUMP MFG: UNIMOUNT 1;25
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F040 TYPE: UT

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7053
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: DHW

(●) ☐ BOILER
BOILER TAG: BLR-3
BOILER TYPE:
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: TELEDYNE LAARS
UNIT MODEL: PW075 IN09CIA
BLR CAP OUTPUT (BTUH): 579,150
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DHW-1
PUMP HP: 0.17
PUMP MFG: MARATHON
PUMP SERVICE: DHW
PUMP MODEL:

HW PUMP

PUMP TAG: DTWP-2
PUMP HP: 0.33
PUMP MFG: BOILER PUMP
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7053
BLDG NAME: ENL BARRACKS W/AS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: VESTIBULES/LATRINES
SOURCE OF HEATING:
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 8

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: UNIMOUNT
PUMP MODEL: F012A TYPE: UT

SCHEDULE

DAYS SCHEDULE NO: 10
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS: 3 WAY VALVE IN MER

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7053.XLS

BLDG: **7053**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	THROUGHOUT BUILDING
AHU TYPE:	FC 2P	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: 3 SPEED FAN CONTROL. PERIMETER RADIATION IN EACH ROOM

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7053.XLS

BLDG: **7053**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1,3	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	KEWANEE	MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	GOOD CONDITION - NEW				
BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8002 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 22,700

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/11/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8002
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,800
CFM-CLG: 28,800
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 72 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8002
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

● CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 650,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 5
PUMP MFG: U.S. ELECTRIC
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F8074-01239L154R033

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8002.XLS

BLDG: **8002**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL
AHU TYPE:	FC 2P	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:*	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: *SEVERAL ARE LEAKY OR INOPERABLE

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8002.XLS

BLDG: **8002**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTO	N/A:	OK: X	REPLACE:	SIZE:	UNIMOUNT, 5 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:	1/3 HP
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:	CONTROL VALVES OK.				
	OVERALL CONDITION, SAME AS OTHER BARRICKS IN AREA.				
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	~1/3 HP FOR DOMESTIC HW/CONV.
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8012
BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: Y
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 22,700

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8012
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,800
CFM-CLG: 28,800
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 72 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8012
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 650,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 3
PUMP MFG: GOULD
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8012.XLS

BLDG: **8012**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* / RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8012.XLS

BLDG: **8012**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 10" X 4.5' LONG

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: CENTURY 1 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: NOT BOLTED DOWN WITH WIRES
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE: EXPOSED
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: DOMESTIC HW CONVERTER TANK REPLACED WITH UNINSULATED CONVERTER
FLOW-RITE-TEMP MODEL 665

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8014 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 11,549

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8014
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG.
REFRIG SYS # SRVNG AHU: CV-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,400 — CFM-CLG: 14,400
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 3 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8014
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 325,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8014.XLS

BLDG: **8014**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8014.XLS

BLDG: **8014**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP MARATHON
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: VALVES FAIR

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: CONVERTER SIZE = 8" X 4.5'
OLD DOMINION SERIAL #HE-2081-M2

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8038 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 22,700

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8038
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,800 — CFM-CLG: 28,800
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 72 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8038
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

● CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 650,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 5
PUMP MFG: US ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL: F8074-01239L154R033

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **8038**
FILE: 8038.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8038.XLS

BLDG: **8038**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	LIKE 8052				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	B & G, 5 HP DUAL TEMP PUMP. CWS & CWR NEW INSULATION ~ 10' @ 4"			

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:	CONTROL VALVES OK. PIPING ON CONVERTER SEVERELY CORRODED.			

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:				

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8040 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 11,549

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/11/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8040
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,400
CFM-CLG: 14,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8040
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: STEAM FROM CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 325,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8040.XLS

BLDG: **8040**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8040.XLS

BLDG: **8040**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	LIKE 8048				
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:	CONTROL VALVES OK. DUAL TEMP = CENTURY 2 HP.				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:	NO INSULATION ON PUMP				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8042
BLDG NAME: ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 22,700

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8042
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,800
CFM-CLG: 28,800
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8042
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 650,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 5
PUMP MFG: US ELECTRIC
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F8074-01239L154R033

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8042.XLS

BLDG: **8042**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	3-WAY VALVES ON FC'S IN HALLWAYS & DAYROOMS. 2 FC'S PER HALLWAY; 2 FC'S PER DAYROOM						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	DUAL TEMP. MANUAL BALANCING VALVES (NO CONTROL VALVES) IN ROOMS. 3-SPEED FAN CONTROL FOR ALL ROOMS. TYPICAL FOR BLDGS. IN THIS AREA. FANS DO NOT SHUT-OFF AFTER ROOMS REACH DESIRED TEMPERATURE.						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8042.XLS

BLDG: **8042**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				

BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	DUAL TEMP PUMP - BALDOR, 5 HP. CONTROL VALVES - OK			

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP BALDOR
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:	OUTSIDE AIR SENSOR			

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	FAIR
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	FAIR
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8048 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 11,549

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8048
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,400
CFM-CLG: 14,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8048
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 325,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8048.XLS

BLDG: **8048**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	N/A: X						DPR-ACT = Damper Actuator
	N/A: X						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
	N/A: X						
SUPPLY AIR FAN	N/A: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	N/A: X	REPLACE:		COMMENTS:	N/A		
COMMENTS:	N/A: X						
	N/A: X						
	N/A: X						
COOLING COIL	N/A: X	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8048.XLS

BLDG: **8048**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:	OLD DOMINION IRON	MODEL:	HE-2081-M1
CONVERTER TYPE:	STM\HW	MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 8" X 45' LONG

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1-1/2 HP MARATHON ELECTRIC
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8050 **BLDG NAME:** ENL BARRACKS W/O DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 11,549

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8050
AHU NUMBER: FC-1 — AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,400 — CFM-CLG: 14,400
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 3 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8050
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

- ☐ BOILER
  - BOILER TAG:
  - BOILER TYPE:
  - FUEL TYPE:
- ☒ CONVERTER
  - CONVERTER TAG: CV-1
  - CONVERTER TYPE: STM TO HW
  - CONV HT SOURCE: CENTRAL PLANT
- ◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 325,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8050.XLS

BLDG: **8050**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 4 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8050.XLS

BLDG: **8050**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:	STEAM CONTROL VALVE OK				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	1.5 CENTURY
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:	CWS MISSING ~ 10' OF 4" INSULATION				
CV INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	8"X2'
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8052 **BLDG NAME:** SR ENL QTRS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 22,700

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 10

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8052
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT BLDG
REFRIG SYS # SRVNG AHU: CV-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,800
CFM-CLG: 28,800
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 72 FAN COILS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	DUAL TEMP WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 10
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8052
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: CENTRAL PLANT

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: DTWP-1
PUMP HP: 5
PUMP MFG: US ELECTRIC
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: F8074-01239L14R033

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8052.XLS

BLDG: **8052**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	ALL				
AHU TYPE:	FC 2P	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:* RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	*SEVERAL ARE LEAKY OR INOPERABLE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8052.XLS

BLDG: **8052**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	CONV = 10" X 69"				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: CENTURY 5 HP/DUAL TEMP.
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:	NEED ~ 30' OF 4" INSULATION ON CW AND CWR LINES			
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:	CW CONTROL VALVE OK			
	STEAM CONTROL VALVE OK			
	DUAL TEMP. CHANGEOVER VALVE			

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7806
BLDG NAME: BN HQ BLDG

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 25

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7806
AHU NUMBER: AHU-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ADMINISTRATIVE
% OF BLDG AREA HEATED: 32

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,400
CFM-CLG: 6,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: TRANE CLIMATE CHANGER
UNIT MODEL: L-14
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON ELEC
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 7D182TTFS7028A
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 25
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 90
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7806
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ADMINISTRATIVE
% OF BLDG AREA HEATED: 32

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,600
CFM-CLG: 6,600
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: TRANE CIMATE CHANGER
UNIT MODEL: L-14
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 7E182TTFS7028A
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 25
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 90
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7806
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 36

BOILER MFG: OSAGE
UNIT MODEL: 3-5-1023
BLR CAP OUTPUT (BTUH): 818,400
BLR CAP INPUT (BTUH): 1,023,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 25
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 7.5 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7806
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: BLR-1

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 36

BOILER MFG: BUNHAM/BUSH
UNIT MODEL: SCA-63-2-1
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0

COMMENTS: Year built: May 1969

SCHEDULE

DAYS SCHEDULE NO: 25
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: 2-Way control valve

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/CWW/AJN

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7806	BLDG NAME:	BN HQ BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	BLDG PERIMETER
SOURCE OF HEATING:	BLR-1	SERVES AREA:	ALL
RADIATION UNIT TYPE:	HW	% AREA HTG:	36

RADIATION PUMP

PUMP TAG:	HP-1	PUMP HP:	0.75	PUMP MFG:	BALDOR
				PUMP MODEL:	

SCHEDULE

DAYS SCHEDULE NO:	25	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:	PNEUMATIC		
RADIATION CONTROL:	3-WAY VALVE HW RESET		
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:	Perimeter radiation under windows with manual control valves		

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/CWW/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7806
BLDG NAME: BN HQ BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1, AHU-2

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9836-3	TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	270	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	73.8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 25
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	Y	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	6-322801-01

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7806.XLS

BLDG: **7806**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	LINKED OA AND RA						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	3 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	MAU-1 HAS BEEN DISCONNECTED						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7806.XLS

BLDG: **7806**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	L-14	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	3 HP MOTOR; DAMPERS ARE INTERLOCKED.						DPR-ACT = Damper Actuator
	MAU-2 IS DISCONNECTED.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7806.XLS

BLDG: **7806**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: TYPICAL OF 6 FANS
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: ACCU IS TSI MODEL 10A076

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: NEEDS INSULATION 35' @ 1-1/2"

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7806.XLS

BLDG: **7806**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:		MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK: X	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7806.XLS

BLDG: **7806**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MEZZANINE		
BOILER TYPE:	STM	MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	DHW-CV'S ARE DISCONNECTED FROM STM SUPPLY. PERIMETER RADIATION HAS MANUAL SHUTOFF VALVES				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:	1/2 HP			
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/05/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8025 **BLDG NAME:** BN ADMIN & CLRM

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 12,000

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 31

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/05/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8025
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT
SERVES AREA: N.W. CLASSROOMS
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0
CFM-CLG: 2,610
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: MZ-43
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: EB145TTDR79227
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 31
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: CW control valve serves all 3 AHU's

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/05/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8025
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT
SERVES AREA: CENTRAL CLASSROOMS
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 0
CFM-CLG: 4,850
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 31
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: CW control valve serves all 3 AHU's

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/05/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8025
AHU NUMBER: AHU-3 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT — SERVES AREA: EAST ADMIN & CLASSROOMS
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: MULTI ZONE — NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 0 — CFM-CLG: 2,610
MIN %OA: 30 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE — UNIT MODEL: MZ-6
SUPPLY FAN HP: 2 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: EB145TTDR7927A — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 31 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: CW control valve serves all 3 AHU's

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/05/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8025
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE:

● CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 100

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 780,000
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 31
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/05/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 8025
BLDG NAME: BN ADMIN & CLRM
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: ALL
SOURCE OF HEATING: CV-1
SERVES AREA: ALL
RADIATION UNIT TYPE: HW
% AREA HTG: 0

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: GOULD
PUMP MODEL: 179260

SCHEDULE

DAYS SCHEDULE NO: 31
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: PNEUMATIC
RADIATION CONTROL: NONE
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/05/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 8025 BLDG NAME: BN ADMIN & CLRM

REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#):

AHU'S SERVED: AHU'S 1,2 & 3

UNIT TYPE CENTRAL PLANT

NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 31 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8025.XLS

BLDG: **8025**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:		MFG.:	TRANE		MODEL:	MZ-6	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:	RA & OA INTERLOCKED. SMALL AMOUNT OF RUST ON AHU-3 BODY, 3 ZONES.						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	ONE VALVE FOR ALL THREE AHU'S						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		*	
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	*6'- 2-1/2" @ PUMP, 6' 2" @ COIL						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8025.XLS

BLDG: **8025**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER				
AHU TYPE:	MZ	MFG.:	TRANE		MODEL:	MZ-10	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER (6)	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:	RA & OA DAMPERS INTERLOCKED						DPR-ACT = Damper Actuator
	OA DAMPER VERY DIRTY, ~ 10% AIR LEAKAGE, 6 ZONES						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		3' @2"	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8025.XLS

BLDG: **8025**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	MER				
AHU TYPE:	MZ	MFG.:	TRANE		MODEL:	MZ-6	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMMENTS:	RA AND OA INTERLOCKED. DIRTY. 10% AIR LEAKAGE.						DPR-ACT = Damper Actuator
	AHU - CASING IS RUSTY, 3 ZONES.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: / RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	WHITE RUST ON RA & OA DUCTWORK						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8025.XLS

BLDG: **8025**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:	OLD DOMINION STEEL	MODEL:	BUILT IN 1976

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 6' LONG, 8" DIAMETER CONVERTER

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: PERIMETER RADIATION: MANUAL SHUT-OFF VALVES. MANUAL DAMPERS ON CONVECTOR BOXES MISSING - CLASS ROOMS HEATED WITH SMALL CABINET UNIT HEATERS. LOOKS INSUFFICIENT FOR HEATING SPACE.

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:*

COMMENTS: *2-1/2" PIPE INSULATION @ 6' AROUND PUMP

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/4/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0003
BLDG NAME: POST CHAPEL

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 8,828

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 40

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/4/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0003
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU:
SERVES AREA: ALL
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 4,800
MIN %OA: 15
MAX %OA: 15

NAMEPLATE

UNIT MFG: COMFORT AIRE
UNIT MODEL: SW90-3BA
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 40
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 60
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/4/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0003
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: 2
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: FAN ONLY
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 15
MAX %OA: 15

NAMEPLATE

UNIT MFG: CLARAGE FAN COMPANY
UNIT MODEL: S: 85454
SUPPLY FAN HP: 0
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 40
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE:
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/4/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0003
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE
UNIT MODEL: 8656
BLR CAP OUTPUT (BTUH): 600,000
BLR CAP INPUT (BTUH): 750,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 40
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	8	9	9	9	9	9	9
REQ STOP:	22	16	16	22	16	16	12

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 7 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: 3 FILE: 3.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	BASEMENT MER				
AHU TYPE:	SZ	MFG.:	COMFORT AIRE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	CENTRAL COOLING AIR CONDITIONER (2) COMPRESSORS						DPR-ACT = Damper Actuator
	B/M NO. 5102-8-18A						RP-ACT = Replace Actuator
	ASBESTOS FREE						
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK:	REPLACE: X		COMMENTS:			
INLET VANES	N/A:	OK: X	COMMENTS:	MANUAL SETTING			
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS: N/A			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS: OLD			
COMMENTS:	OA DUCT IS 12" X 18" DUCT						
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	H&V UNIT CONNECTED TO SINGLE ZONE AHU						RP-ACT = Replace Actuator
	HEATING COIL IS LARGE CAST IRON RADIATOR						RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 3.XLS

BLDG: 3

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE
REFG. EQUIP. TYPE:	CT	MFG.: MARLEY AQUATOWER	SERIAL: 4715663

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: 3/4 HP
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE: X	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CNW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: METER NOT BOLTED TO ANYTHING
CNW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 3.XLS

BLDG: 3

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	BASEMENT MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	TYPE R
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam
HW - Hot Water
STM/HW - Steam to Hot Water Conv.
HTHW/HW - High Temp. HW to HW Cv.
HTHW/STM - High Temp HW to Steam Convertor
DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK: X	REPLACE:

COMMENTS: OLD CONVERTED COAL BURNER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7086
BLDG NAME: UNIT CHAPEL

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 8,696

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 35

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7086
AHU NUMBER: AHU-1
AHU LOCATION: MER BASEMENT
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: SANCTUARY
% OF BLDG AREA HEATED: 67

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,400
CFM-CLG: 5,400
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GE
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 35
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Face & Bypass dampers

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7086
AHU NUMBER: FC-1
AHU LOCATION: THROUGHOUT OFFICE AREA
REFRIG SYS # SRVNG AHU:
SERVES AREA: ADMIN OFFICE
% OF BLDG AREA HEATED: 33

AHU UNIT TYPE: FAN COILS - 2 PIPE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,300
CFM-CLG: 3,300
MIN %OA: 20
MAX %OA: 20

NAMEPLATE

UNIT MFG: MODINE
UNIT MODEL: CS90
SUPPLY FAN HP: 0.75
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☐

SCHEDULE

DAY SCHEDULE NO: 34
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: 3 speed fan switch on FCs.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7086
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: EW-30-G-PF
BLR CAP OUTPUT (BTUH): 907,000
BLR CAP INPUT (BTUH): 1,308,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 34
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 172 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7086
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

- (●) ☒ BOILER
  - BOILER TAG:
  - BOILER TYPE:
  - FUEL TYPE:
- ☐ CONVERTER
  - CONVERTER TAG:
  - CONVERTER TYPE:
  - CONV HT SOURCE:
- ( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 34
MONTH SECHDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: CENTURY
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: 8-164733-20

HW PUMP

PUMP TAG: 2
PUMP HP: 0.75
PUMP MFG: BELL & GOSSETT
PUMP SERVICE: DUAL TEMP PUMP
PUMP MODEL: MOT 148-8

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7086
BLDG NAME: UNIT CHAPEL

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD20S	# OF TOWER FANS:	4
CHILLER SERIAL NO:	6-86-11606-1	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.4
CHILLER AMPS:	44.8	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	20		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 35
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	0	0	0	0	0	10
REQ STOP:	14	0	0	0	0	0	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7086
BLDG NAME: UNIT CHAPEL

REF. UNIT NUMBER/TAG: CH-2
LOCATION (MER#): MER
AHU'S SERVED: FC-1

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	TSI
CHILLER MODEL:	9RC1-1010	# OF TOWER FANS:	1
CHILLER SERIAL NO:	STC 82A -01421	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.4
CHILLER AMPS:	42.8	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 34
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	9	9	9	9	9	10
REQ STOP:	14	17	17	17	17	17	13

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	40	CNWS SETPOINT:	0
CWR SETPOINT:	50	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7086.XLS

BLDG: **7086**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: FACE COIL IS IN CLOSED POSITION. 100% OUTSIDE AIR, 0% RETURN AIR.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: FROM CONTROLS SHEET F & B DAMPER IS MODULATED TO SATISFY THERMOSTAT.

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A:	OK: X	DX	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: WIRES EXPOSED, MOTOR NOT BOLTED DOWN

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	15' @ 2-1/2"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS: AHU PUMP UNINSULATED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7086.XLS

BLDG: **7086**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1,2	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	502CD205/TAC-11

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 4 ON LARGE UNIT (SERVES THE AHU IN BASEMENT MER)
1 FAN ON SMALL UNIT - OK

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7086.XLS

BLDG: **7086**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-3	LOCATION (RM)	MER BASEMENT		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	REFRIG. SYST. CO.	MODEL:	CHS-10W

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: ACCU FOR THIS CHILLER IS SMALL ONE OF TWO OUTSIDE.
SERVES FAN COILS ONLY

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING: X	ESTIMATED QUANTITY: ~50' OF 2-1/2"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: DUAL TEMP - HW ALSO

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7086.XLS

BLDG: **7086**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	EW-30-G-PF
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER LOOKS NEW

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: SEE REFRIGERATION FORM FOR DUAL TEMP PUMP

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 20' @ 3-1/2"

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0602
BLDG NAME: DENTAL CLINIC

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 11,557

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 9

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0602
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 80

AHU UNIT TYPE: DUAL DUCT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 13,900
CFM-CLG: 13,900
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: H-25-B
SUPPLY FAN HP: 25
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GOULD
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	STEAM	☒
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 9
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: Time Clock: 5am-8pm M-W; 5am-9pm Th-F; off Sat & Sun

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0602
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: IBR
UNIT MODEL: PF506
BLR CAP OUTPUT (BTUH): 506,000
BLR CAP INPUT (BTUH): 607,200
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0602
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: BELL AND GOSSETT
UNIT MODEL: SU-64-4
BLR CAP OUTPUT (BTUH): 500,000
BLR CAP INPUT (BTUH):
COMMENTS: Year Built: 1979

SCHEDULE

DAYS SCHEDULE NO: 9
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS:
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
RESET CONTROLS: N
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.25
PUMP MFG: BELL AND GOSSETT
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0602
BLDG NAME: DENTAL CLINIC
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION:
SOURCE OF HEATING: BLR-1
SERVES AREA: PERIMETER ROOMS
RADIATION UNIT TYPE: HW
% AREA HTG: 20

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.25
PUMP MFG:
PUMP MODEL:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0602
BLDG NAME: DENTAL CLINIC

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): EXTERIOR BLDG.
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	CA2CD75	# OF TOWER FANS:	6
CHILLER SERIAL NO:	4-87-12225	TOWER FAN V:	208
CHILLER V:	460	TOWER FAN AMPS:	4.5
CHILLER AMPS:	67.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	78.2		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 9
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	9	9	9	9	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	52	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	BALDOR
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	M3558T

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 602.XLS

BLDG: **602**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE: DUAL DUCT		MFG.: TRANE CLIMATE CHANGER	TYPE: H-25B

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER (2)	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: THERMAL RECLAIM COIL

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/3 HP ON HOT WATER
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 602.XLS

BLDG: **602**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE BLDG. SOUTH SIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	CA2CD75

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 8 FANS

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: EXT. PIPE NEEDS NEW PROTECTIVE JACKET OVER PIPE INSULATION ~50' @8" DIA.

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 602.XLS

BLDG: **602**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	PF-506
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER IS LEAKING AT BOTTOM, SIDES ARE RUSTED OUT.

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 15' @ 4"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7665 **BLDG NAME:** DENTAL CLINIC

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 11,076

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

Building was remodeled in 1990. Building contact: Michelle Brethour @ Ext: 4332

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7665
AHU NUMBER: AHU-1
AHU LOCATION: BASEMENT MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 19,500
CFM-CLG: 19,500
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: U.S. AIR CO
UNIT MODEL: BMZ-224
SUPPLY FAN HP: 15
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	STEAM	☒
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 72
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 72
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 72
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 72
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7665
BOILER RM LOCATION: BASEMENT AREA

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: LOW PRESS STEAM (<15#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE
UNIT MODEL: 3R51G
BLR CAP OUTPUT (BTUH): 648,000
BLR CAP INPUT (BTUH): 810,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7665 BLDG NAME: DENTAL CLINIC

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): BASEMENT MER

AHU'S SERVED: AHU-1

UNIT TYPE RECIPROCATING WITH COOLING TOWER

NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	MARLEY AQUATOWER
CHILLER MODEL:	4RH1-2500-TSK	# OF TOWER FANS:	1
CHILLER SERIAL NO:	CTC82B01746	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	88.5	TOWER FAN HP:	5
CHILLER PH:	3		
CHILLER CAP (TONS):	50		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	N	TEMP GAUGES:	N		

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	MARATHON
PUMP SERVICE:	COND WATER PUMP (CNW)			PUMP MODEL:	KVD184-FL7027ACW

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7665.XLS

BLDG: **7665**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:	MZ	MFG.:	U.S. AIR CO.		MODEL:	MZ-224	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	6 ZONES - PNEUMATIC. COULD NOT FIND OA & RA DAMPERS - MUST BE LOCATED ELSEWHERE IN BLDG. OR ON ROOF.						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	(NONE)	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	*		
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	*50' OF 1-1/2" ON STM & COND						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7665.XLS

BLDG: **7665**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER	
REFG. EQUIP. TYPE:	R-WCT	MFG.:		MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X		REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE: FAIRLY RUSTED AND DIRTY BUT OK
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: CNDW PUMP OK, SEALS OK. FAN MOTOR BODY RUSTED ON TOWER.

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: DX UNIT

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7665.XLS

BLDG: **7665**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	3R51G
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: 1/4 HP	OK: X	REPLACE:	

COMMENTS: NEW CONDENSATE PUMP

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	ASBESTOS

COMMENTS:

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: ELECTRIC DHW HEATER, 80 GALLON - RHEEM, MODEL 81G-80D
4500 WATTS UPPER
4500 WATTS LOWER

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/8/94
PREPARED BY: AJNCWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7670 **BLDG NAME:** DENTAL CLINIC

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 14,960

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 11/8/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJNCWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7670
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 100

AHU UNIT TYPE: DOUBLE DUCT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 25,405
CFM-CLG: 25,405
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: JOHN ZINK CO
UNIT MODEL: 76-155-1
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	STEAM	☒
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: DUAL SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: TIME CLOCK NON OPERABLE

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/8/94
PREPARED BY: AJNCWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7670
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: EL-30-G-WEB
BLR CAP OUTPUT (BTUH): 782,000
BLR CAP INPUT (BTUH): 1,308,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/8/94
PREPARED BY: AJNCWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7670
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HTHW
CONV HT SOURCE: BLR-1

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: NOT AVAILABLE
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/8/94
PREPARED BY: AJNCWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7670
BLDG NAME: DENTAL CLINIC

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED:

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	30GB090	# OF TOWER FANS:	8
CHILLER SERIAL NO:	Q794171	TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	3
CHILLER AMPS:	45	TOWER FAN HP:	1.5
CHILLER PH:	3		
CHILLER CAP (TONS):	83		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **7670**
FILE: 7670.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE:	DD	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: 7.5 HP

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A:	OK: X	COMMENTS:
RETURN AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
RETURN FAN MOTOR	OK: X	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7670.XLS

BLDG: **7670**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7670.XLS

BLDG: **7670**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	EL-30-G-W-B
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: NEW BOILER, 1992. CONDENSATE TANK (12" X 15" X 17") RUSTED.
DUNHAM-BUSH CRV620-8

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7670.XLS

BLDG: **7670**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MER		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:	TACO	MODEL:	

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: CONV = 5' X 8" DIA.

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: ~1/12 HP
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7245
BLDG NAME: ENL PERS DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 13,998

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
AHU NUMBER: AHU-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 7,000
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE CLIMATE CHANGER
UNIT MODEL: 2-15A
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: TOSHEBA
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 7,250
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE CLIMATE CHANGER
UNIT MODEL: 2-15A
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: TOSHEBA
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
AHU NUMBER: HV-1
AHU LOCATION: LATRINE MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 24

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE TORRIENT
UNIT MODEL: 217-1
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
AHU NUMBER: HV-2
AHU LOCATION: KITCHEN MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/9/94
LOCATION: FT. RILEY, KS — PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
AHU NUMBER: HV-3 — AHU LOCATION: KITCHEN MEZZ
REFRIG SYS # SRVNG AHU: — SERVES AREA: DISHWASHING
% OF BLDG AREA HEATED: 2

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,000 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE TORRIVENT — UNIT MODEL: 210-1
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: KINGSTON-COML — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 9457 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☒

SCHEDULE

DAY SCHEDULE NO: 23 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 66

BOILER MFG: BURNHAM
UNIT MODEL: 4FL-675A-40-G-PE

BLR CAP OUTPUT (BTUH): 5,657,000
BLR CAP INPUT (BTUH): 7,071,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7245
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: PERIMETER RADIATION

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HTHW
CONV HT SOURCE: BLR-1

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 66

BOILER MFG: OLD DOMINION
UNIT MODEL: 50254
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/9/94
PREPARED BY: CWW/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7245
BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CWP-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1, 2

UNIT TYPE: OTHER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 25
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	5	5	5	5	5	0
REQ STOP:	0	20	20	20	20	20	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	6-349906-01

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	TYPE 2-15A	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: OA/RA INTERLOCKED

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	2-15A	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: OA/RA INTERLOCKED;

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	**RP- ACT:***	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: *2" CONTROL VALVE

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	H&V	MFG.:	TRANE TORRIVENT		MODEL:	217-1	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	OA DAMPER LINKAGE DISCONNECTED						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		10'-3" PIPE	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	ACM ON PIPE FITTINGS REMOVED						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-2	LOCATION (Rm)	MEZZANINE
AHU TYPE:	H&V	MFG.:	MODEL:

SZ - Single Zone; H&V - Heating & Vntltng.; FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone; VAV - Variable Air Vol.; RHT - Reheat System
DD - Dual Duct; UH - Unit Heater; IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: ACM ON 90'S & TEES ARE REMOVED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-3	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	H&V	MFG.:	TRANE TORRIVENT		MODEL:	210-1	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X*
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	*LINKAGE IS DISCONNECTED						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	PIPE INSULATION MISSING ON 90'S & TEES (ACM REMOVAL)						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CWP-1	LOCATION (RM)	MER	
REFG. EQUIP. TYPE:	C.PLANT	MFG.:		MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
OMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING: X	ESTIMATED QUANTITY: 10 SF

COMMENTS: INSULATION MISSING ON CHW PUMP

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **7245**
FILE: 7245.XLS

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	4FL-675A-40-G-PF
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 30' @ 4"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: NO INSULATION ON BOILER FLUE ~ 25' @ 24" DIA, 2-1/2" THICK

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	KITCHEN MEZZANINE		
BOILER TYPE:	TYPICAL OF 2	MFG.:		MODEL:	
CONVERTER TYPE:	DHW STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	30' @ 2-1/2"
COMMENTS:					

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7245.XLS

BLDG: **7245**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-3	LOCATION (RM)	MEZZANINE		
BOILER TYPE:		MFG.:	OLD DOMINION	MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	6" DIA X 3', TEMP @ 162 DEGREES F				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 10' @ 2-1/2"
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7606
BLDG NAME: ENL PERS DIN

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

SUSPECT ACM LOCATED ON PIPE FITTINGS AND BOILER FLUE

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
AHU NUMBER: AHU-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000
CFM-CLG: 7,000
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-332795
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250
CFM-CLG: 7,250
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
AHU NUMBER: HV-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
AHU NUMBER: HV-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE
UNIT MODEL: A-250
BLR CAP OUTPUT (BTUH): 6,900,000
BLR CAP INPUT (BTUH): 8,625,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 8 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7606
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

SOURCE OF BLDG HEAT

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HTHW
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: DUNHAM BUSH
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.75
PUMP MFG: BALDOR
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7606
BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1, 2

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9225-5	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	CENTURY
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	SC-215-FMA

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7606.XLS

BLDG: **7606**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	SUPPLY				
AHU TYPE:		MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	SEE PHOTOS FOR AHU'S IN MEZZANINE.						DPR-ACT = Damper Actuator
	NEW CONTROL PANELS SITTING OUT, NOT CONNECTED YET.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:	KITCHEN MEZZANINE IS SAME AS OTHER DINING HALLS WITH (1) MAU AND (1) AHU						
	ON EACH SIDE.						
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK:	REPLACE:		COMMENTS:			
INLET VANES	N/A:	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	CONVERTERS THE SAME AS WELL WITH LARGE ASBESTOS HW CONVERTER/STORAGE TANKS						
COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	AHU-1 HAS A LEAKY 3-WAY VALVE ON THE CHILLED WATER @ 2" VALVE.						RP-ACT = Replace Actuator
	AHU-2 CHILLED WATER 3-WAY VALVE IS ALSO SHOT. REPLACE @ 2".						RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:	NEEDS 30' OF 2" INSULATION ON AHU'S						
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	CONVERTER PUMP FOR PERIMETER RADIATION NOT BOLTED DOWN.						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7606.XLS

BLDG: **7606**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER/OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2CD70/TAC-73

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 6 CONDENSER FANS

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7606.XLS

BLDG: **7606**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	PAWNEE	MODEL:	A-250
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER SHELL RUSTED, ASBESTOS ON FLUE

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: PIPE INSULATION PEALING

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7654 **BLDG NAME:** ENL PERS DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

SUSPECT ACM LOCATED ON BOILER FLUE AND PIPE FITTINGS.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
AHU NUMBER: AHU-1 — AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000 — CFM-CLG: 7,000
MIN %OA: 30 — MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH — UNIT MODEL: HAH-80
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322465-01 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 70 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 70 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250
CFM-CLG: 7,250
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-80
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 60
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/10/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
AHU NUMBER: HV-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-80
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 60
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
AHU NUMBER: HV-2
AHU LOCATION: ABOVE CEILING KITCHEN
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 3,600
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-32
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C145TTDR7033B
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE
UNIT MODEL: A-250
BLR CAP OUTPUT (BTUH): 6,900,000
BLR CAP INPUT (BTUH): 8,625,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7654
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

SOURCE OF BLDG HEAT

- ☐ BOILER
  - BOILER TAG:
  - BOILER TYPE:
  - FUEL TYPE:
- ☒ CONVERTER
  - CONVERTER TAG: CV-1
  - CONVERTER TYPE: STM TO HTHW
  - CONV HT SOURCE:
- ○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: U.S. ELECTRICAL
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7654 BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): AHU-1, 2

AHU'S SERVED:

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD805	# OF TOWER FANS:	6
CHILLER SERIAL NO:	7995-4	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	25
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	71		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	DAYTON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	2N937-H

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	DUNHAM BUSH		MODEL:	HAH-80	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	**RP- ACT:X**	**RP-BD:X**
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: 2" CW CONTROL VALVE (3-WAY)

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE
AHU TYPE:	SZ	MFG.:	MODEL:
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)	
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System	
DD - Dual Duct	UH - Unit Heater	IND - Induction System	

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: *
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: *DAMPER ACTUATOR LINKAGE IS DISCONNECTED. ACTUATOR CONTROLS OA & RA DAMPERS. AHU IS VERY DIRTY.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 6'-3" CW PIPE
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: PIPE INSULATION IS DAMAGED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	KITCHEN MEZZANINE		
AHU TYPE:	MAU	MFG.:	DUNHAM BUSH	MODEL:	HAH-32

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	8' @ 2"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-2	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	MAU	MFG.:	DUNHAM-BUSH		MODEL:	HAH-80	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: *	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	*ACTUATOR DISABLED						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	R-11 INSULATION ON ROOF						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		15' @ 2-1/2"	
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	INSULATION POOR IN SPOTS						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2CD80S

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: PUMP UNINSULATED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
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BLDG: **7654**

FILE: 7654.XLS

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	ACCU	MFG.:	MCQUAY-PERTEX	MODEL:	ARC-407A-Y-94

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK: X	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: PUMP UNINSULATED

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)			
BOILER TYPE:	STM	MFG.:	SUPERIOR	MODEL:	A-250
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BURNER CONTROLS WORK OK

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: BOILER FEED PUMP
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X*	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X*	MISSING:	ESTIMATED QUANTITY:

COMMENTS: *ACM INSUL.

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1,2	LOCATION (RM)	KITCHEN MEZZANINE		
BOILER TYPE:	TYPICAL OF 2	MFG.:	SUPERIOR	MODEL:	
CONVERTER TYPE:	DHW STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	CONTROL VALVE GOOD				
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	ASBESTOS
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	
COMMENTS:	10' @ 1-1/2", 5' @ 4"				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7654.XLS

BLDG: **7654**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-3	LOCATION (RM)	MEZZANINE
BOILER TYPE:		MFG.:	MODEL:
CONVERTER TYPE:	STM/HW	MFG.:	MODEL:

STM - Steam
HW - Hot Water
STM/HW - Steam to Hot Water Conv.
HTHW/HW - High Temp. HW to HW Cv.
HTHW/STM - High Temp HW to Steam Convertor
DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 4' -4" X 6" CONVERTER
PERIMETER RADIATION W/MANUAL SHUT-OFF VALVES

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: NOT BOLTED TO PAD, WIRES HANGING OUT.

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 2' X 10"
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 3' X 3"

COMMENTS: VALVE GOOD, PUMP UN-INSULATED

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7804 **BLDG NAME:** ENL PERS DIN

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

SUSPECT ACM LOCATED ON BOILER FLUE

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
AHU NUMBER: AHU-1 — AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000 — CFM-CLG: 7,000
MIN %OA: 30 — MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH — UNIT MODEL: HAH-80
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322465-01 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 70 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 70 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/10/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250
CFM-CLG: 7,250
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-80
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 60
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
AHU NUMBER: HV-1
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 75

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-80
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 60
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
AHU NUMBER: HV-2
AHU LOCATION: ABOVE CEILING KITCHEN
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-32
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C145TTDR7033B
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE:
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: SPACE HEAT & DHW

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE
UNIT MODEL: A-250
BLR CAP OUTPUT (BTUH): 6,900,000
BLR CAP INPUT (BTUH): 8,625,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7804
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

SOURCE OF BLDG HEAT

- ☐ BOILER
  - BOILER TAG:
  - BOILER TYPE:
  - FUEL TYPE:
- ☒ CONVERTER
  - CONVERTER TAG: CV-1
  - CONVERTER TYPE: STM TO HTHW
  - CONV HT SOURCE:
- ○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: U.S. ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7804
BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1, 2

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	MCQUAY PERTEX
CHILLER MODEL:	SC2CD80S	# OF TOWER FANS:	6
CHILLER SERIAL NO:	7995-4	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	3
CHILLER AMPS:	25	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	73.8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: PNEUMATIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	DAYTON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	2N937-H

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **7804**
FILE: 7804.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZ ABOVE KITCHEN
AHU TYPE:		MFG.: TRANE CLIMATE CHANGER	MODEL: L-14

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: O. A. AND R. A. INTERLOCKED

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	LINCOLN 3 HP
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS: COIL SECTION CASING IS TAPED UP WITH DUCT TAPE
NEW COILS

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE: 2.5"	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE: 2"	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: COOLING CONTROL VALVE HAS LEAKY STEM

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY: POOR CONDITION (ALL)
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY:
FILE: 7804.XLS

BLDG: **7804**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZ ABOVE REST ROOM				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	L-14	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:	3 HP		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	CHILLED WATER PUMP O.K. 5HP, UNINSULATED, RUSTED						
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: **	RP- ACT: / RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:	** LEAKING						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	10' OF 2-1/2"		
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7804.XLS

BLDG: **7804**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	MEZZ ABOVE KITCHEN				
AHU TYPE:	MAU	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TRANE: TORRIVENT MOD # T-10						DPR-ACT = Damper Actuator
	MARATHON ELECTRIC 1-1/2 HP						RP-ACT = Replace Actuator
	FACE AND BYPASS DAMPER						
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE: CLEAN COIL	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: POOR	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **7804**
FILE: 7804.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-2	LOCATION (Rm)	MEZZ ABOVE RESTROOM				
AHU TYPE:	MAU	MFG.:	TRANE TORRIVENT		MODEL:	T-21	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	LINCON 5-HP						DPR-ACT = Damper Actuator
	FACE AND BYPASS, ACTUATOR AND LINKAGE DISSABLED, WIRED INTO BYPASS MODE						RP-ACT = Replace Actuator
	NEEDS TO BE CLEANED, FILTER ~1/2" DUST						
FILTER SECTION	N/A:	OK: X	REPLACE: FILTERS	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE: LINCOLN		COMMENTS:	5 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	CONTROL VALVE, 2-WAY STEAM						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: POOR	ESTIMATED QUANTITY:		12' @ 2"	
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	COIL HAS BEEN DISABLED						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7804.XLS

BLDG: **7804**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE	
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	APPLIED PRODUCTS	MODEL: ACDR

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: TYPICAL OF 6
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:

COMMENTS: 4 - 4" 90'S AND 3' OF 4" MISSING, NEED METAL JACKET ~35'

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: NEED INSULATION ON PUMP

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7804.XLS

BLDG: **7804**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)			
BOILER TYPE:	STM	MFG.:	SUPERIOR	MODEL:	2-5-253 SERIAL - 5161
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:
COMMENTS:	POWER BURNER			
	MIN VALVE CAP = 2224 LBS/HR			
	10 PSI APPROX. 15 PSI MAX			
	STEAM DUMPING TO MER; ASBESTOS ON FLUE			

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 30' @ 4"
COMMENTS:				

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7804.XLS

BLDG: **7804**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	MEZZANINE ABOVE KITCHEN		
BOILER TYPE:	TYPICAL OF 2	MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	DOMESTIC HW, 2-WAY CONTROL VALVE ON STM				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **7804**
FILE: 7804.XLS

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-3	LOCATION (RM)	MEZZ ABOVE RESTROOM		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:	DUNHAM-BUSH	MODEL:	SC63-2 BASE BOARD RAD 1969 8"x40"

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3/4 HP
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	DAMAGED
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:	*

COMMENTS: * DAMAGED 5' ON CONVERTER PUMP 1-1/2"

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7804.XLS

BLDG: **7804**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	RAD-1	LOCATION (Rm)	
AHU TYPE:		MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: MANUAL SHUTOFF VALVES UNDER WINDOWS

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK:	REPLACE: LINCON	COMMENTS:
INLET VANES	N/A:	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7856 **BLDG NAME:** ENL PERS DIN

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: Y

CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 23

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

REMARKS:

SUSPECT ACM LOCATED ON BOILER FLUE.

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
AHU NUMBER: AHU-1 — AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000 — CFM-CLG: 7,000
MIN %OA: 30 — MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH — UNIT MODEL: HAH-80
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322465-01 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 70 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 70 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
AHU NUMBER: AHU-2
AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,250
CFM-CLG: 7,250
MIN %OA: 30
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAMN/BUSH
UNIT MODEL: HAH-80
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	STEAM	☒
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 60
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/10/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
AHU NUMBER: HV-1 — AHU LOCATION: MEZZ
REFRIG SYS # SRVNG AHU: — SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,400 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: 11400 — UNIT MODEL: 0
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 60 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
AHU NUMBER: HV-2
AHU LOCATION: ABOVE CEILING KITCHEN
REFRIG SYS # SRVNG AHU:
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,600
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: DUNHAM/BUSH
UNIT MODEL: HAH-32
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6C145TTDR7033B
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 23
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE:

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG: PAWNEE
UNIT MODEL: A-250
BLR CAP OUTPUT (BTUH): 6,900,000
BLR CAP INPUT (BTUH): 8,625,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 10
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	0	0	0	0	0	0
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/10/94
PREPARED BY: JM/AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7856
BOILER RM LOCATION: MEZZ

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: BB RADIATION

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HTHW
CONV HT SOURCE:

○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 17

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 0
BLR CAP INPUT (BTUH): 0
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG: U.S. ELECTRICAL
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/10/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7856 BLDG NAME: ENL PERS DIN

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU-1, 2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	MCQUAY PERTEX
CHILLER MODEL:	SC2CD80S	# OF TOWER FANS:	6
CHILLER SERIAL NO:	7995-4	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	25
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	71		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 23 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	6	5	5	5	5	5	6
REQ STOP:	24	24	24	24	24	24	24

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	DAYTON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	2N937-H

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MEZZ MER				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	L14	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X *	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	* O. A. & R. A. DAMPERS INTERLOCKED. PNEUMATIC CONTROLS.						DPR-ACT = Damper Actuator
	MINIMUM POSITION SWITCH ON O. A. - DOES NOT WORK						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK:	REPLACE: X		COMMENTS:	BEARINGS MAKING NOISE		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:	SUPPLY FAN MOTOR - 5 HP MARATHON						
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	6' - 1 1/2"		
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	INSULATION MISSING ON CONDENSATE LINES						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZ MER				
AHU TYPE:	SZ	MFG.:	TRANE		MODEL:	L14	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X *	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	* OA & RA DAMPERS INTERLOCKED.						DPR-ACT = Damper Actuator
	SINGLE SETPOINT T-STATS ON ALL T-STATS - PNEUMATIC.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 4'OF 1-1/2" ON CONDENSATE			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	DAMAGED VALVE INSULATION ON CHW. - 3' OF 8" INSUL.						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	KITCHEN MEZZ		
AHU TYPE:	MAU	MFG.:	TRANE TORRIVENT	MODEL:	T-10

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: FACE AND BYPASS

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: STEAM COIL ONLY

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	MARATHON ELECTRIC 1-1/2 HP
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	10' OF 2"
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-2	LOCATION (Rm)	LOCKER MEZZANINE				
AHU TYPE:	MAU	MFG.:	TRANE TORRIVENT		MODEL:	T21	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	LARGE HOLES CUT IN INTAKE DUCT TO TAKE AIR FROM MEZZANINE AREA						DPR-ACT = Damper Actuator
	~90% AIR FROM MEZZANINE, 10% FROM OUTSIDE.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	UNIT DISSABLED/ MOTOR GONE/ HOLES TORCHED IN UNIT						
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		5' @ 2" 12' @ 1-1/2"	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		SC2CD70
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	(10AD76-ACCU)

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:	6 FANS @ 1 HR EACH
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:	
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: SPLIT SYSTEM - ACCU OUTSIDE/ COMPRESSOR INSIDE

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:	
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:	

COMMENTS: 50' OF 1-1/4" INSUL. MISSING ON LIQUID LINES

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	15' - 4"

COMMENTS: CHW PUMP NEEDS INSULATION

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	5 HP CENTURY E - PLUS. *
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	

COMMENTS: * MOTOR AND PUMP NOT BOLTED DOWN - HANGING IN AIR - PIPE IS SUPPORTING ALL WEIGHT. (NEW MOTOR)

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	AJAX	MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor			
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: 5HP	OK: X	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	8' OF 4"
COMMENTS:	LARGE CONDENSATE TANK UNINSULATED AT 8' x 3' DIA				
HW PUMP MOTO	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
COMMENTS:	BLOWER DAMPER ACTANTOR DISSABLED ON BOILER				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-1	LOCATION (RM)	KITCHEN MEZZ
BOILER TYPE:		MFG.:	MODEL:
CONVERTER TYPE:	STM/HW	MFG.:	MODEL:

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: ASBESTOS ON CONVERTER
DOMESTIC HOT WATER

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: RELIEF VALVE LEAKING

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: ACTUATOR CONDITION = GOOD

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:

COMMENTS: 10' @ 2"; 8'@ 1-1/2"; 40' @ 3-1/2"

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJM
FILE: 7856.XLS

BLDG: **7856**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-2	LOCATION (RM)	LOCKER ROOM MEZZ		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:	
COMMENTS:	DOMESTIC WATER				
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:	1/12 HP RECIRCULATING PUMP				
	ASBESTOS ON CONVERTER				
BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	28' @ 2-1/2"
COMMENTS:					

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7856.XLS

BLDG: **7856**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	CV-3	LOCATION (RM)	LOCKER MEZZ		
BOILER TYPE:		MFG.:		MODEL:	
CONVERTER TYPE:	STM/HW	MFG.:	DUNHAM/BUSH	MODEL:	SCA63-2-1

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE:

COMMENTS: 6" x 3' LONG

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: PERIMETER RAD

HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: MANUAL SHUT OFF VALVES AND MANUAL BALANCING VALVES ON PERIMETER RAD.

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3/4 HP
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 8' OF 2-1/2"

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0723 **BLDG NAME:** MNT HANGAR COMB

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 21,640

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 2

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

Suspect ACM located on heating pipe fittings

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
AHU NUMBER: HV-1 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: 1ST FLR. MAINT. SHOPS
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,600 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.25 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
AHU NUMBER: UH-1
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BAY
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM-BUSHCH
UNIT MODEL: VHU-10
SUPPLY FAN HP: 0.25
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K907B
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
AHU NUMBER: UH-2 — AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: BAY
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM-BUSCH — UNIT MODEL: VHU-10
SUPPLY FAN HP: 0.25 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K907B — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 70 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
AHU NUMBER: UH-3
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BAY
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM-BUSCH
UNIT MODEL: VHU-10
SUPPLY FAN HP: 0.25
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K907B
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
AHU NUMBER: UH-4 — AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: BAY
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 740 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: DUNHAM-BUSH — UNIT MODEL: VHU-10
SUPPLY FAN HP: 0.25 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K907B — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 2 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

% AREA HEATED BY BB RADIATION: 90

NAMEPLATE

BOILER MFG: BURNHAM
UNIT MODEL: 4FL-311-40-LB
BLR CAP OUTPUT (BTUH): 2,603,000
BLR CAP INPUT (BTUH): 3,254,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0723
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: BAY FLOOR

● ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: BLR-1

○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 832,960
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 2
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 0723
BLDG NAME: MNT HANGAR COMB
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: BAY FLOOR
SOURCE OF HEATING: CV-1
SERVES AREA: BAY FLOOR
RADIATION UNIT TYPE: HW
% AREA HTG: 32

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG: BELL & GOSSETT
PUMP MODEL: M80037

RADIATION PUMP

PUMP TAG: 2
PUMP HP: 0.5
PUMP MFG: BELL & GOSSETT
PUMP MODEL: M80037

SCHEDULE

DAYS SCHEDULE NO: 2
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL: 2-WAY VALVE, MANUAL O
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0723	BLDG NAME:	MNT HANGAR COMB
PER RAD (SYSTEM TAG) NO:	RAD-2	RAD SYS LOCATION:	1ST & 2ND FLR. OFFICES
SOURCE OF HEATING:	BLR-1	SERVES AREA:	1ST & 2ND FLR. OFFICES
RADIATION UNIT TYPE:	STEAM	% AREA HTG:	25

SCHEDULE

DAYS SCHEDULE NO: 2 MONTHS SCHEDULE NO: 1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC

RADIATION CONTROL:

OCC HT SPACE SP: 0

UNOCC HT SPACE SP: 0 RESET CONTROL: N

CONTROL COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 723.XLS

BLDG: **723**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	BAY				
AHU TYPE:	SZ	MFG.:	DUNHAM-BUSH		MODEL:	VHU-10	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	PERIMETOR RADIATION IN OFFICE AREAS WITH MANUAL CONTROL VALVES.						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE *	SIZE:			
COMMENTS:	* NO FILTER, COIL EXPOSED						
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:	GE MODLE: 5KH33GG111E		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	1/6 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	CONDENSATE PMPS CONTINEOUSLY RUNNING AT EACH HEATING FAN COIL IN THE BAY AT 1/3 HP.						
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	MANUAL	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	TYPICAL OF (4) UNITS IN BAY AREA						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	20' @ 3"		
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 723.XLS

BLDG: **723**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	4FL-311-40-LB
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	

COMMENTS:

BLR PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 3' @ 6" & 15' @ 4"

COMMENTS:

HW PUMP MOTO	N/A:	OK: X	REPLACE:	SIZE: 1/2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK: X	REPLACE:	SIZE: 1/2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	X	ESTIMATED QUANTITY: 30' @ 1-1/2"

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0727
BLDG NAME: MNT HANGAR COMB

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 36,152

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: MAINT. SHOPS/TOOL ROOM
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,160
CFM-CLG: 5,160
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CCDV03APBB
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 200V
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-1
SERVES AREA: SHOPS AND BREAKROOM
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 4

CFM-HTG: 1,175
CFM-CLG: 1,175
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CCB12BBRBO
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOERR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: HV-1 — AHU LOCATION: PAINT BOOTH
REFRIG SYS # SRVNG AHU: — SERVES AREA: PAINT BOOTH
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: UH-1
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: 29SD2
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: UH-2
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800
CFM-CLG: 2,800
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: 29SD2
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: UH-3
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: AIRTHERM
UNIT MODEL: 29SD2
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DAYTON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: OTHER
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
AHU NUMBER: UH-4
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 7.5

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,800
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: AIRHERM
UNIT MODEL: 29SD2
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

% AREA HEATED BY BB RADIATION: 33

NAMEPLATE

BOILER MFG: KEWANEE
UNIT MODEL: M-335-KGO
BLR CAP OUTPUT (BTUH): 3,350,000
BLR CAP INPUT (BTUH): 4,181,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ADDITION

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX
UNIT MODEL: WG450D
BLR CAP OUTPUT (BTUH): 360,000
BLR CAP INPUT (BTUH): 450,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 150 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 2
PUMP HP: 3
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

HW PUMP

PUMP TAG: 1
PUMP HP: 1
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0727
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE: BAY FLOOR RADIATION

(●) ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE: BLR-1

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 33

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH):
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/AMS

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	0727	BLDG NAME:	MNT HANGAR COMB
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	BAY FLOOR
SOURCE OF HEATING:	BLR-1	SERVES AREA:	BAY FLOOR
RADIATION UNIT TYPE:	HW	% AREA HTG:	33

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	1.5	PUMP MFG:	CENTURY
				PUMP MODEL:	SC-1845-FC4-7

RADIATION PUMP

PUMP TAG:	2	PUMP HP:	1.5	PUMP MFG:	CENTURY
				PUMP MODEL:	SC-1845-FC4-7

SCHEDULE

DAYS SCHEDULE NO:	11	MONTHS SCHEDULE NO:	1
SCHEDULE COMMENTS:			

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
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CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC		
RADIATION CONTROL:			
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N
CONTROL COMMENTS:			

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0727
BLDG NAME: MNT HANGAR COMB

REF. UNIT NUMBER/TAG: ACCU-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUC-306-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.5
CHILLER AMPS:	13	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	16		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0727
BLDG NAME: MNT HANGAR COMB

REF. UNIT NUMBER/TAG: ACCU-2
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUB-C153-A	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	0
CHILLER AMPS:	71.4	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	15		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1	LOCATION (Rm)	BAY				
AHU TYPE:	FC-2P	MFG.:	AIRTHERM		MODEL:	295D2	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	TYPICAL OF (4) UNDERFLOOR HEAT WORKING						DPR-ACT = Damper Actuator
CT/ACCU FAN MTR							RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	1/3 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	MANUAL	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	CONDENSATE DRAINS ON TO FLOOR. CONDENSATE PUMP						RP-ACT = Replace Actuator
	MISSING. OTHER CONDENSATE PUMP WITH BAD BEARING AT 1/3 HP.						RP-BD = Replace Body
	(2) LEAKY CONDENSATE TANKS.						
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER NORTH				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	CCDB03APBB	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	FAIRLY NEW UNIT						DPR-ACT = Damper Actuator
CT/ACCU FAN MTR	OA AND RA DAMPER INTERLOCKED.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE: BAD BEARINGS		COMMENTS:	CENTURY 1 HP		
INLET VANES	N/A: X	OK:	COMMENTS:	SQUELS ON AND OFF			
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL DX	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING C STM	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:	8' @ 1"		
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	SOUTH MER				
AHU TYPE:	MZ-4	MFG.:	TRANE CLIMATE CHANGER		MODEL:	CCBB12BBKB0	

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

CT/ACCU FAN MTR SUMMER/WINTER SWITCH, DAY/NIGHT SWITCH — DPR-ACT = Damper Actuator
CT/ACCU FAN MTR — RP-ACT = Replace Actuator
LOCKED IN THE 100% RA POSITION

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	DOERR 5 HP
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL DX	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL HW	N/A:	OK: X	REPLACE:	SIZE: 3/4"	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: — RP-ACT = Replace Actuator — RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	EST 5 HP
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	LOOKS NEW

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	ACCU-1	LOCATION (RM)	NORTH SIDE OF BLDG.		
REFG. EQUIP. TYPE:	ACCU	MFG.:	TRANE	MODEL:	RAVC-306-B

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: COMP. 208V/13 AMPS, OLD BUT STILL RUNS.

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: FAN 208V/ 2.5 AMP

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	RAUB-C153-A

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 230 V AND 71.4 A
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: 1.2
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: LOOKS OK

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER (E)		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	M335-K60
CONVERTER TYPE:	STM/HW	MFG.:	5'x10"	MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.		HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:	
COMMENTS:	UV SENSOR				

CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 10'@10" 15' @ 6"
COMMENTS:				
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP (OLD) CENTURY
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1.5 HP (OLD) CENTURY
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:	PUMPS UNINSULATED AND ASSOICATED PIPING VERY RUSTED CONTROL VALVE OK			
CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 727.XLS

BLDG: **727**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-2	LOCATION (RM)	MER SOUTH		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WG-150-D
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK:	REPLACE:

COMMENTS: ATMOSPHERIC BURNER WITH POWER EXHAUST

CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: BOILER RUSTED

* SEE AHU-3

* HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: SUPPLY AREA HAS UNIT HEATERS (2) . POWER TRAIN HAS (2)
SHEET METAL HAS (4) PAINT SHOP HAS (1)

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0741 **BLDG NAME:** MNT HANGAR COMB

ELECTRIC METER: N
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 38,898

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 24

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741
AHU NUMBER: AHU-1 — AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: ALL
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 14,200 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: MCQUAY — UNIT MODEL: 71136-L-1/71136-L-
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOERR — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 30004 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 24 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 65 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741
AHU NUMBER: AHU-2
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: ALL
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 14,200
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: MCQUAY
UNIT MODEL: 71136-L1/71136-L-
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOERR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 30004
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 24
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 65
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741
AHU NUMBER: AHU-3 — AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: ALL
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 14,200 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: MCQUAY — UNIT MODEL: 71136-L-1/71136-L-
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOERR — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 30004 — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 24 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 65 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0741
AHU NUMBER: AHU-4
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: ALL
% OF BLDG AREA HEATED: 25

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT:

CFM-HTG: 14,200
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: MCQUAY
UNIT MODEL: 71136-L-1/71136-L-
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOERR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 30004
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 24
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 65
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0741
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: MED PRESS STEAM (15# TO 125#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: 4FL675A40LB
BLR CAP OUTPUT (BTUH): 5,657,000
BLR CAP INPUT (BTUH): 7,071,000

COMMENTS: 5 HP BURNER MOTOR, 2EA 1 HP COND. PUMPS

SCHEDULE

DAYS SCHEDULE NO: 24
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	8	7	8	7	8	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 741.XLS

BLDG: **741**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1-4	LOCATION (Rm)	BAY WALL
AHU TYPE:	FC 2P	MFG.: MCQUAY	MODEL: 71136-L-2

SZ - Single Zone; H&V - Heating & Vntltng.; FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone; VAV - Variable Air Vol.; RHT - Reheat System
DD - Dual Duct; UH - Unit Heater; IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: DPR-ACT = Damper Actuator; RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	ELECTRODYNAMICS
INLET VANES	N/A: X	OK:	COMMENTS:	440V @ 6.8A
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: *	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: *MANUAL
HAS 6 SINDOW AC'S FOR OFFICES IN BAY AREA. CONDENSORS IN B
RP-ACT = Replace Actuator; RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 25' @ 4" EA UNIT
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: LOOKS LIKE INSULATION IS BEING RE-DONE. THESE UNITS ARE ONLY HEAT SOURCE FOR ENTIRE BAY. PERIMETER CAST IRON RADIATORS IN WEST OFFICES AND 1 UNIT HEATER ONLY IN SW OFFICE.

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 741.XLS

BLDG: **741**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	BURNHAM	MODEL:	4FL-675A-40-LB
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam STM/HW - Steam to Hot Water Conv. HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water HTHW/HW - High Temp. HW to HW Cv. DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: BOILER NOT ON AND IT IS COLD. GAS HEATER IN MER.

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0820
BLDG NAME: TAC EQUIP SHOP

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 20,564

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 39

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/17/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0820
AHU NUMBER: AHU-1 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-1 — SERVES AREA: ALL
% OF BLDG AREA HEATED: 45

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800 — CFM-CLG: 4,800
MIN %OA: 12 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE CLIMATE CHANGER — UNIT MODEL: A85F65042
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 5
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☒

SCHEDULE

DAY SCHEDULE NO: 39 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC/DDC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0820
AHU NUMBER: HV-1
AHU LOCATION: OFFICES
REFRIG SYS # SRVNG AHU:
SERVES AREA: OFFICES
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,400
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 39
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/17/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0820
AHU NUMBER: MAU-1 — AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: — SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: MAKE-UP AIR UNIT — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,100 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 3 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 39 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0820
AHU NUMBER: MAU-2
AHU LOCATION: MAINT. BAYS
REFRIG SYS # SRVNG AHU:
SERVES AREA: MAINT. BAYS
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,100
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 39
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0820
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 15

BOILER MFG: BURNHAM
UNIT MODEL: 4FW-277-40-LB

BLR CAP OUTPUT (BTUH): 2,318,000
BLR CAP INPUT (BTUH): 2,898,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 39
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS: JC DSC- 8500 CONTROL PANEL

HW PUMP

PUMP TAG: 1
PUMP HP: 10
PUMP MFG: US ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL: E810AU11U253R112F

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0820
BLDG NAME: TAC EQUIP SHOP

REF. UNIT NUMBER/TAG: ACCU-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUC-C124-C	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:		TOWER FAN AMPS:	2.7
CHILLER AMPS:	10.7	TOWER FAN HP:	0.75
CHILLER PH:	0		
CHILLER CAP (TONS):	12		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 39
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **820**
FILE: 820.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-2	LOCATION (Rm)					
AHU TYPE:	MAU	MFG.:	TRANE CLIMATE CHANGER		MODEL:	CCDB06ANOD	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	OA & RA DAMPERS INTERLOCKED. HAS SEPARATE ACTUATOR						DPR-ACT = Damper Actuator
	DAMPER TO CLOSE OA LOUVER.						RP-ACT = Replace Actuator
	4 UH'S IN BAY #2						
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 820.XLS

BLDG: **820**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	CCDB10ABNU	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	NO DAMPERS SEEN.						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	EST 5 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:	IN-LINE @ ~16" IN DIA.		
RETURN FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
COMMENTS:	PLANS SHOW RETURN FAN AS AN OUTSIDE AIR FAN, OUTSIDE AIR DAMPERS AND						
	EXHAUST DAMPERS. COULD NOT LOCATE ON UNIT.						
COOLING COIL DX	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE: 3/4	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	THIS BLDG. IS SIMILAR TO 8390 IN THE BAY AREAS						RP-ACT = Replace Actuator
	(4) UNIT HEATERS IN BAY WITH (1) AHU.						RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 820.XLS

BLDG: **820**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1	LOCATION (Rm)	TOOL ROOM
AHU TYPE:	H&V	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: OA & RA INTERLOCKED

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	EST 1 HP
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **820**
FILE: 820.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	
AHU TYPE:	MAU	MFG.: TRANE CLIMATE CHANGER	TYPE: CCDB06ANOD

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: OA & RA DAMPERS INTERLOCKED; PNEUMATIC CONTROLS TO ACTUATOR ARE DISCONNECTED, OPERATES IN RA MODE.
4 UH'S IN BAY #1

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS: 1 HP MOTOR

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:GOOD	RP-BD: X
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: DIRTY COILS; PNEUMATIC LINE TO CONTROL VALVE IS DISCONNECTED

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 820.XLS

BLDG: **820**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	WEST SIDE OF BLDG.		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	RAUC-C-124-C

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 10.7 AMP @ 460V
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 820.XLS

BLDG: **820**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	4FW-277-40-LB
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 10 HP, U.S. ELECTRIC
HW PUMP SEALS	N/A:	OK:	REPLACE: X	SIZE: 230V @ 25.2A
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE: BEARINGS BAD OR CAVITATING
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE: VERY NOISY PUMP
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 1470 **BLDG NAME:** AR VEH MNT SHOP

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 21,667

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-1
SERVES AREA: OFFICES/CLASSROOM
% OF BLDG AREA HEATED: 8

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,500
CFM-CLG: 2,500
MIN %OA: 25
MAX %OA: 25

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: BAUA359C-B
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-2
SERVES AREA: ADDITION OFFICES
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000
CFM-CLG: 2,000
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG: SNYDER GENERAL
UNIT MODEL: GUG141A020IN
SUPPLY FAN HP: 0.33
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: RESIDENTIAL GAS-FIRED FURNANCE

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	GAS	☐
REHEAT COIL:	HOT WATER	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
AHU NUMBER: MAU-1
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT.BAY
% OF BLDG AREA HEATED: 5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 22,200
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 20
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	GAS	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
AHU NUMBER: UH-1
AHU LOCATION: MAINT. BAYS
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT.BAYS
% OF BLDG AREA HEATED: 55

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 12,320
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
AHU NUMBER: UH-2
AHU LOCATION: WAREHOUSE
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WAREHOUSE
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,800
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL OF 4 FAIN COIL UNITS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: 3R6-RO
BLR CAP OUTPUT (BTUH): 792,000
BLR CAP INPUT (BTUH): 990,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 145 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL: YYE145TTDR5352AA

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 1470
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-2
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: KEWANEE
UNIT MODEL: 3R6-RO
BLR CAP OUTPUT (BTUH): 792,000
BLR CAP INPUT (BTUH): 990,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 145 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL: YYE145TTDR5352AA

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 1470
BLDG NAME: AR VEH MNT SHOP

REF. UNIT NUMBER/TAG: ACCU-2
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	INTERCITY PRODUCTS	TOWER MFG:	
CHILLER MODEL:	AD060H	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	2.3
CHILLER AMPS:	19.6	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 1470
BLDG NAME: AR VEH MNT SHOP

REF. UNIT NUMBER/TAG: ACCU-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUC-256-A	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	2.5
CHILLER AMPS:	9	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	5		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER (WITH BOILERS)
AHU TYPE:	SZ	MFG.:	TRANE SPLIT SYSTEM EVAPORATOR ;MODEL: BAUA-359C-B

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: CANNOT ACCESS

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	FURNACE	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER
AHU TYPE: RES/FURN/AC		MFG.: SNYDER GENERAL	MODEL: GUG 141AO20IN

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: SERVES NEW ADDITION ONLY. ELECTRIC CONTROLS WITH RA AND OA INTERLOCKED. INPUT = 141000 BTU/HR, OUTPUT = 111000 BTU/HR

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	FURNACE X	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-1-4	LOCATION (Rm)	WAREHOUSE				
AHU TYPE:	UH	MFG.:	TRANE		MODEL:	UH5A0605-A-AAC	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	TYPICAL OF 4						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	CEILING OF FARTHEST BAY
AHU TYPE:	MAU	MFG.: CANNOT ACCESS	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: NATURAL GAS FIRED MAU. FOUR UNIT HEATERS (REZNER) IN FAR BAYS.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	CANNOT SEE
SUPPLY FAN MOTOR	OK:	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS: (6) UNIT HEATERS IN MAIN BAY AREA. BASEBOARD RADIATION IN ALL OTHER AREAS.

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	FURNACE	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: GE ZONE LINE HEAT PUMP IN OFFICE IN BAY AREA. 2 UNIT HEATERS IN PARTS STORAGE

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE BLDG. NORTH	
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	DELUXE HIGH EFF.	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: BOILERS & AHU IN MER ~ 10 YEARS OLD

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	OUTSIDE BLDG. NORTH		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	RAUC-256-A

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: BOILER #2 RUNS OK. BOILER #1 RUNS OK, BUT PRODUCES A LOT OF EXHAUST.

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 14 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 1470.XLS

BLDG: **1470**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1&2	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	KEWANEE	MODEL:	3R6-KO
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: OVERALL CONDITION OF BOILERS & PUMPS = GOOD

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP MARATHON ELECTRIC
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/9/94
PREPARED BY: CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7176
BLDG NAME: MOTOR POOL MNT SHOP

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y

CONDITIONED SQFT: 4,880

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 7

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

REMARKS:

SUSPECT ACM LOCATED ON ALL STEAM AND CONDENSATE PIPE

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 11/9/94
LOCATION: FT. RILEY, KS — PREPARED BY: CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7176
AHU NUMBER: UH-1 — AHU LOCATION: CEILING MOUNTED
REFRIG SYS # SRVNG AHU: — SERVES AREA: ALL
% OF BLDG AREA HEATED: 22

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,250 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 0

NAMEPLATE

UNIT MFG: MODINE — UNIT MODEL:
SUPPLY FAN HP: 0.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS: TOTAL FOR 5 UHS

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 7 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 11/9/94
PREPARED BY: CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7176
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: LOW PRESS STEAM (<15#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: NATIONAL RADIATOR
UNIT MODEL: 6-66
BLR CAP OUTPUT (BTUH): 1,000,000
BLR CAP INPUT (BTUH): 1,250,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 7
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	8	9	12	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7176.XLS

BLDG: **7176**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-1	LOCATION (Rm)	CEILING (13' TO BOTTOM OF UNIT)				
AHU TYPE:	UNIT HEATER	MFG.:	MODINE		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	MANUAL ON/OFF SWITCH FOR UH'S IN BAY AREA						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK: N/A	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	NO PIPE INSULATION - INSULATION IS NOT NECESSARY, PIPE USED TO HEAT BLDG. ALSO.						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 9 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7176.XLS

BLDG: **7176**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:		MODEL:	
CONVERTER TYPE:		MFG.: NAT-U.S. RADIATOR, CRANE CO		MODEL:	Jun-66
STM - Steam	STM/HW - Steam to Hot Water Conv.		HTHW/STM - High Temp HW to Steam Convertor		
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.		DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC: X	POWER:	OK:	X	REPLACE:

COMMENTS: BOILER IS OLD & RUSTED

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X*	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS: *ACM INSULATION

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7920 BLDG NAME: VEH MNT SHOP DS

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 124,553

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 55

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-1
SERVES AREA: OFFICES - WING A
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200
CFM-CLG: 1,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS - FIRES; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-2
SERVES AREA: OFFICES WING B
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,575
CFM-CLG: 1,575
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 45,000 BTUH INPUT; 36,700 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	GAS	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-3
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-3
SERVES AREA: OFFICES - WING C
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200
CFM-CLG: 1,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-4
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-4
SERVES AREA: OFFICES - WING D
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200
CFM-CLG: 1,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS - FIRED; 27,000 BTUH INPUT; 21,600 OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-5
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-5
SERVES AREA: OFFICES - WING E
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200
CFM-CLG: 1,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-6
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-6
SERVES AREA: OFFICES - WING A
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,200
CFM-CLG: 1,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 27,000 BTUH INPUT; 21,600 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/17/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: AHU-7 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: ACCU-7 — SERVES AREA: OFFICES - CENTRAL
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,700 — CFM-CLG: 3,700
MIN %OA: 10 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 2 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 55 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: HV-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SUPPLY - WING A
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 439,000 BTUH INPUT; 352,000 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: HV-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SUPPLY - WING B
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: HV-3
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SUPPLY - WING C
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 395,000 BTUH INPUT; 316,000 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0
COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: HV-4
AHU LOCATION: MEZZANINE
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SUPPLY - WING D
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 395,000 BTUH INPUT; 316,000 BTUH OUTPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: HV-5
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SUPPLY - WING E
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-1
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WING A
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,250
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,541,000 BTUH INPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-2
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WING B
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 19,625
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 10
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: RELIANCE
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,493,000 BTUH INPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-3
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WING C
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,900
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,590,000 BTUH

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-4
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WING D
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,900
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,590,000 BTUH INPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-5
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: WING E
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,900
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,590,000 BTUH INPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: MAU-6
AHU LOCATION: BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: CENTRAL
% OF BLDG AREA HEATED: 2.5

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 14,500
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL: 5
SUPPLY FAN HP: 0
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: GAS FIRED; 1,101,000 BRHU INPUT

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7920
AHU NUMBER: UH-1
AHU LOCATION: CEILING MOUNTED
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: CENTRAL
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE: GAS-FIRED UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 20,240
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS: TOT. FOR 11 UHS; BTUH INPUT: 1,650,000; BTUH OUTPUT: 1,320,000

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 55
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: BAYS
SOURCE OF HEATING: NATURAL GAS
SERVES AREA: WINGS A, B, C, D, & E
RADIATION UNIT TYPE: NATURAL GAS
% AREA HTG: 38

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-7
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-7

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-6
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-6

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAUA-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-5
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-5

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAUA-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-2
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAUA-252-B	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-1
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	OAUA-252-B	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	230
CHILLER V:	0	TOWER FAN AMPS:	2.2
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-3
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-3

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38FGA30500	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.25
CHILLER PH:	0		
CHILLER CAP (TONS):	3		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7920
BLDG NAME: VEH MNT SHOP DS

REF. UNIT NUMBER/TAG: ACCU-4
LOCATION (MER#): ROOF
AHU'S SERVED: AHU-4

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	HEAT WAVE	TOWER MFG:	
CHILLER MODEL:	CTD 904	# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	4		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 55
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	9	7	9	7	9	0
REQ STOP:	0	17	17	17	15	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.: DOOR HEATERS 1-8		LOCATION (Rm)	CENTER AREA
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: BURNS OPEN FLAME IN A RING WITH A BLOWER. NATURAL GAS, ONLY RUN WHEN THE DOORS ARE OPEN (NO EXHAUST). 2 UNITS NOT OPERATING.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-1	LOCATION (Rm)	WEST WING, MEZZANINE
AHU TYPE: UNIT HEATER		MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: GAS FIRED W/EXHAUST

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: UNIT NOT ACCESSIBLE

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	UH-2	LOCATION (Rm)	CORE AREA (WAREHOUSE)
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: GAS FIRED UNIT HEATERS WITH FLUE.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	ROOM HEATER-1	LOCATION (Rm)	WEST WING, MEZZANINE, SOUTH					
AHU TYPE: ROOM HEATER		MFG.:			MODEL:			
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater		IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:	
COMMENTS:								DPR-ACT = Damper Actuator
								RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:				
COMMENTS:								
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:				
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:				
INLET VANES	N/A: X	OK:	COMMENTS:					
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A			
COMMENTS:								
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
COMMENTS:	GAS-FIRED							RP-ACT = Replace Actuator
								RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:				
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:				
COMMENTS:								
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:				
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:				
COMMENTS:								

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	CORE AREA, MEZZANINE (EAST)				
AHU TYPE:	SZ	MFG.:	CARRIER		MODEL:	58CH080 202	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	HAS A GAS-FIRED FURNACE SECTION AND A CARRIER DX COIL						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:	UNIT UNACCESSIBLE		
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:		DETERIORATING	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	WEST WING, (E) MEZZANINE				
AHU TYPE:	SZ	MFG.:	CARRIER		MODEL:	58CH080 202	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: N/A	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	O.A. & R.A. DAMPER INTERLINKED. ELECTRIC DAMPER ACTUATOR.						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:	FILTERS DIRTY						
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	~1/2 HP		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	GAS FIRED FURNACE						
COOLING COIL	N/A:	OK: X	REPLACE: DX	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	COMPRESSORS & CONDENSOR ON ROOF						RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:		DETERIORATING	
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7620.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1	LOCATION (Rm)	IN CENTER AREA ON MEZZANINE, EAST			
AHU TYPE:	MAU	MFG.:	SPACE AIR (GAS-FIRED RAD)	MODEL:	218-HH	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater	IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: ELECTRIC ACTUATOR ON OA

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS: 7-1/2 HP MARATHON, CFM 14,500
INPUT 1,104,000 BTUH

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: GAS-FIRED

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7620.XLS

BLDG: **7920**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-2	LOCATION (Rm)	WEST WING, MEZZANINE, SOUTH				
AHU TYPE:	MAU	MFG.:	SPACE AIR		MODEL:	221-HH	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	CFM = 20,900M BTU INPUT = 1,590,000						DPR-ACT = Damper Actuator
	10 HP RELIANCE, ELECTRIC ACTUATORS, ELECTRIC CONTROL,						RP-ACT = Replace Actuator
	GAS-FIRED - DIRECT FIRE, NO EXHAUST						
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	ON ROOF (SERVES AHU-2)	
REFG. EQUIP. TYPE:		MFG.:	CARRIER	MODEL: 38GF-103410

C-WCT = Centrifugal w/ Water Side Cooling Towe
R-WCT = Reciprocating w/ Water Side Cooling To
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SOUTH BAY - CARRIER 38TG030500, 208V @ 9.5 AMP COMPRESSOR

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7920.XLS

BLDG: **7920**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO. ACCU 1-3		LOCATION (RM) ON ROOF		
REFG. EQUIP. TYPE: ACCU'S		MFG.: HEATWAVE	MODEL: CTD904	
C-WCT = Centrifugal w/ Water Side Cooling Tower		R-ACCU = Reciprocating w/ Air Cooled Condensing Unit		
R-WCT = Reciprocating w/ Water Side Cooling Tower		ASB-WCT = Absorption w/ Water Side Cooling Tower		
ACCU = Air Cooled Condensing Unit		CT = Cooling Tower		
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:	1/2 HP COND FANS - 2 EA, 1 OF 3 ON SE BAY			
	440V - 16.5 AMP COMPRESSORS			
COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:	2 OF 3 -	TRANE OAUA-252-B		
		230V - 2.2A COND. FAN.		
		230V - 15.6A COMPRESSOR		
	SOUTH BAY - CARRIER 38TG030500, 208V @ 9.5 AMP COMPRESSOR			

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8390 **BLDG NAME:** TAC EQUIP SHOP

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 24,755

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 51

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/13/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: 1ST 2ND FLOOR OFFICES
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,475
CFM-CLG: 3,475
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL:
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/13/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: HV-1
AHU LOCATION: 102
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: 1ST FLR OFFICES
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,345
CFM-CLG: 0
MIN %OA: 33
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/13/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: MAU-1
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,700
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: MAU-2
AHU LOCATION: MAINT. BAY
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: MAKE-UP AIR UNIT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,700
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: UH-1
AHU LOCATION: MAINT. BAY NORTH
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT. BAY NORTH
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
AHU NUMBER: UH-2
AHU LOCATION: MAINT. BAY SOUTH
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: MAINT BAY SOUTH
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 11,200
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 51
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8390
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

● ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

○ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 10

BOILER MFG: AJAX
UNIT MODEL: WGFD3250
BLR CAP OUTPUT (BTUH): 2,600,000
BLR CAP INPUT (BTUH): 3,250,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 51
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 190 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 15
PUMP MFG: U S ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL: GB06200151L021R060

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 8390
BLDG NAME: TAC EQUIP SHOP
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: PERIMETER OFFICES
SOURCE OF HEATING:
SERVES AREA: 1ST 2ND FLOORS
RADIATION UNIT TYPE: HW
% AREA HTG: 10

SCHEDULE

DAYS SCHEDULE NO: 51
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/13/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 8390
BLDG NAME: TAC EQUIP SHOP

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	COMPRESSOR
CHILLER MODEL:	RAUCB754B	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	480	TOWER FAN AMPS:	2.7
CHILLER AMPS:	12.3	TOWER FAN HP:	0.33
CHILLER PH:	0		
CHILLER CAP (TONS):	8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 51
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	18	18	18	18	18	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8390.XLS

BLDG: **8390**

PERIMETER RADIATION - HVAC UPGRADE OBSERVATIONS

AHU NO.:	PR-1	LOCATION (Rm)	STORAGE ROOM, WEST SIDE				
AHU TYPE:	PR	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System			PERIMETER RADIATION		
O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	ZONE CONTROL VALVE (2-WAY PNEUMATIC, 1/2") NEEDS TO BE REPLACED. PHOTO #5. TYPICAL OF OTHERS						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK:	REPLACE:		COMMENTS:			
INLET VANES	N/A:	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **8390**
FILE: 8390.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1	LOCATION (Rm)	STORAGE ROOM - WEST SIDE				
AHU TYPE:	H&V	MFG.:	TRANE		MODEL:	TORIVENT, TYPE 2	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: MINIMUM POSITIONER ON ACTUATOR.. OA DAMPER AND RA DAMPER INTERLOCKED

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	2 HP
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8390.XLS

BLDG: **8390**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	MAU-1&2	LOCATION (Rm)	CEILING				
AHU TYPE:	MAU	MFG.:	TRANE	MODEL:	CLIMATE CHANGER, SIZE 8, TYPE CF-B		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	PNEUMATIC						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:	2 HP MARATHON		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:X RP-BD:X
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:	3-WAY PNEUMATIC CONTROL VALVE @ 1" PIPE SIZE						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN

BLDG: **8390**
FILE: 8390.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: *
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: *
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: *ACTUATOR IS MISSING. RETURN AIR IS SEALED OF WITH SHEET METAL; OA DAMPERS ARE WIRED OPEN. UH'S ARE IN GOOD CONDITION.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: DX COIL FOR COOLING

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8390.XLS

BLDG: **8390**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	ACCU-1	LOCATION (RM)	OUTSIDE - EAST SIDE
REFG. EQUIP. TYPE:	ACCU	MFG.:	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 8390.XLS

BLDG: **8390**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:		MODEL:	
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	
COMMENTS:					
BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:	
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:	
COMMENTS:	(NEW BEARINGS & SEALS 10-18-94)				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:	
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:	
COMMENTS:					
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	
COMMENTS:					

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/19/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM.AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0202 **BLDG NAME:** PHYS FITNESS CTR

ELECTRIC METER: N **CONDITIONED SQFT:** 51,307

GAS METER: N

SUSPECT ACM: N

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 52

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: AHU-1
AHU LOCATION: WEIGHT ROOM
REFRIG SYS # SRVNG AHU: CT-1
SERVES AREA: WEIGHT ROOM
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: AHU-2
AHU LOCATION: SKATE RINK
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: SKATE RINK
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 18,500
CFM-CLG: 18,500
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: CARRIER
UNIT MODEL: 28CX1428
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: UH-1
AHU LOCATION: GYMNASIUM
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: GYM
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: UH-2
AHU LOCATION: GYMNASIUM
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: GYM
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: UH-3
AHU LOCATION:

REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: 2ND FLR. OFFICES
% OF BLDG AREA HEATED: 15

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,750
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: UH-4
AHU LOCATION: LOCKER ROM
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: LOCKER RM/ RAQUETBALL CO
% OF BLDG AREA HEATED: 21

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 8,000
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP:
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
AHU NUMBER: UH-5
AHU LOCATION: STORAGE
REFRIG SYS # SRVNG AHU:
SERVES AREA: WOMEN'S LOCKERS
% OF BLDG AREA HEATED: 16

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 52
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0202
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: LOW PRESS STEAM (<15#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: KEWANEE
UNIT MODEL: M425-KG
BLR CAP OUTPUT (BTUH): 4,250,000
BLR CAP INPUT (BTUH): 5,313,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 52
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: 10 DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/19/94
PREPARED BY: JM.AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0202
BLDG NAME: PHYS FITNESS CTR

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AE044S10AA	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.6
CHILLER AMPS:	76	TOWER FAN HP:	0.43
CHILLER PH:	3		
CHILLER CAP (TONS):	45		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 52
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/19/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM.AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0202 BLDG NAME: PHYS FITNESS CTR

REF. UNIT NUMBER/TAG: CT-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1

UNIT TYPE WATER COOLING TOWER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	MARLEY
CHILLER MODEL:		# OF TOWER FANS:	1
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	1
CHILLER PH:	0		
CHILLER CAP (TONS):	10		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 52 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	6	6	9
REQ STOP:	21	22	22	22	22	22	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	0.75	PUMP MFG:	
PUMP SERVICE:	COND WATER PUMP (CNW)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 202.XLS

BLDG: **202**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	FC-1,2	LOCATION (Rm)	GYM
AHU TYPE:	FC	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: TWO FC'S IN GYM & ONE IN ATTIC ABOVE RAQUET BALL COURTS.
220V/8.42 AMPS

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: DUCT, 58" X 16"

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS: UNITS VERY OLD.

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	NONE	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: CONDITION = VERY POOR

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 202.XLS

BLDG: **202**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	WEIGHT ROOM
AHU TYPE:	SZ	MFG.: COMFORT AIRE	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL-DX	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: OLD UNIT. NO INSULATION ON ~20' @ 3" FOR HEATING

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 202.XLS

BLDG: **202**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE, WEST OF BLDG.		
REFG. EQUIP. TYPE:	ACCU	MFG.:	CARRIER	MODEL:	38AE044510AA

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 4 FANS

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE: X	SIZE:

COMMENTS: DAMAGED, SEE PHOTOS

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 202.XLS

BLDG: **202**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CT-1	LOCATION (RM)	OUTSIDE
REFG. EQUIP. TYPE:	CT	MFG.: MARLEY AQUATOWER	SERIAL: 4615 750

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE: X	SIZE: 1 HP
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: THIS UNIT GOES WITH THE COMFORT AIR UNIT IN THE WEIGHT ROOM

COOLING TOWER	N/A:	OK:	REPLACE: X	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: CORE CAKED W/SCALE

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CNW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: MOTOR IS OLD, 3/4 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 202.XLS

BLDG: **202**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	KEWANEE	MODEL:	M-425-KG
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 12' @ 8" + 24' @ 4"

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7485 **BLDG NAME:** BOWLING ALLEY

ELECTRIC METER: Y **CONDITIONED SQFT:** 36,966

GAS METER: Y

SUSPECT ACM: N

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 53

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7485
AHU NUMBER: AHU-1
AHU LOCATION: ORIG. BLDG MER
REFRIG SYS # SRVNG AHU: CH-2
SERVES AREA: ORIG. BLDG.
% OF BLDG AREA HEATED: 46

AHU UNIT TYPE: DUAL DUCT
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 16,000
CFM-CLG: 16,000
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG: WORTHINGTON CORP
UNIT MODEL: CM-40.00
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 53
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7485
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-2
SERVES AREA: NEW ADDITION
% OF BLDG AREA HEATED: 46

AHU UNIT TYPE: VAV
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,000
CFM-CLG: 10,000
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: CARRIER
UNIT MODEL: 34ED23
SUPPLY FAN HP: 10
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	HOT WATER	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 53
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 70
PRESENT TEMP WINTR UNOCC: 70
PRESENT TEMP SUM OCC: 70
PRESENT TEMP SUM UNOCC: 70
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/11/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7485
AHU NUMBER: UH-1 — AHU LOCATION: STORAGE/ MAINTENANCE
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: ORIG. BLDG
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: UNIT HEATER — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,200 — CFM-CLG: 0
MIN %OA: 0 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 0.25 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 53 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: N — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7485
AHU NUMBER: UH-2
AHU LOCATION: STORAGE/ MAINTENANCE
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: NEW ADDITION
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: UNIT HEATER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 1,630
CFM-CLG: 0
MIN %OA: 0
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 0.25
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 53
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7485
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: AHU-1,2

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: AJAX
UNIT MODEL: WGFD-2000
BLR CAP OUTPUT (BTUH): 1,600,000
BLR CAP INPUT (BTUH): 2,000,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 53
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: N
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 3
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL: UVE 182TTDR7627ACL

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7485
BLDG NAME: BOWLING ALLEY

REF. UNIT NUMBER/TAG: CH-2
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-2

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	CARRIER	TOWER MFG:	
CHILLER MODEL:	38AD-028-530	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.5
CHILLER PH:	0		
CHILLER CAP (TONS):	28		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 53
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7485
BLDG NAME: BOWLING ALLEY

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	502CD60	# OF TOWER FANS:	6
CHILLER SERIAL NO:	9692	TOWER FAN V:	0
CHILLER V:	230	TOWER FAN AMPS:	4.6
CHILLER AMPS:	250	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	60		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 53
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	12	9	9	9	9	9	9
REQ STOP:	22	24	24	24	24	2	2

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7485.XLS

BLDG: **7485**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	NEW MER				
AHU TYPE:	VAV	MFG.:	CARRIER		MODEL:	28CU112MB4084-K	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	VAV CONTROLLER IS SET TO MANUAL OPERATION						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7485.XLS

BLDG: **7485**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER WEST
AHU TYPE:	DUAL DUCT	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	CLEAN	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	CLEAN	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: DAMPERS VERY DIRTY, NEED TO BE CLEANED. UNIT CHANGEOVER SWITCH STILL @ SUMMER.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:X
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 20' @ 3"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7485.XLS

BLDG: **7485**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE NEW SIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	CARRIER	MODEL:	38AD-028-530

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: 208V @ 6A
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: 1 HP
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE: 1 HP

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7485.XLS

BLDG: **7485**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	SOUTH OF BLDG.		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	502CD60

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 6 CONDENSER FANS

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7485.XLS

BLDG: **7485**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER EAST		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WFD-2000
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	

COMMENTS:

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3 HP
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: PUMP LOOKS OLD, BUT OK. PUMP UN-INSULATED

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/14/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/AMS/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 6914 **BLDG NAME:** EXC MAIN RETL

ELECTRIC METER: Y **CONDITIONED SQFT:** 63,930

GAS METER: Y

SUSPECT ACM: N

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 54

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/AMS/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1, CH-2
SERVES AREA: MAIN SALES AREA
% OF BLDG AREA HEATED: 51

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 28,100
CFM-CLG: 28,100
MIN %OA: 57
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 20
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	HOT WATER	☒
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 60
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/AMS/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1, CH-2
SERVES AREA: OFFICE AREA
% OF BLDG AREA HEATED: 6

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 3,500
CFM-CLG: 3,500
MIN %OA: 17
MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTEMP
UNIT MODEL:
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/14/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/AMS/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
AHU NUMBER: AHU-3 — AHU LOCATION: MEZZ ABOVE OFFICES
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: WAREHOUSE
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,380 — CFM-CLG: 7,380
MIN %OA: 25 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 60 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/AMS/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
AHU NUMBER: AHU-4
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1, CH-2
SERVES AREA: SOUTH SHOPS
% OF BLDG AREA HEATED: 18

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 9,620
CFM-CLG: 9,620
MIN %OA: 0
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 10
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/AMS/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
AHU NUMBER: AHU-5
AHU LOCATION: MEZZANINE
REFRIG SYS # SRVNG AHU: CH-1, CH-2
SERVES AREA: NORTH SERVICES SHOPS
% OF BLDG AREA HEATED: 12

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 6,790
CFM-CLG: 6,790
MIN %OA: 0
MAX %OA: 100

NAMEPLATE

UNIT MFG: AIRTEMP
UNIT MODEL: BD15
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: CF213TTDR702
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/AMS/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6914
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE:

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

(○) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: OSAGE
UNIT MODEL: 3-5-350
BLR CAP OUTPUT (BTUH): 1,600,000
BLR CAP INPUT (BTUH): 2,000,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 54
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:

CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 5
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL: CVH184TTDR2026

HW PUMP

PUMP TAG: 2
PUMP HP: 5
PUMP MFG: LEESON
PUMP SERVICE: HW PUMP
PUMP MODEL: N184117DBIA

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/14/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/AMS/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 6914 BLDG NAME: EXC MAIN RETL

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1,2,4,5

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	
CHILLER MODEL:	6DK1-3500-TSK	# OF TOWER FANS:	16
CHILLER SERIAL NO:	88H75879	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	125	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	127		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	7.5	PUMP MFG:	LINCOLN
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	TV-2996

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/14/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/AMS/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 6914 BLDG NAME: EXC MAIN RETL

REF. UNIT NUMBER/TAG: CH-2 LOCATION (MER#): OUTSIDE

AHU'S SERVED: AHU-1,2,4,5

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	COPELAMETIC	TOWER MFG:	
CHILLER MODEL:	6DK1-3500-TSK	# OF TOWER FANS:	16
CHILLER SERIAL NO:	88H75879	TOWER FAN V:	0
CHILLER V:	208	TOWER FAN AMPS:	0
CHILLER AMPS:	125	TOWER FAN HP:	0.33
CHILLER PH:	3		
CHILLER CAP (TONS):	127		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	7.5	PUMP MFG:	LINCOLN
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	TV-2996

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER MEZZANINE
AHU TYPE:	SZ	MFG.: SUPERIOR	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

CT/ACCU FAN MTR
CT/ACCU FAN MTR

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: FILTERS DIRTY

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING: X	ESTIMATED QUANTITY:	10' @ 2-1/2"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER MEZZANINE				
AHU TYPE:	SZ	MFG.:	AIRTEMP		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR							DPR-ACT = Damper Actuator
CT/ACCU FAN MTR							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	MAN. VALVES	RP- ACT: / RP-BD:
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: *	RP- ACT:X / RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: / RP-BD:
COMMENTS:	* CONTROL VALVE DISCONNECTED FROM AIR						RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:		UGLY	
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	SHIPPING AREA
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

CT/ACCU FAN MTR SPACE IS VERY HOT, EVEN THOUGH T-STAT SET AT 60 DEGREES F

DPR-ACT = Damper Actuator

CT/ACCU FAN MTR

RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator

RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	3' 1-1/2" MISSING
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-4	LOCATION (Rm)	LEFT OF MAIN ENTRANCE				
AHU TYPE:	MZ-6	MFG.:	AIR TEMP		MODEL:	BD-15	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
CT/ACCU FAN MTR	DAMPER ACTUATORS DISCONNECTED FROM PNEUMATIC LINES,						DPR-ACT = Damper Actuator
CT/ACCU FAN MTR	NO PNEUMATIC AIR TO CONTROL VALVES. DAMPERS IN 100% RA						RP-ACT = Replace Actuator
	POSITION						
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:X
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:X
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:	DEGRADED, 20' @ 2-1/2"						

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1,2	LOCATION (RM)	MER
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	MODEL:

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: SEE OTHER SHEET FOR ACCU'S; TYPICAL OF CHILLER 2 ALSO.

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: CW PUMP INSULATION IS MISSING

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 13 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	**ACCU-1-4**	LOCATION (RM)	OUTSIDE BLDG. - NORTH		
REFG. EQUIP. TYPE:	ACCU	MFG.:	CARRIER	MODEL:	09DE-098-600

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 8 CONDENSER FANS. ACCU IN GOOD CONDITION

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6914.XLS

BLDG: **6914**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER
BOILER TYPE:	HW	MFG.: SUPERIOR	MODEL: 3-5-350
CONVERTER TYPE:		MFG.:	MODEL:

STM - Steam | STM/HW - Steam to Hot Water Conv. | HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water | HTHW/HW - High Temp. HW to HW Cv. | DHW - Domestic Hot Water Convertor

COMP. MOTOR	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:
COMP. MOTOR	1984			
COMP. MOTOR				
COMP. MOTOR				
CT/ACCU FAN MTR				

CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 60' @ 4"

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 6940
BLDG NAME: INDOOR SWIM POOL

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N
CONDITIONED SQFT: 23,347

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 59

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/14/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6940
AHU NUMBER: HV-1 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE — SERVES AREA: SWIMMING POOL
% OF BLDG AREA HEATED: 77

AHU UNIT TYPE: HEATING AND VENTILATING — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 24,800 — CFM-CLG: 0
MIN %OA: 100 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TEMTROL — UNIT MODEL: BD-T31D
SUPPLY FAN HP: 20 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 256 TTDR 7329CC — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 59 — MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 74 — HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: HUMIDITY SENSORS ON OA AND RA

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/14/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6940
AHU NUMBER: HV-2
AHU LOCATION: LOCKER RMS/STORAGE
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: LOCKER ROOMS/ STORAGE
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: TEMTROL
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 59
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 75
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS: CONTROLS IN POOR CONDITION

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/14/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6940
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE:
FUEL TYPE:

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: OSAGE
UNIT MODEL: 3-5-350
BLR CAP OUTPUT (BTUH): 2,240,000
BLR CAP INPUT (BTUH): 2,800,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 59
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	11	11	11	11	11	11	11
REQ STOP:	20	20	20	20	20	20	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: BALDOR
PUMP SERVICE: HW PUMP
PUMP MODEL: M3155T

HW PUMP

PUMP TAG: 2
PUMP HP: 1
PUMP MFG: BELL & GOSSETT
PUMP SERVICE: HW PUMP
PUMP MODEL:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6940.XLS

BLDG: **6940**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER				
AHU TYPE:	SZ	MFG.:	TEMTROL		MODEL:	BZ-T31D	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: *
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	ACTUATORS LOOK OK, BUT STUCK OPEN.						DPR-ACT = Damper Actuator
	ACTUATORS LOCATED IN FAR WALL OF POOL AREA (2 @ 6' X 3')						RP-ACT = Replace Actuator
	OPEN ~20%						
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	HUMIDITY METER IN AHU-1 BOX						
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY:		15' @ 2"	
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6940.XLS

BLDG: **6940**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER CEILING MOUNTED				
AHU TYPE:	SZ	MFG.:	TEMTROL		MODEL:	_-106	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	MISSING	RP- ACT: X
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS: X		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6940.XLS

BLDG: **6940**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	SUPERIOR	MODEL:	3-5-350
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	
COMMENTS:	SOME RUST ON TOP OF BOILER CASING; OTHERWISE IT LOOKS TO BE IN GOOD CONDITION				

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 15' OF 4"
COMMENTS:				
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				
CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 8069 **BLDG NAME:** IN SW POOL/GYM

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 25,620

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 58

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS
EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT
SERVES AREA: EXERCISE ROOM
% OF BLDG AREA HEATED: 9

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 5,190
CFM-CLG: 5,190
MIN %OA: 5
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1016
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322466-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CENTRAL PLANT
SERVES AREA: RACQUETBALL COURTS
% OF BLDG AREA HEATED: 4

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,125
CFM-CLG: 2,125
MIN %OA: 5
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L0613
SUPPLY FAN HP: 1.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33257702
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-1
AHU LOCATION: BASKETBALL GYM

REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BASKETBALL GYM
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750
CFM-CLG: 0
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL: L1420
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322466-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-2
AHU LOCATION: BASKETBALL GYM

REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BASKETBALL GYM
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750
CFM-CLG: 0
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL: L1420
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322466-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS
EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-3
AHU LOCATION: BASKETBALL GYM
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BASKETBALL GYM
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750
CFM-CLG: 0
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL: L1420
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: B-322466-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-4
AHU LOCATION: BASKETBALL GYM
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: BASKETBALL GYM
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,750
CFM-CLG: 0
MIN %OA: 20
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL: L1420
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-322466-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-5
AHU LOCATION: SWIMMING POOL
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SWIMMING POOL
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 0
MIN %OA: 50
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1016
SUPPLY FAN HP: 2
RET/EXH FAN HP:
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1262-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 58
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-6
AHU LOCATION: SWIMMING POOL
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SWIMMING POOL
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 0
MIN %OA: 50
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1016
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1262-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 58
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-7
AHU LOCATION: SWIMMING POOL
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SWIMMING POOL
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 0
MIN %OA: 50
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1016
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1262-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 58
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-8
AHU LOCATION: SWIMMING POOL

REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: SWIMMING POOL
% OF BLDG AREA HEATED: 7

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,500
CFM-CLG: 0
MIN %OA: 50
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1016
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 8-33-1262-03
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 58
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N

MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N

IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
AHU NUMBER: HV-9
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: 1ST FLOOR LOCKER ROOMS
% OF BLDG AREA HEATED: 13

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,000
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: CENTRAL AIRE
UNIT MODEL: L1715
SUPPLY FAN HP: 5
RET/EXH FAN HP: 1.5
SUPPLY FAN MTR MFG: BALDOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: M3218T
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 54
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 8069
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

○ ☐ BOILER
BOILER TAG:
BOILER TYPE:
FUEL TYPE:

☒ CONVERTER
CONVERTER TAG: CV-1
CONVERTER TYPE: STM TO HW
CONV HT SOURCE:

◉ CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG:
UNIT MODEL:
BLR CAP OUTPUT (BTUH): 1,000,000
BLR CAP INPUT (BTUH):
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 58
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	9	6	6	6	12	6	9
REQ STOP:	20	22	22	22	22	22	20

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 7.5
PUMP MFG: DOERR
PUMP SERVICE: HW PUMP
PUMP MODEL: 91720AE78T

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 8069
BLDG NAME: IN SW POOL/GYM
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: SWIMMING POOL
SOURCE OF HEATING: CENTRAL PLANT DIRECT
SERVES AREA: SWIMMING POOL
RADIATION UNIT TYPE: HW
% AREA HTG: 6

SCHEDULE

DAYS SCHEDULE NO: 54
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: JMAJN.AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 8069 BLDG NAME: IN SW POOL/GYM

REF. UNIT NUMBER/TAG: CWP-1 LOCATION (MER#): MER

AHU'S SERVED: AHU-1,2

UNIT TYPE OTHER

NAMEPLATE

CHILLER MFG:		TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	0
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	0	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0
CHILLER PH:	0		
CHILLER CAP (TONS):	0		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 54 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	10	9	9	9	9	9	9
REQ STOP:	19	21	21	21	21	21	21

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG: 1 PUMP HP: 7.5 PUMP MFG:
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

CW and CNW PUMPS

PUMP TAG: 2 PUMP HP: 0.5 PUMP MFG:
PUMP SERVICE: CW PUMP (Chilled Water) PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JMAJN.AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

CW and CNW PUMPS

PUMP TAG:	3	PUMP HP:	0.5	PUMP MFG:	
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **8069**
FILE: 8069.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	UPSTAIRS NEXT TO WORKOUT ROOM IN CEILING
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:	6' ON COIL PIPE
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:	

COMMENTS: INSULATION BENT

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8069.XLS

BLDG: **8069**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	UPSTAIRS NEXT TO WORKOUT ROOM IN CEILING
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 6' ON COIL PIPE
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 8069.XLS

BLDG: **8069**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-1-8	LOCATION (Rm)	CATWALK
AHU TYPE:	H&V	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 7 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN

BLDG: **8069**
FILE: 8069.XLS

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	H&V-9	LOCATION (Rm)	MER MEZZANINE				
AHU TYPE:	H&V	MFG.:	AIR THERM		MODEL:	L1715	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: FACE & BYPASS PNEUMATIC

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0722 **BLDG NAME:** FLIGHT SIMULATOR

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: N

CONDITIONED SQFT: 7,000

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 4

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0722
AHU NUMBER: AHU-1
AHU LOCATION: SIMULATOR ROOM
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: SIMULATOR EQUIPMENT RM
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 15,590
CFM-CLG: 15,590
MIN %OA: 0
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 20
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: FAIRBANKS MOR
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: KZK
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/18/94
LOCATION: FT. RILEY, KS — PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0722
AHU NUMBER: AHU-2 — AHU LOCATION: MEZZANINE MER
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: SIMULATOR EQUIP. ROOM
% OF BLDG AREA HEATED: 30

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 7,500 — CFM-CLG: 7,500
MIN %OA: 20 — MAX %OA: 100

NAMEPLATE

UNIT MFG: — UNIT MODEL:
SUPPLY FAN HP: 1 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GE — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 5K215AD205B — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	ATOMIZERS	☒
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 1 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 65 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y — MIXED AIR DMPR CONTROL: N — IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: N — TIME CLOCK: N
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0722
AHU NUMBER: AHU-3
AHU LOCATION: MEZZANINE MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ADMIN OFFICES, CLASSROOM
% OF BLDG AREA HEATED: 20

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 4,050
CFM-CLG: 4,050
MIN %OA: 25
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 5
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 60
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0722
AHU NUMBER: AHU-4
AHU LOCATION: SIMULATION RM
REFRIG SYS # SRVNG AHU: CH-2
SERVES AREA: COMPUTER RM
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: AC
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 6,400
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: PAC
UNIT MODEL: CUXC-12
SUPPLY FAN HP: 3
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 1
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 72
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 70
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: N
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: N
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0722
BOILER RM LOCATION: 2ND FL. MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: AHU-1,2,3

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: BURNHAM
UNIT MODEL: 4FW92SPLOGP
BLR CAP OUTPUT (BTUH): 480,100
BLR CAP INPUT (BTUH): 602,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 4
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	17	17	17	17	17	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 3
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0722
BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-1,2,3

UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	
CHILLER MODEL:	CA2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	480
CHILLER V:	480	TOWER FAN AMPS:	2.3
CHILLER AMPS:	67.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	Y	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	5	PUMP MFG:	
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0722
BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-2
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-4

UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	LARKIN	TOWER MFG:	
CHILLER MODEL:	PFG16	# OF TOWER FANS:	2
CHILLER SERIAL NO:		TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	2.2	TOWER FAN HP:	0.5
CHILLER PH:	3		
CHILLER CAP (TONS):	16		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:	
PRESS LITE LOW:	N	TEMP LITE LOW:	N		
PRESS GAUGES:	Y	TEMP GAUGES:	Y		

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	0.5	PUMP MFG:	
PUMP SERVICE:				PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: 20 HP - FAIRBANKS MORRIS

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: PNEUMATIC

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE MER				
AHU TYPE:	SZ	MFG.:	AIRTEMP		MODEL:	AV170	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	GE 10 HP MOTOR						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS: X		COMMENTS:	EITHER FAN OR MOTOR		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:	BEARINGS ARE BAD		
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE: CLEAN	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE: CLEAN	SIZE:	CNTLVLV	OK:	**RP- ACT:X RP-BD:X**
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE

CLIENT CONTRACT NO.: DACA 01-94-D-0033

LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	MEZZANINE MER
AHU TYPE:	SZ	MFG.:	MODEL:
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)	
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System	
DD - Dual Duct	UH - Unit Heater	IND - Induction System	

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	5 - 7.5 HP
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	**RP- ACT:X**	**RP-BD:X**
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-4	LOCATION (Rm)	SIMULATION ROOM				
AHU TYPE:	SZ	MFG.:	ED PAC		MODEL:	CUXC-12	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	100% RETURN AIR. COOLING COIL ONLY INSIDE UNIT. HUMIDITY CONTROLLER						DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	30AOCD75

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 68 RLA @ 460V
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE: 56 RLA @ 460V
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 6
BRAND NEW R-ACCU (NOT HOOKED-UP YET)

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 30' @ 6"

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 5 HP
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: HEAT TAPE ON EXPOSED PIPE

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	OUTSIDE	
REFG. EQUIP. TYPE:		MFG.:	LARKIN	MODEL: PFG16

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: 1/2 HP FANS - 2 EA.

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 1.5 HP CENTURY

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 722.XLS

BLDG: **722**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MEZZANINE MER	
BOILER TYPE:	HW	MFG.: BURNHAM	MODEL: 4FW-92-5PL-0-GP	
CONVERTER TYPE:		MFG.:	MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor		
BOILER BURNER	ATMOSPHERIC:	POWER:	OK:	REPLACE: X

COMMENTS:

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/3 HP
BLR PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTO	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 0724
BLDG NAME: FLIGHT SIMULATOR

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N
CONDITIONED SQFT: 13,188

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 1

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0724
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: OFFICES
% OF BLDG AREA HEATED: 60

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 6,200
CFM-CLG: 6,200
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CCDB14CDCHO
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: N
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: N
EXH AIR DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0724
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-2
SERVES AREA: COMPUTER ROOM
% OF BLDG AREA HEATED: 40

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 6,000
CFM-CLG: 6,000
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CCDB12CEMJ
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: CENTURY
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-35741601
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0724
AHU NUMBER: CRU-1
AHU LOCATION: COMPUTER ROOM
REFRIG SYS # SRVNG AHU: CH-3,4
SERVES AREA: COMPUTER ROOM
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: OTHER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 8,600
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: LIEBERT
UNIT MODEL: FE192GVA10
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	ELECTRIC	☐
HUMIDIFIER:	ELECTRIC	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/18/94
LOCATION: FT. RILEY, KS
PREPARED BY: JM/AJN/AMS

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 0724
AHU NUMBER: CRU-2
AHU LOCATION: COMPUTER ROOM
REFRIG SYS # SRVNG AHU: CH-3,4
SERVES AREA: COMPUTER ROOM
% OF BLDG AREA HEATED: 0

AHU UNIT TYPE: OTHER
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 0
CFM-CLG: 8,600
MIN %OA: 0
MAX %OA: 0

NAMEPLATE

UNIT MFG: LIEBERT
UNIT MODEL: FE192GVA10
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	NONE	☐
REHEAT COIL:	ELECTRIC	☐
HUMIDIFIER:	ELECTRIC	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: N
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: N
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 0724
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT

BLR/CONVERTER SERVES AREA OR SERVICE:

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION:

BOILER MFG: AJAX
UNIT MODEL: WGFD-450
BLR CAP OUTPUT (BTUH): 360,000
BLR CAP INPUT (BTUH): 450,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 1
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	6	6	6	6	6	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: N
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 3
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL: VBK215TTDR7026HTL

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-4 LOCATION (MER#): OUTSIDE

AHU'S SERVED: CRU-1,2

UNIT TYPE AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	PRYCODER	TOWER MFG:	
CHILLER MODEL:	DSO419A	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	64	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0724
BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-3
LOCATION (MER#): OUTSIDE
AHU'S SERVED: CRU-1,2

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	PRYCODER	TOWER MFG:	
CHILLER MODEL:	DSO419A	# OF TOWER FANS:	4
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	0	TOWER FAN HP:	0.75
CHILLER PH:	3		
CHILLER CAP (TONS):	10		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	64	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/18/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0724 BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): OUTSIDE

AHU'S SERVED:

UNIT TYPE AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	CGADC254ABAIGTJWR	# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.8
CHILLER AMPS:	23.5	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	25		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	Y	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/18/94
PREPARED BY: JM/AJN/AMS

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 0724
BLDG NAME: FLIGHT SIMULATOR

REF. UNIT NUMBER/TAG: CH-2
LOCATION (MER#): OUTSIDE
AHU'S SERVED: AHU-2

UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:		# OF TOWER FANS:	3
CHILLER SERIAL NO:		TOWER FAN V:	460
CHILLER V:	460	TOWER FAN AMPS:	1.8
CHILLER AMPS:	17.2	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	20		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	1	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	VDC182TTDR7026DF

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE:	MZ	MFG.: TRANE	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MER
AHU TYPE:	SZ	MFG.:	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE

CLIENT CONTRACT NO.: DACA 01-94-D-0033

LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	COMPUTER ROOM				
AHU TYPE:	SZ	MFG.:	LIEBERT		MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					

O.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:(NONE)	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE	MODEL:	CGADC254

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 2

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-2	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	LIEBERT	MODEL:	CGADC254

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 4 FANS

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 10 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 724.XLS

BLDG: **724**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	AJAX	MODEL:	WGFD-450
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: CWW/AJN

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7739
BLDG NAME: MOVING TARGET SIM BLDG

ELECTRIC METER: N
GAS METER: N
SUSPECT ACM: Y
CONDITIONED SQFT: 4,074

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/12/94
LOCATION: FT. RILEY, KS
PREPARED BY: CWW/AJN

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7739
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: ALL
% OF BLDG AREA HEATED: 80

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 3

CFM-HTG: 7,064
CFM-CLG: 7,064
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: CLIMATE CHANG
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: U.S. ELCTRICAL
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: A907
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	DX	☐

SCHEDULE

DAY SCHEDULE NO: 11
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: N
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? N
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: CWW/AJN

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7739
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 20

BOILER MFG: CRANE CO.
UNIT MODEL: 200-385
BLR CAP OUTPUT (BTUH): 308,000
BLR CAP INPUT (BTUH): 385,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 0.08
PUMP MFG: MARATHON
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	CWW/AJN

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER:	7739	BLDG NAME:	MOVING TARGET SIM BLDG
PER RAD (SYSTEM TAG) NO:	RAD-1	RAD SYS LOCATION:	MAINT. STORAGE ROOM, OFFIC
SOURCE OF HEATING:		SERVES AREA:	
RADIATION UNIT TYPE:	HW	% AREA HTG:	20

RADIATION PUMP

PUMP TAG:	1	PUMP HP:	0.08	PUMP MFG:	
				PUMP MODEL:	

SCHEDULE

DAYS SCHEDULE NO:	11	MONTHS SCHEDULE NO:	1

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS:	ELECTRIC		
RADIATION CONTROL:			
OCC HT SPACE SP:	0		
UNOCC HT SPACE SP:	0	RESET CONTROL:	N

CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: CWW/AJN

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7739
BLDG NAME: MOVING TARGET SIM BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): EAST EXTERIOR OF BL
AHU'S SERVED: AHU-1

UNIT TYPE: AIR COOLED CONDENSING UNIT, DX

NAMEPLATE

CHILLER MFG:	TRANE	TOWER MFG:	
CHILLER MODEL:	RAUA-2006MA	# OF TOWER FANS:	3
CHILLER SERIAL NO:	3H-16081	TOWER FAN V:	200
CHILLER V:	200	TOWER FAN AMPS:	5.8
CHILLER AMPS:	89	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	20		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7739.XLS

BLDG: **7739**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER
AHU TYPE:	MZ-3	MFG.: TRANE CLIMATE CHANGER	MODEL: TYPE 14

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT: X
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:

COMMENTS: OA & RA DAMPERS DISCONNECTED AND WIRED WITH OA SHUT AND RA OPEN. ZONE DAMPERS DISCONNECTED.

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS: 5 HP
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: DX COIL
ELECTRIC ACTUATORS

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: BEARING GOING BAD, .08 HP
AHU PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 8' AT 2-1/2"
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7739.XLS

BLDG: **7739**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	ACCU	MFG.:	TRANE	MODEL:	RAUA 2006 MA

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 4' AT 2-1/2"

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7739.XLS

BLDG: **7739**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	CRANE	MODEL:	200-385
CONVERTER TYPE:	N/A	MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC: X	POWER:	OK: X	REPLACE:

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK:	MISSING: X	ESTIMATED QUANTITY: 12' OF 1-1/2"

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: (B&G) PERIMETER RADIATION PUMP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 6620
BLDG NAME: COMMUN ACT CTR

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N

CONDITIONED SQFT: 31,740

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 11

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

REMARKS:

BLDG. CONTACT: MACK MCMULLEN @ 239-9532 OR 9533

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6620
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: WEST WING
% OF BLDG AREA HEATED: 32

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 7

CFM-HTG: 12,910
CFM-CLG: 12,910
MIN %OA: 10
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 7.5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: RELIANCE
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: Y149924A1LL
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 60
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION — EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033 — DATE: 10/17/94
LOCATION: FT. RILEY, KS — PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6620
AHU NUMBER: AHU-2 — AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1 — SERVES AREA: BALL ROOM
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE: SINGLE ZONE — NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 9,600 — CFM-CLG: 9,600
MIN %OA: 30 — MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE — UNIT MODEL: TYPE 21
SUPPLY FAN HP: 7.5 — RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: GENERAL MOTOR — RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: B-2222A — RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 60 — MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC — THERMOSTAT TYPE: SETBACK
HOT DECK DEG F: 0
PRESENT TEMP WINTR OCC: 0 — COLD DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0 — MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0 — OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0 — OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N — MIXED AIR DMPR CONTROL: Y — IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y — ECONOMIZER DB CONTROL: Y — TIME CLOCK: Y
RET AIR DMPR CONTROL: Y — ECONOMIZER WB CONTROL: N — TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/17/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6620
AHU NUMBER: AHU-3
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: NONE
SERVES AREA: KITCHEN
% OF BLDG AREA HEATED: 14

AHU UNIT TYPE: HEATING AND VENTILATING
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 10,500
CFM-CLG: 0
MIN %OA: 100
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: 21
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MARATHON
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 1AS15TVR26BDW
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	NONE	☐

SCHEDULE

DAY SCHEDULE NO: 60
MONTH SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: Y
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: N
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 6620
AHU NUMBER: AHU-4
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: DINNING ROOM
% OF BLDG AREA HEATED: 23

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 8,800
CFM-CLG: 8,800
MIN %OA: 34
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: 21
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: DOER
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	STEAM	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 60
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	16	16	16	16	16	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: N
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: N

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 6620
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: LOW PRESS STEAM (<15#)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 8

BOILER MFG: CLEAVER-BROOKS
UNIT MODEL: I53-700-4520
BLR CAP OUTPUT (BTUH): 4,520,000
BLR CAP INPUT (BTUH): 5,736,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC/ELECTRIC
RESET CONTROLS: Y
OPERATING SETPOINT: DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 1.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

HW PUMP

PUMP TAG: 2
PUMP HP: 0.5
PUMP MFG:
PUMP SERVICE: HW PUMP
PUMP MODEL:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

PERIMETER RADIATION SURVEY OBSERVATIONS

BLDG NUMBER: 6620
BLDG NAME: COMMUN ACT CTR
PER RAD (SYSTEM TAG) NO: RAD-1
RAD SYS LOCATION: RMS-103,106,109,11,114,115,116
SOURCE OF HEATING: BLR-1
SERVES AREA:
RADIATION UNIT TYPE: HW
% AREA HTG: 8

RADIATION PUMP

PUMP TAG: 1
PUMP HP: 0.5
PUMP MFG:
PUMP MODEL:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF RAD. CONTROLS: ELECTRIC
RADIATION CONTROL:
OCC HT SPACE SP: 0
UNOCC HT SPACE SP: 0
RESET CONTROL: N
CONTROL COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/17/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 6620
BLDG NAME: COMMUN ACT CTR

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1,2,4

UNIT TYPE: AIR COOLED CONDENSING UNIT W/ CHW

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CM130SP	# OF TOWER FANS:	12
CHILLER SERIAL NO:	8723-2	TOWER FAN V:	0
CHILLER V:	460	TOWER FAN AMPS:	0
CHILLER AMPS:	237	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	130		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 11
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	0	0	0	0	0	0
PRES STOP:	24	24	24	24	24	24	24
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	16	16	16	16	16	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	42	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG: 1
PUMP HP: 7.5
PUMP MFG: GOULD
PUMP SERVICE: CW PUMP (Chilled Water)
PUMP MODEL: 6330778-03

CW and CNW PUMPS

PUMP TAG: 2
PUMP HP: 7.5
PUMP MFG: GOULD
PUMP SERVICE: CW PUMP (Chilled Water)
PUMP MODEL: 6330778-03

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)	MER BASEMENT				
AHU TYPE:	MZ-7	MFG.:	TRANE CLIMATE CHANGER		MODEL:	TYPE 25	
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	AHU BODY IS RUSTED						DPR-ACT = Damper Actuator
							RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	STEAM	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	TYPE 21	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	PLENUM RETURN KITCHEN AREA						

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:
COMMENTS:				
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS: X	COMMENTS:	
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:	
INLET VANES	N/A: X	OK:	COMMENTS:	
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:	N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:	
COMMENTS:				

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	STEAM	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
COMMENTS:								

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
COMMENTS:				
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	H&V	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK: X	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	OLD COIL SETTING BY AHU. DAMPER POSITIONING SENSORS						DPR-ACT = Damper Actuator
	ON ACTUATORS ARE NOT FUNCTIONING						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:			
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:							
COOLING COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	STEAM	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-4	LOCATION (Rm)	MEZZANINE				
AHU TYPE:	SZ	MFG.:	TRANE CLIMATE CHANGER		MODEL:	TYPE 21	
SZ - Single Zone	H&V - Heating & Vntltng.		FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)				
MZ - Mulitzone	VAV - Variable Air Vol.		RHT - Reheat System				
DD - Dual Duct	UH - Unit Heater		IND - Induction System				
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	OLD MOTOR, FAN HAS A BAD BEARING. THERE IS AN ABANDONED						DPR-ACT = Damper Actuator
	COIL LEFT IN AHU MIDWAY BETWEEN HEATING & COOLING COIL.						RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS: X		COMMENTS:	FAN IS OLD		
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:			
COMMENTS:	AHU BADLY RUSTED, BUT OK						
	NOISY						
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator
							RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER BASEMENT		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TSI	MODEL:	SC2CNV30SP

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: 1 COMPRESSOR IS NEW, 2 COMPRESSORS REPLACED. ~2-4 YRS. OLD.
1 COMPRESSOR IS ORIGINAL.

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: INSULATION MISSING AROUND PUMP 1 OF 2 PUMPS

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	ACCU-1	LOCATION (RM)	OUTSIDE		
REFG. EQUIP. TYPE:	ACCU	MFG.:	TSI	MODEL:	TAC-174

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower

COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 12

COOLING TOWER	N/A:	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 12 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 6620.XLS

BLDG: **6620**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	STM	MFG.:	CLEAVER BROOKS	MODEL:	153-700-4520
CONVERTER TYPE:	STM/HW	MFG.:		MODEL:	MODEL I

STM - Steam; STM/HW - Steam to Hot Water Conv.; HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water; HTHW/HW - High Temp. HW to HW Cv.; DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:

COMMENTS: TYPICAL OF (2) BOILERS
BOILERS LOOK TO BE IN GOOD CONDITION

BLR PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3/4 HP
BLR PUMP SEALS	N/A:	OK:	REPLACE: X	SIZE:

COMMENTS: REPLACE BOTH PUMPS, OLD & LEAKING, UNINSULATED. LABELED BOILER FEED PUMPS

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 1/2 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE: NOT BOLTED DOWN
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: THIS IS THE ONLY HOT WATER PUMP. SERVES PERIMETER RADIATION

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/11/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7604 **BLDG NAME:** GEN INST BLDG

ELECTRIC METER: Y **CONDITIONED SQFT:** 13,493

GAS METER: Y

SUSPECT ACM: N

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 61

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

REMARKS:

BLDG. contact: Ms Foreman @ ext. 9475

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
EMC NO: 1406-001
CLIENT CONTRACT NO: DACA 01-94-D-0033
DATE: 10/11/94
LOCATION: FT. RILEY, KS
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7604
AHU NUMBER: AHU-1
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: WEST HALF OF BLDG.
% OF BLDG AREA HEATED: 45

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,000
CFM-CLG: 6,000
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: MODULAR
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 61
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7604
AHU NUMBER: AHU-2
AHU LOCATION: MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: EAST HALF OF BLDG.
% OF BLDG AREA HEATED: 45

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 5

CFM-HTG: 6,000
CFM-CLG: 6,000
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 61
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC/ELECTRIC
THERMOSTAT TYPE: OTHER
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7604
AHU NUMBER: AHU-3
AHU LOCATION: MEZZANINE
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: SOUTH ADMIN OFFICES
% OF BLDG AREA HEATED: 10

AHU UNIT TYPE: SINGLE ZONE
NUMBER OF ZONES IF MZ UNIT: 0

CFM-HTG: 2,000
CFM-CLG: 2,000
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG: TRANE
UNIT MODEL: MCCA006MADOE
SUPPLY FAN HP: 2
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 61
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0
HOT DECK DEG F: 76
COLD DECK DEG F: 60
MIXED AIR DEG F: 65
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7604
BOILER RM LOCATION: MER

BOILER UNIT

BLR/CONVERTER SERVES AREA OR SERVICE: ALL

SOURCE OF BLDG HEAT

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: BURNHAM
UNIT MODEL: EW20GPF
BLR CAP OUTPUT (BTUH): 648,000
BLR CAP INPUT (BTUH): 877,000

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 61
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 0 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

HW PUMP

PUMP TAG: 1
PUMP HP: 2
PUMP MFG: US ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL: F108

HW PUMP

PUMP TAG: 2
PUMP HP: 2
PUMP MFG: US ELECTRIC
PUMP SERVICE: HW PUMP
PUMP MODEL: F108

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/11/94
PREPARED BY: AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7604
BLDG NAME: GEN INST BLDG

REF. UNIT NUMBER/TAG: CH-1
LOCATION (MER#): MER
AHU'S SERVED: AHU-1,2,3

UNIT TYPE: RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TRANE
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	8
CHILLER SERIAL NO:	9225-2	TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.1
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	70		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 61
MONTHS SCHEDULE NO: 2
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	N	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	2	PUMP MFG:	U S ELECTRIC
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE

CLIENT CONTRACT NO.: DACA 01-94-D-0033

LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7604.XLS

BLDG: **7604**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1	LOCATION (Rm)					
AHU TYPE:	MZ (5) ZONES	MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:							DPR-ACT = Damper Actuator RP-ACT = Replace Actuator
FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:			
COMMENTS:							
SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:		COMMENTS:			
SUPPLY FAN MOTOR	OK: X	REPLACE:		COMMENTS:			
INLET VANES	N/A: X	OK:	COMMENTS:				
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:		COMMENTS:	N/A		
RETURN FAN MOTOR	OK:	REPLACE:		COMMENTS:	N/A		
COMMENTS:							
COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT: RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT: RP-BD:
COMMENTS:							RP-ACT = Replace Actuator RP-BD = Replace Body
AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:			
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:			
COMMENTS:							
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:			
COMMENTS:							

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7604.XLS

BLDG: **7604**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-2	LOCATION (Rm)	MEZZANINE
AHU TYPE:	MZ	MFG.: TRANE CLIMATE CHANGER	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS:

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS: N/A

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A: X	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS: UNIT HEATER IN MEZZANINE

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7604.XLS

BLDG: **7604**

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-3	LOCATION (Rm)	MEZZANINE
AHU TYPE:	SZ	MFG.: TRANE CLIMATE CHANGER	MODEL:

SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System
DD - Dual Duct	UH - Unit Heater	IND - Induction System

O.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK: X	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A: X	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:

COMMENTS: SYSTEM NEW

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

SUPPLY AIR FAN	OK: X	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK: X	REPLACE:	COMMENTS:
INLET VANES	N/A: X	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS: N/A
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:

COMMENTS:

COOLING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK: X	REPLACE:	SIZE:	CNTLVLV	OK: X	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:

COMMENTS:

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7604.XLS

BLDG: **7604**

REFRIGERATION EQUIPMENT - HVAC UPGRADE OBSERVATIONS

CHILLER / EQUIP. NO.	CH-1	LOCATION (RM)	MER		
REFG. EQUIP. TYPE:	R-ACCU	MFG.:	TRANE (ACCU)	MODEL:	CAUCC80E2C03

C-WCT = Centrifugal w/ Water Side Cooling Tower
R-WCT = Reciprocating w/ Water Side Cooling Tower
ACCU = Air Cooled Condensing Unit
R-ACCU = Reciprocating w/ Air Cooled Condensing Unit
ASB-WCT = Absorption w/ Water Side Cooling Tower
CT = Cooling Tower
CHILLER IS TSI SC2CD70

COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK: X	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
COMP. MOTOR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK: X	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:
CT/ACCU FAN MTR	N/A:	OK:	REPLACE:	SIZE:

COMMENTS: TYPICAL OF 8

COOLING TOWER	N/A: X	OK:	REPLACE:	SIZE:
AIR COOLED COND.	N/A:	OK: X	REPLACE:	SIZE:

COMMENTS:

CHILLER INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
CHW PIPE INSUL.	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

CHW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
CHW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 11 Nov-94
PREPARED BY: AJN
CHECKED BY: AJN
FILE: 7604.XLS

BLDG: **7604**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	BURNHAM	MODEL:	EW-20-G-PF
CONVERTER TYPE:		MFG.:		MODEL:	
STM - Steam HW - Hot Water	STM/HW - Steam to Hot Water Conv. HTHW/HW - High Temp. HW to HW Cv.	HTHW/STM - High Temp HW to Steam Convertor DHW - Domestic Hot Water Convertor			
BOILER BURNER	ATMOSPHERIC:	POWER: X	OK: X	REPLACE:	

COMMENTS:

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BUILDING DATA SURVEY OBSERVATIONS

BLDG NUMBER: 7656
BLDG NAME: GEN INST BLDG

ELECTRIC METER: Y
GAS METER: Y
SUSPECT ACM: N
CONDITIONED SQFT: 13,493

BUILDING OCCUPANCY SCHEDULE

BUILDING SCHDULE NO: 61

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

REMARKS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7656
AHU NUMBER: AHU-1
AHU LOCATION: MEZZANINE
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: WEST HALF OF BLDG.
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,000
CFM-CLG: 7,000
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG:
UNIT MODEL:
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG:
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL:
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HW	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 61
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: ELECTRIC
THERMOSTAT TYPE: SINGLE SETPOINT
PRESENT TEMP WINTR OCC: 0
HOT DECK DEG F: 0
PRESENT TEMP WINTR UNOCC: 0
COLD DECK DEG F: 0
MIXED AIR DEG F: 0
PRESENT TEMP SUM OCC: 0
OTHER SETPOINT DESCRIP:
PRESENT TEMP SUM UNOCC: 0
OTHER SETPOINT DEG F: 0

MIN OA DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? Y
MAX OA DMPR CONTROL: Y
ECONOMIZER DB CONTROL: Y
TIME CLOCK: Y
RET AIR DMPR CONTROL: Y
ECONOMIZER WB CONTROL: N
TIME CLOCK OPERATIONAL? Y
EXH AIR DMPR CONTROL: Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

AIR HANDLING UNIT SURVEY OBSERVATIONS

BUILDING NUMBER: 7656
AHU NUMBER: AHU-2
AHU LOCATION: MEZZANINE MER
REFRIG SYS # SRVNG AHU: CH-1
SERVES AREA: EAST HALF OF BLDG.
% OF BLDG AREA HEATED: 50

AHU UNIT TYPE: MULTI ZONE
NUMBER OF ZONES IF MZ UNIT: 6

CFM-HTG: 7,000
CFM-CLG: 7,000
MIN %OA: 15
MAX %OA: 100

NAMEPLATE

UNIT MFG: MCQUAY
UNIT MODEL: LML114EH
SUPPLY FAN HP: 5
RET/EXH FAN HP: 0
SUPPLY FAN MTR MFG: MAGNETEK
RET/EXH FAN MTR MFG:
SUPPLY FAN MTR MODEL: 6-3556253-02
RET/EXH FAN MTR MODEL:
COMMENTS:

COILS

Coil	Coil Type	Modulating Valve?
PREHEAT COIL:	NONE	☐
HEATING COIL:	HOT WATER	☒
REHEAT COIL:	NONE	☐
HUMIDIFIER:	NONE	☐
COOLING COIL:	CW	☒

SCHEDULE

DAY SCHEDULE NO: 61
MONTH SCHEDULE NO: 3
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

CONTROLS

TYPE OF CONTROLS: PNEUMATIC
THERMOSTAT TYPE: SINGLE SETPOINT
HOT DECK DEG F: 70
COLD DECK DEG F: 60
MIXED AIR DEG F: 69
OTHER SETPOINT DESCRIP:
OTHER SETPOINT DEG F: 0

PRESENT TEMP WINTR OCC: 0
PRESENT TEMP WINTR UNOCC: 0
PRESENT TEMP SUM OCC: 0
PRESENT TEMP SUM UNOCC: 0

MIN OA DMPR CONTROL: Y
MAX OA DMPR CONTROL: Y
RET AIR DMPR CONTROL: Y
EXH AIR DMPR CONTROL: Y
MIXED AIR DMPR CONTROL: N
ECONOMIZER DB CONTROL: Y
ECONOMIZER WB CONTROL: N
IMPLEMENT DEMAND LIMIT CNTRLS? N
TIME CLOCK: Y
TIME CLOCK OPERATIONAL? Y

OTHER CONTROLS DESCR:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME: EEAP, FEASABILITY STUDY FOR INSTALLATION
CLIENT CONTRACT NO: DACA 01-94-D-0033
LOCATION: FT. RILEY, KS

EMC NO: 1406-001
DATE: 10/12/94
PREPARED BY: AJN/CWW

BOILER AND CONVERTER SURVEY OBSERVATIONS

BUILDING NUMBER: 7656
BOILER RM LOCATION: MER

BOILER UNIT

SOURCE OF BLDG HEAT
BLR/CONVERTER SERVES AREA OR SERVICE: ALL

(●) ☒ BOILER
BOILER TAG: BLR-1
BOILER TYPE: HW (UP TO 250 DEG)
FUEL TYPE: NAT. GAS

☐ CONVERTER
CONVERTER TAG:
CONVERTER TYPE:
CONV HT SOURCE:

( ) CENTRAL PLANT DIRECT

NAMEPLATE

% AREA HEATED BY BB RADIATION: 0

BOILER MFG: PAWNEE
UNIT MODEL: A-250
BLR CAP OUTPUT (BTUH): 6,900,000
BLR CAP INPUT (BTUH): 8,265,000
COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 61
MONTH SECHDULE NO: 1
SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☒	☒

CONTROLS

TYPE OF BLR CONTROLS: PNEUMATIC
RESET CONTROLS: Y
OPERATING SETPOINT: 207 DEG F or PSIG
TYPE OF BURNER CONTROLS:
CONTROLS COMMENTS:

EMC ENGINEERS, INC.

PROJECT NAME:	EEAP, FEASABILITY STUDY FOR INSTALLATION	EMC NO:	1406-001
CLIENT CONTRACT NO:	DACA 01-94-D-0033	DATE:	10/12/94
LOCATION:	FT. RILEY, KS	PREPARED BY:	AJN/CWW

REFRIGERATION EQUIPMENT SURVERY OBSERVATIONS

BLDG NUMBER: 7656 BLDG NAME: GEN INST BLDG

REF. UNIT NUMBER/TAG: CH-1 LOCATION (MER#): MER

AHU'S SERVED: AHU-1,2

UNIT TYPE RECIPROCATING WITH AIR COOLED CONDENSING UNIT

NAMEPLATE

CHILLER MFG:	TSI	TOWER MFG:	TSI
CHILLER MODEL:	SC2CD70	# OF TOWER FANS:	6
CHILLER SERIAL NO:		TOWER FAN V:	208
CHILLER V:	208	TOWER FAN AMPS:	4.8
CHILLER AMPS:	135	TOWER FAN HP:	1
CHILLER PH:	3		
CHILLER CAP (TONS):	73.8		

COMMENTS:

SCHEDULE

DAYS SCHEDULE NO: 61 MONTHS SCHEDULE NO: 2

SCHEDULE COMMENTS:

	SUN:	MON:	TUE:	WED:	THUR:	FRI:	SAT:
PRES START:	0	7	7	7	7	7	0
PRES STOP:	0	23	23	23	23	15	0
REQ START:	0	7	7	7	7	7	0
REQ STOP:	0	23	23	23	23	15	0

MONTHS ON:	JAN:	FEB:	MAR:	APR:	MAY:	JUN:	JUL:	AUG:	SEP:	OCT:	NOV:	DEC:
	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐

CONTROLS

TYPE OF CONTROLS: ELECTRIC

CWS SETPOINT:	0	CNWS SETPOINT:	0
CWR SETPOINT:	0	CNWR SETPOINT:	0

PRESS LITE HI:	N	TEMP LITE HI:	N	OTHER INDICATIORS:
PRESS LITE LOW:	N	TEMP LITE LOW:	N	
PRESS GAUGES:	Y	TEMP GAUGES:	N	

CONTROLS COMMENTS:

CW and CNW PUMPS

PUMP TAG:	1	PUMP HP:	3	PUMP MFG:	MARATHON
PUMP SERVICE:	CW PUMP (Chilled Water)			PUMP MODEL:	YJ182TTDR5326AB

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7656.XLS

BLDG: 7656

AIR HANDLING UNIT - HVAC UPGRADE OBSERVATIONS

AHU NO.:	AHU-1,2	LOCATION (Rm)					
AHU TYPE:		MFG.:			MODEL:		
SZ - Single Zone	H&V - Heating & Vntltng.	FC - Fan Coil (Indicate 2P for 2 Pipe or 4P for 4 Pipe)					
MZ - Mulitzone	VAV - Variable Air Vol.	RHT - Reheat System					
DD - Dual Duct	UH - Unit Heater	IND - Induction System					
O.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
R.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
E.A. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
F. & B. DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
ZONE DAMPER	N/A:	OK:	REPLACE:	SIZE:	DPR-ACT	OK:	RP- ACT:
COMMENTS:	ALL NEW EQUIPMENT.						
	LOOKS GOOD.						
	SEE PHOTOS						

DPR-ACT = Damper Actuator
RP-ACT = Replace Actuator

FILTER SECTION	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				

SUPPLY AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:
SUPPLY FAN MOTOR	OK:	REPLACE:	COMMENTS:
INLET VANES	N/A:	OK:	COMMENTS:
RETURN AIR FAN	OK:	REPLACE FAN BEARINGS:	COMMENTS:
RETURN FAN MOTOR	OK:	REPLACE:	COMMENTS:
COMMENTS:			

COOLING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
HEATING COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
PREHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
REHEAT COIL	N/A:	OK:	REPLACE:	SIZE:	CNTLVLV	OK:	RP- ACT:	RP-BD:
COMMENTS:								

RP-ACT = Replace Actuator
RP-BD = Replace Body

AHU PUMP MOTOR	N/A:	OK:	REPLACE:	SIZE:
AHU PUMP SEALS	N/A:	OK:	REPLACE:	SIZE:
COMMENTS:				

PIPE INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
DUCT INSULATION	N/A:	OK:	MISSING:	ESTIMATED QUANTITY:
COMMENTS:				

E M C ENGINEERS, INC.

PROJECT: EEAP, FEASIBILITY STUDY FOR HVAC UPGRADE
CLIENT CONTRACT NO.: DACA 01-94-D-0033
LOCATION: FT. RILEY, KANSAS

EMC NO.: 1406-005
DATE: 8 Nov-94
PREPARED BY: CWW
CHECKED BY: AJN
FILE: 7656.XLS

BLDG: **7656**

BOILER & CONVERTER - HVAC UPGRADE OBSERVATIONS

BOILER/CONVERTER NO.	BLR-1	LOCATION (RM)	MER		
BOILER TYPE:	HW	MFG.:	PAWNEE	MODEL:	A-250
CONVERTER TYPE:		MFG.:		MODEL:	

STM - Steam	STM/HW - Steam to Hot Water Conv.	HTHW/STM - High Temp HW to Steam Convertor
HW - Hot Water	HTHW/HW - High Temp. HW to HW Cv.	DHW - Domestic Hot Water Convertor

BOILER BURNER	ATMOSPHERIC:	POWER: X	OK:	REPLACE:

COMMENTS: MER HAS BEEN RE-PIPED.
BOILER HAS A REPAIR DATE STAMPED ON IT AS 1/7/93

BLR PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
BLR PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

BLR INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:
PIPE INSULATION	N/A:	OK: X	MISSING:	ESTIMATED QUANTITY:

COMMENTS:

HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A:	OK: X	REPLACE:	SIZE: 3 HP
HW PUMP SEALS	N/A:	OK: X	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
HW PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV PUMP MOTOR	N/A: X	OK:	REPLACE:	SIZE:
CV PUMP SEALS	N/A: X	OK:	REPLACE:	SIZE:

COMMENTS:

CV INSULATION	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:
CV PIPE INSUL.	N/A: X	OK:	MISSING:	ESTIMATED QUANTITY:

COMMENTS: