MUON CRYOSYSTEM DESIGN NOTE 21

SUBSYSTEM: ☐ CCM ☐ CVM ☒ Cryoplant

TITLE: Muon Valve List

AUTHOR: R.L. Schmitt

DATE: April 9, 1986

REVIEWED BY

_____ _____

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P&I #1	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-17-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753.700-ME-157052
1 of 8

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		ORDERED BY
								RLS
MV-100-H	SUPPLY LINE	PUMPOUT & VENT	3/4	WORCESTER	466TSW/SE			RLS
MV-101-H	BYPASS LINE	MUON CRYO BYPASS	3/4	VALTEK	MARK I			
								RLS
MV-102-H	PDIS-PHS	INSTRUMENT ZERO	1/2	AGCO	M1VS-4			RLS
MV-103-H	"	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-104-H	HELIUM SUPPLY	PRESSURIZATION	1/2	WORCESTER	466T SW			RLS
MV-105-H	PDIS-PHS	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			
								EXISTING
MV-106-H	B+BM	BLOCK & BLEED MANIFOLD	1/4	NUPRO	4BK-TW			EXISTING
SV-106-H	EX-II	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	350 PSIG		EXISTING
MV-107-H	B+BM	BLOCK & BLEED MANIFOLD	1/4	NUPRO	4BK-TW			EXISTING
SV-107-H	EX-I	SAFETY VALVE	1/2	CIRCLE SEAL	5139B4MP360			
								EXISTING
MV-108-H	EX-II	INLET BALANCING	1/2	NUPRO	8BK-TW			STOCK
MV-109-H	B+BM	ARC CELL EXHAUST	1/4	NUPRO	SS-4BK-TW			
								RLS
MV-110-N	LLXLN	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-111-N	LLXLN	"	1/2	AGCO	"			EXISTS
CV-111-N	EX-I	VENT CHECK	1	FERMI				RLS
MV-112-N	LLXLN	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			
SV-112-N	EX-I	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	35 PSIG		
SV-113-N	EX-IIA	"	1/4	CIRCLE SEAL	5159B	35 PSIG		
								STOCK
MV-115-H	PV-115-H	SAMPLE LINE BLOCK	1/4	NUPRO	SS-4BK-TW			RLS
MV-116-H	HELIUM SUPPLY	VENT & PUMPOUT	3/4	WORCESTER	466TSW/SE			
								RLS
MV-117-H	PDI-118-H	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-118-H	"	"	1/2	"	"			RLS
MV-119-H	"	"	1/2	"	"			

FERMILAB **ENGINEERING NOTE**

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #1	2

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-17-85 REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
MV-121-H	PT-PX2HP	INSTRUMENT BLOCK	1/4	NUPRO	SS-4BK-TW		STOCK
SV-123-H	B+BM	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	350 PSIG	EXISTING
MV-123-H	"	SAMPLE POINT BLOCK	1/4	NUPRO	4BK-TW		"
MV-124-H	"	"	1/4	NUPRO	4BK-TW		"
MV-125-H	"	"	1/4	NUPRO	4BK-TW		"
MV-127-H	PDT-PQX2	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4		RLS
MV-128-H	"	" VENT	1/2	AGCO	M1VS-4		RLS
MV-129-H	"	" "	1/2	AGCO	M1VS-4		RLS
MV-131-H	PT-PH3HP	INSTRUMENT BLOCK	1/4	NUPRO	B4HK-2		RLS
MV-132-H	PI-132 H	INSTRUMENT VENT	1/4	NUPRO	B4HK-2		EXISTING
SV-133-H	B+BM	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	350 PSIG	EXISTING
MV-133-H	"	SAMPLE POINT BLOCK	1/4	NUPRO	4BK-TW		"
MV-134-H	"	"	1/4	NUPRO	4BK-TW		"
MV-135-H	"	"	1/4	NUPRO	4BK-TW		"
MV-136-H	REF END BOX	U TUBE A	1 1/2	DYNAQUIP	VPA2-B30A		EXISTING
MV-137-H	DRY ENGINE	U TUBE A	1 1/2	DYNAQUIP	VPA2-B30A		EXISTING
SV-137-A	"	AIR SUPPLY RELIEF	1/4	NUPRO	4CPA2-3	25PSIG	"
SV-137-H	"	INLET RELIEF	1/2	CIRCLE SEAL	5159B	350 PSIG	"
EV-137-A	"	PV-137-H AIR SUPPLY	1/4	SKINNER	V53ADB2150		"
PV-137-H	"	INLET SHUTOFF	1/2	BADGER	T1068		"
SV-138-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	350 PSIG	"
MV-142-H	AI-N_2	SAMPLE LINE PURGE	1/4	NUPRO	SS-4BK-TW		STOCK
MV-143-H	GAS BOTTLE	ZERO GAS BLOCK	1/4	NUPRO	SS-4BK-TW		STOCK
MV-144-H	GAS BOTTLE	SPAN GAS BLOCK	1/4	NUPRO	SS-4BK-TW		STOCK
PV-145-H	SAMPLE LINE	REGULATOR	1/4				
MV-146-H	SAMPLE LINE	BLOCK VALVE	1/8				
MV-147-H	"	CONNECTOR	1/8				
	"	"	"				

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL/CATEGORY	PAGE
		P&I #1	3

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-17-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
PV-149-H	MOISTURE ANAL	REGULATOR	1/8	MATHESON	3590			RLS
MV-150-H	PI-PX4HP	INSTRUMENT BLOCK	1/4	NUPRO	SS-4BKTW			STOCK
MV-151-H	REF END BOX	U TUBE W	1 1/2	DYNAQUIP	VPA2-B30A			EXISTING
SV-153-H	B&BM	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	350 PSIG		EXISTING
MV-153-H	"	SAMPLE BLOCK	1/4	NUPRO	4BK-TW			"
MV-154-H	"	"	1/4	NUPRO	4BK-TW			"
MV-155-H	"	"	1/4	NUPRO	4BK-TW			"
MV-171H	COOLDOWN PANEL	INSTRUMENT VALVE	1/2	AGCO	MIVS-4			RLS
MV-172H	"		1/2	"	"			RLS
MV-173H	"		1/2	"	"			RLS
MV-200-H	EX-2 OUT	LOW PRESS EXIT FROM REFER	4	POSI SEAL	→		04-131-2201-11-1-00 WITH LEVER	RLS
SV-200-H	"	SAFETY VALVE	4x6	AGCO	930406RA	6 PSIG		SS/RCS
MV-201-V	END BOX	VACUUM PUMPOUT	1 1/8	AIRCO	1110			
SV-201-V	"	VACUUM RELIEF	2	PARALLEL	PLATE	1 PSIG		
MV-202-V	"	VACUUM GAUGE BLOCK	1/4	NUPRO	4BK-TW			
MV-203-H		SAMPLE LINE BLOCK	1/4	NUPRO	SS-4BKTW			STOCK
MV-204-H	B&BM	VENT BLOCK	1/4	NUPRO	SS-4BKTW			STOCK
SV-204-H	RETURN LINE	SAFETY VALVE	1 1/2x2	AGCO	8305G152S	50 PSIG		RCS
MV-205-H	PI-205-H	INSTRUMENT BLOCK	1/4	NUPRO	SS-4BK-TW			STOCK
MV-206-H	RETURN He	VENT/PUMPOUT	3/4	WORCESTER	466TSW/SE		WAS MV-104-H	RLS
MV-207-H	RETURN LINE	PUMPOUT/VENT	3/4	WORCESTER	466TSW/SE			RLS
SV-223-H	B&BM	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	45 PSIG		EXISTING
MV-223-H	B&BM	BLOCK	1/4	NUPRO	4BK-TW			EXISTING
MV-224-H	"	"	1/4	"	4BK-TW			"
MV-225-H	"	"	1/4	"	4BK-TW			"
SV-233-H	B&BM	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	45 PSIG		
MV-233-H	"	SAMPLE POINT BLOCK	1/4	NUPRO	4BK-TW			EXISTING
MV-234-H	"	"	1/4	"	4BK-TW			"
MV-235-H	"	"	1/4	"	4BK-TW			"
MV-240-V	DRY ENGINE	VACUUM PUMPOUT	1	CVI	V1046			
SV-240-V	"	VACUUM RELIEF	2	PARALLEL	PLATE	1 PSIG		

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P&I #1	4

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-17-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
HV-247-H	END BOX	U-TUBE B REMOVAL	1 1/2	DYNAQUIP	VPA2-B30A		EXISTING
MV-248-H	DRY ENGINE	U-TUBE B REMOVAL	1 1/2	"	VPA2-B30A		"
MV-249-H	"	PUMP OUT	1/4	NUPRO	B4HK-2		STOCK
CV-249-H	DRY ENGINE	INSTRUMENT CHECK	1/2	PERMI	TFE		EXISTING
SV-249-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	350 PSIG	"
MV-251-H	END BOX	U-TUBE 'E' REMOVAL	1 1/2	DYNAQUIP	VPA2-B30A		EXISTING
SV-253-H		SAFTEY VALVE	1/4	CIRCLE SEAL	5159B	45 PSIG	"
MV-253-H		BLOCK & BLEED MANIFOLD	1/4	NUPRO	4BK-TW		EXISTING
MV-254-H		"	1/4	"	4BK-TW		"
MV-255-H		"	1/4	"	4BK-TW		"
MV-271-A	INLET (OUTLET)	AIR VALVE (3 WAY)	1/4	WHITEY	B-43XS4		RLS
SV-280-H	LABA	COMPRESSOR PROTECTION	8	FERMI	PLATE	12 PSIG	JB

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #1	5

PROJECT: VALVE LIST

NAME: RLS

DATE: 10-17-85

REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
PV-HPS	SUPPLY LINE	HIGH PRESSURE SUPPLY	3	POSI SEAL	→		03-741-2201-11-1-00 WITH BETTIS ACTUATOR CB-315-SR	RLS
PV-LPR	RETURN	LOW PRESSURE RETURN	8	POSI SEAL	→		08-131-2201-11-1-00 WITH BETTIS ACTUATOR CB-415-SR	RLS
EV-LPR	PV-LPR	AIR SUPPLY - PV-LPR	1/4	ASCO	8314C22			RLS
EV-HPS	PV-HPS	AIR SUPPLY - PV-HPS	1/4	ASCO	11			RLS
EV-X1	EX-1 INLET	EX-1 INLET	1/2	VALTEK	MARK 1		$C_v = 7.3$	EXISTING
EV-X2	EX-2	EX-2 INLET	1 1/2	VALTEK	MARK 1		$C_v = 11.0$ BODY VALTEK 1600CL 2214SC	EXISTING
EV-XLN	EX-IIA	LN_2 SUPPLY		FERMI			$C_v = .32$ EQUAL PERCENTAGE	JB

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P+I #2	1

SUBJECT: **VALVE LIST**

NAME: RLS

DATE: 10-17-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753-700-ME-157052

2 OF 8

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
SV-150-H	VALVE BOX	SAFETY VALVE	1/4	CIRCLE SEAL	5159B	350 PSIG		EXISTS
MV-152-H	VALVE BOX	U TUBE 'X' REMOVAL	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
MV-156-H	"	U TUBE 'H' REMOVAL	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
MV-160-H	WET ENGINE	U TUBE H	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
PV-160-H	"	WET ENGINE SHUTDOWN	1/2	BADGER	T1068			EXISTS
EV-160-A	"	AIR TO PV-160-H	1/4	SKINNER	V53ADB2150			EXISTS
SV-160-A	"	" SAFETY VALVE	1/4	NUPRO	4CPA2-3	25 PSIG		
MV-162-H	WET ENGINE	VENT + PURGE	1/4	NUPRO	B4HK-2			STOCK
SV-162-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	350 PSIG		
SV-250-V	VALVE BOX	VACUUM RELIEF		FERMI	PLATE			EXISTS
MV-250-V	VALVE BOX	VACUUM GAUGE ISOLATION	1/4	NUPRO	SS-4BK-TW			EXISTS
MV-251-H	VALVE BOX	VACUUM PUMPOUT	1	AIRCO	1010-V			EXISTS
MV-252-H	VALVE BOX	U TUBE 'Y'	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
MV-257-H	VALVE BOX	U TUBE R	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
SV-257-H	VALVE BOX	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	65 PSIG		EXISTS
MV-258-H	VALVE BOX	U-TUBE M	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
CV-260-H	WET ENGINE	INSTRUMENT CHECK	1/2	FERMI	TFE			EXISTS
MV-260-H	WET ENGINE	INSTRUMENT VENT	1/4	NUPRO	B4HK-2			EXISTS
SV-260-H	WET ENGINE	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	65 PSIG		EXISTS
MV-261-V	WET ENGINE	VACUUM PUMPOUT + BLEED	1	CVI	V1046			
SV-261-V	WET ENGINE	VACUUM RELIEF	1 1/2	PARALLEL	PLATE	1 PSIG		
MV-261-H	WET ENGINE	U-TUBE P	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P&I SHEET 2	2

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-18-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-266-H	VALVE BOX	U-TUBE P	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
SV-266-H	VALVE BOX	SAFETY VALVE	1/2	CIRCLE SEAL	5159B	65 PSIG		EXISTS
MV-267-H	VALVE BOX	U-TUBE F	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
MV-268-H	VALVE BOX	U-TUBE G	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
CV-268-H	VALVE BOX	U-TUBE G CHECK		Fermi			DWG 1820 MB 111104	EXISTS
MV-269-H	VALVE BOX	U-TUBE F'	1 1/2	DYNAQUIP	VPA2-B30A			EXISTS
CV-301-H	S-1	S-1 COOLDOWN CHECK	1/2	CHECKALL	UN-3-050		"	RCS
MV-302-H	S-1	INTRUMENT BLOCK						CDM
								COM
MV-305-H	S-1	INSTRUMENT BLOCK						CDM
SV-306-V	S-1	VACUUM RELIEF	2					
MV-307-V	S-1	VACUUM PUMPOUT	1	CVI	V-1046-31			
MV-308-V	S-1	PE-304-V ISOLATION	1/8					
MV-309-H	S-1	U-TUBE S	1 1/2	DYNAQUIP				JB
SV-310-H	S-1	DEWAR SAFETY VALVE	1 1/2 x 2	AGCO		75 PSIG		RCS
MV-312-H	S-1	U TUBE R	1 1/2	DYNAQUIP				JB
MV-313-H	S-1	S-1 INLET BLOCK					V.J.	

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		D&I #2	3

SUBJECT

VALVE LIST

NAME	
RLS	
DATE	**REVISION DATE**
10-18-85	4-10-86

SCHEMATIC DRAWING 2753.700-ME-157052

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-316-H	S-1	U TUBE T	1½	DYNAQUIP				
MV-317-H	S-1	INSTRUMENT BLOCK	¼	NUPRO	SS-4BK-TW			JB
MV-318-H	S-1	S-1 OUTLET BLOCK						STOCK
MV-320-H	S-1	S-1 VENT [illegible]	½	WORCESTER	466T SW		$C_v = 8$	RLS
MV-322-H	S-1	SAMPLE LINE BLOCK	¼	NUPRO	SS-4BK-TW			CDM
MV-323-H	S-1	PUMPOUT	½	WORCESTER	466TSW			STOCK
CV-324-H	S-1	INLET CHECK		Fermi				JB
MV-327-N	S-1	S-1 SHIELD SUPPLY						
CV-328-N	S-1	S-1 SHIELD VENT	¾	NIBCO				
SV-330-H	S-1	RUPTURE DISK	1	FIKE		95 PSIG		RD
EVXBY	VALVE BOX	DEWAR BYPASS		FERMI			$C_v = 0.2$	JB
EVXJT	VALVE BOX	WET ENGINE BYPASS		FERMI			$C_v = 2.0$	JB
EVDEWH	S-1	DEWAR PRESSURE CONTROL		FERMI			$C_v = 2.0$	JB

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL · CATEGORY	PAGE
	1	P&I #3	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 7/12/85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753.700-ME-157052

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-401-N	LN_2 DEWAR	PV-430 BLOCK	1	SUPPLIED	WITH DEWAR	N.A.		EXISTS
MV-402-N	"	PV-430 BYPASS	3/4	"	"	"		
MV-403-N	"	PV-430 BLOCK	1	"	"	"		
MV-404-N	"	LN_2 DRAIN	3/4	"	"	"		
MV-405-N	"	P.B. VAPOR BLOCK	1	"	"	"		
MV-406-N	"	TOP FILL LINE	1 1/4	"	"	"		
MV-407-N	"	BOTTOM FILL LINE	1 1/4	"	"	"		
MV-408-N	"	TRYCOCK	1/4	"	"	"		
MV-410-N	"	VENT REGULATOR BLOCK	3/8	SUPPLIED	WITH DEWAR			
MV-411-N	"	INSTRUMENT BLOCK	1/4	"	"	"		
MV-412-N	"	"	1/4	"	"	"		
MV-413-N	"	"	1/4	"	"	"		
MV-414-N	"	"	1/4	"	"	"		
MV-415-N	"	"	1/4	"	"	"		
MV-416-V	"	VACUUM PUMPOUT	1 1/4	"	"	"		
MV-417-V	"	THERMOCOUPLE ISOLATION	1/8	"	"	"		
MV-418-N	"	DEWAR LIQUID OUTLET BLOCK	1	"	"	"		
CV-419-N	"	VENT REGULATOR CHECK	3/4	"	"	"		
SV-420-N	LN_2 TRANSFER LINE	ODH SHUTOFF	3/4	AKTOMATIC	15438-G	"	FAIL CLOSED	
MV-421-N	LN_2 DEWAR	DEWAR BLOWDOWN	1/2					
MV-422-N	BUILDING SUPPLY	BDLG GAS SUPPLY BLOCK	1/2	CRYOLAB	EST-864-2[PG2]	"		
MV-423-N	GAS PANEL	INSTRUMENT BLOCK	1/4	AGCO	M1VS-4	"		RLS
MV-424-N	"	"	1/4	"	"	"		RLS
MV-425-N	"	"	1/4	"	"	"		RLS

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
	( ) 1	P&I #3	2

SUBJECT: VALVE LIST

NAME: RLS

DATE: 7/12/85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753.700-ME-157052

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
PV-430-N	LN_2 DEWAR	PRESSURE BUILDING REGULATOR	1	SUPPLIER	WITH DEWAR	20 PSIG		EXISTS
PV-431-N	"	VENT REGULATOR	1/2	"	"	30 PSIG		SI
SV-440-N	PV-430 INLET	HYDROSTATIC RELIEF	1/4	REGO	9432 NH			EXISTS
SV-441-N	TRANSFER LINE	MV-418-N OPEN-RELIEF	1½ x 2	AGCO		50 PSIG		
SV-442-N	DEWAR	DEWAR RUPTURE DISK	1/2		SIA-KUL?	273 PSIG@72°F		
SV-443-N	DEWAR	DEWAR RELIEF	3/4 x 1	LUKENHEIMER	12136O	200 PSIG		
SV-444-V	DEWAR	DEWAR VACUUM SPACE R. DISK.	4	SUPPLIED WITH DEWAR		≈2 PSIG		
SV-445-N	FILL LINE	HYDROSTATIC RELIEF	1/4	REGO	9432NH	400 PSIG		
SV-446-N	TRANSFER LINE	HYDROSTATIC RELIEF	1/2	CIRCLE SEAL	5159 B	100 PSIG		
SV-447-N	P.B. COIL	HYDROSTATIC RELIEF	1/2	"	5159 B	100 PSIG		
SV-448-N	GAS SUPPLY	EXPANSION RELIEF	1/2	"	5159 B	100 PSIG		
SV-450-V	LN_2 TRANSFER	VACUUM PUMPOUT/RELIEF	1/2	CRYOLAB	SV3-84-5W4	2-6 PSIG		
SV-451-V	"	"	1/2	"	SV3-84-5W4	2-6 PSIG		
SV-452-V	"	"	1	"	SV3-88-5W2	2-6 PSIG		
SV-453-V	"	PLATE TYPE RELIEF	3	FERMILAB	—	≈0 PSIG		
SV-454-V	"	VACUUM PUMPOUT/RELIEF	1	CRYOLAB	SV3-88-5W2	2-6 PSIG		
SV-455-V	"	"	1	"	SV3-88-5W2	2-6 PSIG		
SV-456-V	"	PLATE TYPE RELIEF	3	FERMILAB	—	≈ 0 PSIG		
SV-457-V	"	VACUUM PUMPOUT/RELIEF	1	CRYOLAB	SV3-88-5W2	2-6 PSIG		

FERMILAB **ENGINEERING NOTE**

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #3	3

SUBJECT: VALVE. LIST

NAME: RLS

DATE: 10-21-85 REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-502-H	EX-5	VENT	3/4	WORCESTER	466T SW/SE			RLS
MV-504-H	FI-502-H	INSTRUMENT ZERO	1/4	AGCO	M1VS-4			RLS
MV-505-H	FE-503-H	INSTRUMENT BLOCK	1/4	"	"			RLS
MV-506-H	FE 503-H	INSTRUMENT BLOCK	1/4	"	"			RLS
MV-507-H	EX-5	CVM COOLDOWN	3/4	VALTEK	MARK 1		C_v CALC = 1.94 C_v ACTUAL = 2.2 (TABLE II) LINEAR (FTO)	RLS
MV-508-H	PE-507-H	INSTRUMENT BLOCK	1/2	AGCO	MSVS-44			RLS
SV-509-H	EX-5/EX-6	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	350 PSIG		MES
SV-510-H	EX-5	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	65 PSIG		MES
MV-511-H	EX-5	RETURN BLOCK	3	POSISEAL	→		03-131-2201-11-1-00 WITH LEVER	RLS
MV-513-H	PV-514-H	CCM COOLDOWN BLOCK	3/4	WORCESTER	466TSW			RLS
PV-514-H	EX-8	CCM COOLDOWN REGULATOR	1/2	JORDAN	MARK 61		C_v = .84	RLS
MV-516-H	EX-5	VENT	3/4	WORCESTER	C466PMSW/SE		SW UPSTREAM /SE DOWNSTREAM	RLS
MV-517-H	EX-8	VENT	3/4	"	"		"	RLS
MV-519-H	FI-517-H	INSTRUMENT ZERO	1/2	AGCO	M1VS-4			RLS
MV-520-H	FI-517-H	INSTRUMENT BLOCK	1/2	"	"			RLS
MV-521-H	FT-517-H	INSTRUMENT BLOCK	1/2	"	"			RLS
MV-522-H	EX-8	CCM COOLDOWN CONTROL	1	VALTEK	MARK 1		C_v = 6.4 LINEAR (FTO) TABLE II	RLS
CV-523-N	EX-6	VENT CHECK	2	NIBCO	S-433-Y			RLS
MV-524-H	EX-8	CCM COOLDOWN BLOCK	1 1/2	WORCESTER	C466PMSW			RLS
MV-525-H	EX-6	CVM COOLDOWN BLOCK	1 1/2	WORCESTER	C466PMSW			RLS
MV-526-H	EX-5	"	2	WORCESTER	C466PMSW			RLS
MV-527-N	EX-8	LN2 BLOCK	3/4	WORCESTER	C416PMTE			RLS
SV-528-N	EX-8	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		MES
CV-529-N	EX-8	EX-8 VENT CHECK	2	NIBCO	S-433-Y			RLS
SV-530-H	EX-8	SAFETY VALVE	3/4 x 1	AGCO	83-5686	60 PSIG		RCS
MV-531-H	PE-531-H	INSTRUMENT BLOCK	1/4	NUPRO	SS-4BK-TW			STOCK

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P+I #3	4

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-533-H	PI-533H	INSTRUMENT BLOCK	1/4	NUPRO	SS-4BK-TW			STOCK
MV-534-H	PI-534H	"	1/4	NUPRO	SS-4BK-TW			STOCK
MV-535-H	PI-516 H	"	1/2	AGCO	MS VS-44			RLS
SV-536-H	PV-514-H	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	85 PSIG		MES
MV-537-H	EX-6	EX6 BLOCK	3/4	WORCESTER	C416PMTE			RLS
SV-538-H	Ex-6	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	85 PSIG		MES
EVX6LN	EX-6	EVX6 CONTROL		FERMI			C_v = .45 USE FERMI 0.5 LINEAR	JB
PVX8LN	EX-8	EX-8 FILL SOLENOID	3/4	WORCESTER	C416PMTE		WITH ACTUATOR 10 R 39 5 D, 115A	RLS

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P+I #4	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 1-30-86 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
SV-433-N	TRANSFER LINE	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	MES
SV-434-N	"	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	MES
MV-435-N	"	BLOCK	1	WORCESTER	C416PMTE		RLS
MV-436-N	"	BLOCK	1	WORCESTER	C416PMTE		RLS
MV-437-N	"	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	MES

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P&I #4	2

SUBJECT: **VALVE LIST**

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753-700-ME-157052

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
								RLS
MV-460-N	S-2	S-2 FILL BLOCK	3/4	WORCESTER	C416PMTE			MES
SV-460-N	S-2	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		
								RLS
MV-461-N	S-2	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-462-N	S-2	"	1/2	"	"			RLS
MV-463-N	S-2	"	1/2	"	"			RLS
MV-464-N	S-2	S-2 PUMP BYPASS	3/4	WORCESTER	C416PMTE			RLS
CV-465-N	S-2	VENT CHECK	2	NIBCO	S-433-Y			RLS
MV-466-N	P-1 VENT	PUMP VENT	1	WORCESTER	C416PMTE			RLS
MV-467-N	P-2 VENT	PUMP VENT	1	WORCESTER	C416PMTE			RLS
CV-468-N	P-1 VENT	"	1	NIBCO	S-433-Y			
CV-469-N	P-2 VENT	"	1	NIBCO	S-433-Y			
								RLS
MV-470-N	S-2	S-2 DRAIN	3/4	WORCESTER	C416PMTE/SE		TE UPSTREAM /SE DOWNSTREAM	RLS
MV-471-N	P-1	SUCTION BLOCK	2	WORCESTER	2 C416PMTE			MES
SV-471-N	P-1	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		RLS
MV-472-N	P-1	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-473-N	P-1	"	1/2	"	"			RLS
MV-474-N	P-1	"	1/2	"	"			RLS
MV-475-N	P-1	DRAIN	3/4	WORCESTER	C416PMTE/SE		TE UPSTREAM	STOCK
MV-476-N	P-1	PURGE BLOCK	1/4	NUPRO	SS-4BK-TW			RLS
PV-477-N	P-1	PURGE REGULATOR	1/4	FISHER	67AFR			RLS
MV-478-N	P-1	DISCHARGE BLOCK	1 1/2	WORCESTER	C416PMTE			RLS
CV-479-N	P-1	DISCHARGE CHECK	1 1/2	NIBCO	S-433-Y			
								RLS
MV-481-N	P-2	SUCTION BLOCK	2	WORCESTER	C416PMTE			MES
SV-481-N	P-2	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		RLS
MV-482-N	P-2	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-483-N	P-2	"	1/2	"	"			RLS
[illegible]	[illegible]	"	1/2	"	"			

FERMILAB **ENGINEERING NOTE**

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P&I #4	3

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-485-N	P-2	DRAIN	3/4	WORCESTER	C416PMTE/SE			RLS
MV-486-N	P-2	PURGE BLOCK	1/4	NUPRO	SS-4BK-TW			STOCK
PV-487-N	P-2	PURGE REGULATOR	1/4	FISHER	67AFR			RLS
MV-488-N	P-2	DISCHARGE BLOCK	1 1/2	WORCESTER	C416PMTE			RLS
CV-489-N	P-2	DISCHARGE CHECK	1 1/2	NIBCO	S-433-Y			RLS
SV-490-N	DISCH HEADER	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		MES
MV-491-N	P-1, P-2	RECYCLE	1"	CRYOLAB	ES2-88-25CG2	-E.P.	$C_V = 10$	RLS
MV-492-N	CVM SUPPLY	CVM SUPPLY BLOCK	1	WORCESTER	C416PMTE			RLS
MV-493-N	STR-494N	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-494-N	"	"	1/2	"	"			RLS
MV-495-N	"	"	1/2	"	"			RLS
MV-496-N	PI-496N	"	1/2	AGCO	M5VS-44			RLS
SV-497-N	CVM RETURN	SAFETY VALVE						
MV-497-N	CVM RETURN	BALANCING	1	CRYOLAB	ES2-88-25CG2	-E.P.	$C_V = 10$	RLS
CV-497-N	CVM RETURN	CHECK	1	NIBCO	S-433-Y			RLS
MV-541-H	TRANSFER LINE	IN TUBE T	1 1/2	DYNAQUIP	VPA2-B20A			JB
CV-541-H	"	ANTI PULSE CHECK	1/2	Fermi				J 13
SV-541-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG		MES
MV-542-H	"	IN TUBE M	1 1/2	DYNAQUIP	VPA2-B20A			EXISTS
CV-542-H			1/2					

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #4	4

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
CV-544-H	TRANSFER LINE		1 1/2	Fermi			
SV-546-H	CVM TO EX-5	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	65 PSIG	JB
SV-547-H	EX6 TO CVM	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	350 PSIG	
							MES
							MES
CV-550-H	TRANSFER LINE	CVM COOLDOWN CHECK	1	Fermi			
MV-551-H	"	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4		JB
MV-552-H	"	"	1/2	"	"		RLS
MV-553-H	"	"	1/2	"	"		RLS
							RLS
MV-555-H	"	INSTRUMENT BLOCK	1/4				
MV-556-H	"	"	1/4				
MV-557-H	"	"	1/4				
CV-558-H	"	CVM COOLDOWN CHECK	1	Fermi			
MV-559-N	"	CVM BYPASS	1	Worcester	C 416 PMTF		JB
							MES
MV-560-H	TRANSFER LINE	U-TUBE REMOVAL	1 1/2	Dynaquip	VPA2-B20A		
SV-560-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	65 PSIG	JB
MV-561-H	"	U-TUBE REMOVAL	1 1/2	Dynaquip	VPA2-B20A		MES
SV-561-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	350 PSIG	JB
CV-565-H	SUCTION LINE	SUCTION CHECK	2	CHECKALL	HVFD-200		MES
SV-568	TRANSFER LINE	SAVETY VALVE	1/2	CIRCLE SEAL	5159B		RCS
CV-569	"	ANTI-PULSE CHECK	1/2				
CV-570-H	TRANSFER LINE	CCM RETURN CHECK	1	Fermi	"		
MV-572-H	"	"					JB

FERMILAB
ENGINEERING NOTE

SECTION | PROJECT | SERIAL-CATEGORY: P+I #4 | PAGE: 5

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-574-H	TRANSFER LINE	H TUBE B	1 1/2	DYNAQUIP	VPA2-B20A			JB
SV-574-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	65 PSIG		MES
MV-575-H	"	H TUBE C	1 1/2	DYNAQUIP	VPA2-B20A			JB
SV-575-H	"	SAFETY VALVE	1/2	CIRCLE SEAL	5159B-4MP-L	85 PSIG		MES
CV-576-H	"	CCM SUPPLY CHECK	1	Fermi				JB
CV-577-H	"	CCM COOLDOWN CHECK	1 1/2	Fermi				JB
MV-578-H	CCM	FLOW METER SELECTION	3/4	WORCESTER	T466TSW	V2		RLS
MV-579-H	CCM	CCM COOLDOWN VENT	1 1/2	WORCESTER	466TSW			RLS
CV-579-H	CCM	CCM COOLDOWN VENT CHECK	1 1/2	CHECKALL	UN3-150			RCS
SV-580-V	TRANSFER LINE	VACUUM RELIEF	3	Fermi				[illegible]
MV-581-V	"	VACUUM PUMPOUT/PURGE	1	CVI				[illegible]
MV-591-H		LN_2 SUPPLY TO CCM BLOCK	1	WORCESTER	C416PMTE			RLS
MV-592-H		INSTRUMENT BLOCK	1/2	AGCO	M5VS-44			RLS
MV-593-H		VENT BLOCK	3/4	WORCESTER	466TSW			RLS
MV-602-H	CCM	AUXILLIARY LN_2 INLET	3/4	WORCESTER	C416PMTE			RLS
MV-615-H	CCM	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4			RLS
MV-616-H	CCM	"	1/2	"	"			RLS
MV-617-H	CCM	"	1/2	"	"			RLS
PV-PSUC	SUCTION LINE	SUCTION LINE VENT	3/4	JORDAN	MARK 51	2 PSIG	$C_v = 4.4$	RLS
PV-S2	S-7	S2 FILL	3/4	WORCESTER	" C416PMTE		WITH ACTUATOR SIZE? R 395 P, 115A SPRING CLOSED	RLS
EVCVM	TRANSFER LINE	CVM FILL		FERMI			$C_v = 3.0$	JB
EV CCM	TRANSFER LINE	CCM FILL		FERMI			$C_v = 0.2$	JB
EVCVMOUT	TRANSFER LINE	CVM RETURN BLOCK		FERMI			$C_v = 3.0$ (WAS MV-554-H)	
EVCCMOUT	TRANSFER LINE	CCM RETURN BLOCK		FERMI			$C_v = 3.0$ (WAS MV-573-H)	

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #4	6

SUBJECT: VALVE LIST

NAME: RLS

DATE: 12/30/85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
MV-650-N	LN, TO CCM	STRAINER BLOCK	1	WORCESTER	C416 PMTE		RLS
MV-651-N	〃	〃	〃	〃	〃		〃
MV-652-N	〃	〃	〃	〃	〃		〃
MV-653-N	〃	〃	〃	〃	〃		〃
CIV-654-N	LN, TO CCM	STRAINER PURGE	1/4	WORCESTER	C416 PMTE		RLS
CIV-655-N	〃	〃	〃	〃	〃		〃
MV-656-N	〃	〃	〃	〃	〃		〃
MV-657-N	〃	〃	〃	〃	〃		〃
CV-658-N		〃	1/4				
MV-660-N		INSTRUMENT BLOCK	1/2	ACCO	M1VS-4		RLS
MV-661-N		〃	〃	〃	〃		〃
MV-662-N		〃	〃	〃	〃		〃
SV-670-N	CCM STRAINER	SAFETY VALVES	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	MES
SV-671-N	〃	〃	〃				〃
SV-672-N	〃	〃	〃				〃

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		p&I #5	1

SUBJECT: **VALVE LIST**

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
								EXIST
MV-603-H	CCM	INSTRUMENT CONNECTION	1/4	HOKE				STOCK
MV-604-H	CCM	"	1/4	NUPRO	SS-4BK-TW			
MV-605-V	CCM	VACUUM GAUGE ISOLATION	1/2	VEECO				EXIST
CV-606-V	CCM	RUPTURE DISK CHECK	8					
MV-607-H	CCM	U TUBE C	1	NIBCO				
MV-608-V	CCM	VACUUM GAUGE ISOLATION	1/2	VEECO				RLS
MV-609-N	CCM	INSTRUMENT BLOCK	1/4	AGCO	MSVJ-44			RLS
MV-610-N	CCM	N_2 RETURN	1	CRYOLAB	ES2-88-25CG2	-EP	$C_v = 10$	EXIST
CV-611-V	CCM	RUPTURE DISK CHECK						
MV-612-H	CCM	U TUBE B	1	DYNAQUIP				RLS
CV-613-N	CCM	N_2 RETURN CHECK	1	NIBCO	S-433-Y			
								RD
MV-620-H	CCM	COOLDOWN TUBE REMOVAL						EXIST
MV-621-H	CCM	LEAD FLOW BLOCK		DWYER				RCS
CV-622-H	CCM	LEAD FLOW CHECK	1/2	CHECKALL	UN-3-050			EXIST
MV-623-H	CCM	LEAD FLOW BLOCK		DWYER				
SV-630-N	CCM	SAFETY VALVE						
SV-631-H	CCM	SAFETY VALVE	1 1/2	CIRCLE SEAL		5 PSIG		
SV-632-H	CCM	RUPTURE DISK	4	FIKE	CPV-6T	12		
SV-633-H	CCM	SAFETY VALVE	1 1/2	CIRCLE SEAL		8		
SV-634-H	CCM	RUPTURE DISK	4	FIKE	CPV-6T	12		
SV-636-V	CCM	RUPTURE DISK	8	FIKE	CPV-6T	12		
SV-637-V	CCM	RUPTURE DISK	4	FIKE	CPV-6T	12		
SV-638-V	CCM	PUMPOUT/RELIEF	1	CRYOLAB	SV2-8P5W2	2		
SV-639-V	CCM	"	1	CRYOLAB	"	2		
				FERMI			$C_v = 3.0$ E.P.	

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P+I #6	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	FROM CERN?		
PV-002-H	CVM DEWAR	VENT	4				Y		
MV-005-H	CVM DEWAR	VENT							
MV 007-H	"	MODE SELECTOR					Y	SPECIAL INTERNAL 3 WAY VALVES	
SV-008-H	"	SAFETY VALVE					Y		
SV-013-H	"	SAFETY VALVES				43.5 PSIG	Y		
SV-014-H	"	"					Y		
SV-015-H	CVM DEWAR	SAFETY VALVES					Y		
SV-016 H	"	"					Y		
SV-017 H	"	"					Y		
SV-018-H	"	"					Y		
MV-019-H	CVM DEWAR	U-TUBE VALVE	1 1/2	DYNAQUIP	VPA2-B20A		N		JB
MV-020-H		"	1 1/2	"	"		N		JB
MV-021-H		"	1 1/2	"	"		N		JB
MV-022-H		"	1 1/2	"	"		N		JB
MV-023-H		"	1 1/2	"	"		N		JB
MV-040-V	CVM DEWAR	VACUUM VALVE					Y		
MV-041-V	"	"					Y		
MV-043-V	"	VACUUM GAUGE ISOLATION							
MV-045-V	"	DEWAR PUMPOUT					Y		
MV-046-V	"	MOTOR DISTANCE PIECE PUMPOUT					Y		
SV-056-V	"	DEWAR VACUUM RELIEF							
MV-062-H	"	INSTRUMENT BLOCK							
MV-063-H	"	"							
SV-064-N	CVM STRAINER	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	NO		MES
SV-065-N	CVM STRAINER	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MP-L	85 PSIG	NO		MES
SV-066-N	CVM STRAINER	SAFETY VALVE	1/2	CIRCLE SEAL	51598-4MPL	85 PSIG	NO		MES
							Y		

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P-I #6	2

SUBJECT: VALVE LIST

NAME: RLS
DATE: 12/30/85
REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753-700-ME-157052

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
MV-088N	LN_2	INSTRUMENT BLOCK	1/2	AGCO	M1VS-4		RLS
MV-089N	"	"	"	"	"		↓
MV-090N	"	"	"	"	"		
MV-091N	CVM LN_2	STRAINER BLOCK	1	WORCESTER	C416PMTE		RLS
MV-092N	"	"	"	"	"		
MV-093N	"	"					
MV-094N	"	"					↓
MV-095N	CVM LN_2	STRAINER PURGE	1/4	WORCESTER	C416PMTE		RLS
MV-096N		"					
MV-097N		"					
MV-098N		"					
CV-099-N							↓

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I #7	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	BY CERN?	
MV-024-H	CVM	EMERGENCY LEAD FLOW					Y	
MV-025-H	CVM	NORMAL LEAD FLOW					Y	
MV-026-H	CVM	HIGH LEAD FLOW					Y	
MV-027-H	CVM	EMERGENCY LEAD FLOW					Y	
MV-028-H	CVM	NORMAL LEAD FLOW					Y	
MV-029-H	CVM	HIGH LEAD FLOW					Y	
PV-030-H	CVM	EMERGENCY LEAD FLOW					Y	
PV-031-H	CVM	HIGH LEAD FLOW					Y	
PV-032-H	CVM	EMERGENLY LEAD FLOW					Y	
PV-033-H	CVM	HIGH LEAD FLOW					Y	
MV-047-V	CVM	LEAD PUMPOUT					Y	
MV-048-V	CVM	LEAD PUMPOUT					Y	
MV-053-V	CVM	VACUUM PUMP BLOCK					Y	
MV-054-V	CVM	VACUUM GAUGE ISOLATION					Y	
SV-057-V	CVM	CVM VACUUM RELIEF					Y	
SV-058-V	CVM	VACUUM RELIEF					Y	
MV-059-V	CVM	VACUUM GAUGE BLOCK						
SV-070-V	TRANSFER LINE	VACUUM RELIEF					N	
MV-070-V	"	VACUUM PUMPOUT					N	
PV-080-V	CVM	D.P. 1 INLET					Y	
PV-081-V	CVM	D.P.2 INLET					Y	
PV-085-V	CVM	DP1 FORE VALVE						
PV-086-V	CVM	D.P.2 FORE VALVE						
EVCVML	CVM	LEAD FLOW CONTROL	1	VALTEK	MARK I		N	C_v = E.P. RLS

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
		P&I 7	2

SUBJECT: VALVE LIST

NAME: RLS

DATE: 1/8/86 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
SV-073-H	CUM TOPHAT	SAFETY VALVE						
MV-074-H	"	U-TUBE REMOVAL	1 1/2	DYNAQUIP	VPA2-B20A			JB
MV-075-H	"	"	1 1/2	DYNAQUIP	VPA2-B20A			JB
MV-076-H	"	"	1 1/2	DYNAQUIP	VPA2-B20A			JB
SV-077-H	"	SAFETY VALVE						

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
	CCM	P&ID #8	1

SUBJECT: VALVE LIST

NAME: RLS

DATE: 7-12-85 REVISION DATE: 4-10-86

SCHEMATIC DRAWING 2753·700-ME-157051

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT	
MV-660-HY	HYDRAULIC PUMP	PUMP ISOLATION	1/4	PARKER		N.A.	EXISTS
MV-661-HY	"	"	1/4	"		"	
MV-662-HY	HYDRAULIC MAN.	PUMP RECYCLE	1/4	PNUE-TROL		N.A.	
PV-663-HY	"	PRESSURE REGULATOR	1/4	DENISON		VARIABLE	
PV-664-HY	"	"	1/4	"		VARIABLE	
MV-U1-CD	HYDRAULIC MAN.	CYLINDER ISOLATION/CONTROL	1/4	PNUE-TROL		N.A.	EXISTS
MV-U2-CD	"	"					
MV-U3-CD							
MV-U4-CD							
MV-U5-CD							
MV-U6-CD							
MV-U7-CD							
MV-U8-CD							
MV-U9-CD							
MV-U10-CD							
MV-U11-CD							
MV-U12-CD							
MV-L12-CD							
MV-L11-CD							
MV-L10-CD							
MV-L9-CD							
MV-L8-CD							
MV-L7-CD							
MV-L6-CD							
MV-L5-CD							
MV-L4-CD							
MV-L3-CD							
MV-L2-CD							
MV-L1-CD							

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL-CATEGORY	PAGE
	CCM	P&I #8	22

SUBJECT: VALVE LIST

NAME: RLS

DATE: 7-12-95 REVISION DATE: 4-10-96

SCHEMATIC DRAWING 2753.700-MC-157051

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
MV-H1-W	HYDRAULIC MAN.	CYLINDER ISOLATION/CONTROL	1/4	PNUE-TROL		N/A.		EXISTS
MV-H2-W								
MV-H3-W								
MV-H4-W								
MV-H5-W								
MV-H6-W								
MV-H7-W								
MV-H8-W								
MV-H9-W								
MV-H10-W								
MV-H11-W								
MV-H12-W								
MV-L12-W								
MV-L11-W								
MV-L10-W								
MV-L9-W								
MV-L8-W								
MV-L7-W								
MV-L6-W								
MV-L5-W								
MV-L4-W								
MV-L3-W								
MV-L2-W								
MV-L1-W								

FERMILAB
ENGINEERING NOTE

SECTION	PROJECT	SERIAL - CATEGORY	PAGE
		P2I #8	3

SUBJECT: VALVE LIST

NAME: RL SCHMIT

DATE: 10-21-85 | REVISION DATE: 4-10-86

SCHEMATIC DRAWING _____

TAG	LOCATION	SERVICE	SIZE	MFR	MODEL	SET POINT		
SV-701-A	AIR RECEIVER	SAFETY VALVE						
MV-702-A	"	INSTRUMENT BLOCK	1/4					
MV-703-A	"	"	1/4					
MV-704-A	"	TRAP BLOCK	3/4	WORCESTER	446NSE			RLS
MV-705-A	"	CONNECTION	3/4	"	446NSE			RLS
MV-706-A	"	DRIER INLET	3/4	"	446NSE			RLS
MV-707-A	"	DRIER BYPASS	3/4	"	446NSE			RLS
MV-708-A	"	DRIER OUTLET	3/4	"	446NSE			RLS
MV-709-A	"	CONNECTION	3/4	"	446NSE			RLS
LV-710-A	"	RECEIVER TRAP						
CV-711-A	"	COMPRESSOR FAILURE CHECK	3/4	NIBCO	T-433-Y			RLS
MV-712-A	CRYO ROOM	CONNECTION	3/4	WORCESTER	446NSE			RLS