GENERAL NOTES: (UNLESS OTHERWISE SPECIFIED)

1. DIMENSIONING AND TOLERANCING:
FRACTIONS; ±1/8 MOUNTING HOLES; +1/16 −0 ANGULAR; ±2°.
DECIMALS; .XX ± .03; .XXX ± .010.

2. REMOVE ALL BURRS AND BREAK ALL SHARP EDGES.

3. WELD AND INSPECT ALUMINUM WELDS PER AWS D1.2, VT WELDS FINAL PASS.
WELD AND INSPECT STAINLESS STEEL STRUCTURAL MEMBERS PER AWS D1.6.
WELD AND INSPECT CARBON STEEL STRUCTURAL MEMBERS PER AWS D1.1.
WELD AND INSPECT PIPING PER ASME/ANSI B31.3. VT ALL WELDS AT FINAL PASS.

4. USE TEFLON TAPE ON THREADED JOINTS.

5. FIELD LOCATE ITEM 62, (HOSE REEL), ON ITEM 59, (SERVICE BODY), APPROX. AS SHOWN. TEMPLATE ITEM 62 TO SERVICE BODY AND FASTEN PER MANUFACTURERS' INSTRUCTIONS. BACK UP PLATE (ITEM 15) TO MATCH WIDTH AND LENGTH OF HOSE REEL MOUNTING PAD. TRANSFER HOLE PATTERN FROM MOUNTING PAD AS REQUIRED. IF NECESSARY, FIELD FIT, FABRICATE, AND INSTALL BRACKET TO SUPPORT/LOCATE ITEM 62 HOSE REEL PER COG ENGINEER DIRECTION.

6. PLASTIC AND PAPER WRAP SUPPORT ASSY. (ITEM 2) SHALL BE CENTERED ON SERVICE BODY AND BE USED TO TEMPLATE 7/16 DIA MOUNTING HOLES (6 PLACES) IN SERVICE BODY (ITEM 59).

7. PROVIDE 5/16−18 UNC−2B THREADED HOLES (16 PLACES) INTO ITEM 22, ONE END ONLY. USE ITEM 26 FOR TEMPLATE AS SHOWN.

8. DURING INSTALLATION OF ITEM 33 (INSULATING DRUM BLANKET), PROVIDE CLEARANCE WITH PARTS PROTRUDING FROM ITEM 32 (DRUM) AS SHOWN IN SECT M−M, SH 5. REMOVE A MINIMUM OF INSULATION.

9. HEAT ELEMENT AND THERMAL SWITCH IS ROTATED 180° FROM ORIGINAL POSITION SO THERMAL SWITCH IS ON TOP SIDE OF UNIT.

10. DELETED

11. PREPARE AND PAINT ALL EXPOSED CARBON STEEL SURFACES WITH ONE COAT OF FAST DRY INDUSTRIAL RUST−INHIBITIVE PRIMER AND TWO FINISH COATS OF FAST DRY INDUSTRIAL ENAMEL. FINISH COLOR SHALL BE GRAY. APPLY PAINT PER MANUFACTURER'S SPECIFICATIONS.

12. SKID MOUNTED PUMP AND MOTOR WITH PLUMBING. WESTERN POWER & EQUIPMENT (MODEL #SKDEHY8GPM) WITH THE FOLLOWING FEATURES: HYPRO MODEL 2414 POSITIVE DISPLACEMENT PUMP COUPLED WITH 7 1/2 HP, 230V SINGLE PHASE ELECTRIC MOTOR RATED FOR OUTDOOR USE. NOMINAL OUTPUT CAPACITY OF 8 GPM @1200 PSIG. PRESSURE RELIEF OUTLET SHALL BE PLUMBED TO RETURN TO PUMP INLET. WHERE POSSIBLE, STAINLESS STEEL PIPE FITTINGS SHALL BE USED. HOSES, IF USED FOR PLUMBING, SHALL BE MARKED WITH THE MANUFACTURER'S NAME AND MAWP @ TEMPERATURE.

13. ATTACH NAMEPLATES TO CORRESPONDING COMPONENT AS SHOWN ON THE SPRAY WASH SYSTEM SCHEMATIC. LABEL TEXT SHALL BE PER NAMEPLATE SCHEDULE (SEE SH. 4). USE 1 1/2 HIGH MIN X 3 WIDE LAMINATED PHENOLIC LABELS WITH 1/4 HIGH BLACK CHARACTERS CENTERED HORIZONTALLY AND VERTICALLY ON A WHITE BACKGROUND. ATTACH LABELS WITH PAN HEAD, SELF−TAPPING #8 X LAR SHEET METAL SCREWS, WHERE POSSIBLE; AN ENGINEERING APPROVED ADHESIVE OR STAINLESS STEEL WIRE WHERE APPROPRIATE (FINISH WIRE IN A MANNER TO PREVENT INJURY).

14. SHIM AS REQUIRED.

15. AN OPTIONAL PROTECTIVE COVER FOR THE WATER PRESSURE GAUGE AND PUMP SIDE HOSE CONNECTIONS MAY BE USED. THE PROTECTIVE COVER CONSISTS OF A BOX FRAME FROM 1 INCH CARBON STEEL SQUARE TUBING OR ANGLE. FIELD FIT THE FRAME TO COVER THE AREA OF THE WATER PRESSURE GAUGE AND HOSE CONNECTIONS WHILE PROVIDING SUFFICIENT CLEARANCE FOR UNOBSTRUCTED REMOVAL AND REPLACEMENT. COVER THE THREE OUTWARD FACING SIDES OF THE FRAME WITH EXPANDED STEEL GRATING. NON−CODE WELDS ARE ACCEPTABLE FOR FABRICATION. THE PROTECTIVE COVER IS NOT TO BE PERMANENTLY FASTENED TO THE SERVICE BODY OR PUMP FRAME.

16. FIELD ROUTE ALL HOSES AND FITTINGS APPROXIMATLEY AS SHOWN.

17. FIELD LOCATE ITEM 176 (BRACKET) ON ITEM 59 (SERVICE BODY) APPROX. AS SHOWN. DRILL 6X ø.406 THRU ITEM 59 (SERVICE BODY). TEMPLATE FROM EXISTING HOLES IN ITEM 176 (BRACKET).

18. FABRICATE LABEL AS FOLLOWS. USE 4" HIGH X 8" WIDE LAMINATED PHENOLIC LABEL WITH 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND. LABEL TEXT AS SHOWN AND LOCATE APPROX. AS SHOWN. ATTACH TO ITEM 29 (EXPANDED METAL) USING STAINLESS STEEL WIRE. FINISH WIRE IN A MANNER TO PREVENT INJURY.

19. LOCATE ALL ITEMS IN VIEW P−P APPROX. AS SHOWN UNLESS OTHERWISE SPECIFIED. LOCATE SUCH THAT HOSES FROM HR−1/2, PUMP INLET (ITEM 35) AND AIR SUPPLY CAN BE ATTACHED WITHOUT INTERFERENCE.

20. REMOVE EXISTING CAP IF/AS NECESSARY AND REPLACE WITH ITEM 187 AND 188. DO NOT OPERATE WITHOUT ITEM 187 VENT IN PLACE.

21. ITEMS 200 STRAINER AND 201 SCREEN MAY BE PRODUCED AS A UNIT FROM SPRAYING SYSTEMS.

22. MOUNT ALL ITEMS IN VIEW Z−Z (SPRAY WASH STRAINER STORAGE) APPROX. AS SHOWN. TEMPLATE 8X ø3/8 FROM ITEM 206 U−BOLT THRU ITEM 59 SERVICE BODY.

23. FIELD ROUTE CAPILLARY AND BULB (ITEM 34), STRAPPING AND SEAL (ITEMS 113 AND 114) APPROX. AS SHOWN (ON SH. 3, 4 AND 5).

24. APPLY HEAT TRANSFER COMPOUND (ITEM 213) TO THERMOMETER (ITEM 34) PER MFG. INSTRUCTIONS. FILL PVC PIPE (ITEM 211) WITH INSULATING FOAM (ITEM 212) PER MFG. INSTRUCTIONS.

25. FIELD FABRICATE, LOCATE, AND INSTALL AS NECESSARY, BRACKETS TO SUPPORT CONDUIT AND PIPING. LOCATE AND FINISH BRACKETS IN A MANNER TO PRVENT INJURY.

26. OPTIONAL TO USE ITEM 7 HOSE EXTENSION ASSEMBLY IN LOCATION SHOWN.

27. REMOVE MANUFACTURER PROVIDED THERMAL RELIEF VALVE FROM PUMP INLET AND REPLACE WITH ITEM 175 (PIPE PLUG).

PARTS/MATERIAL LIST

QTY REQD −070	−060	−050	−040	−030	−020	−010	PART/DASH NUMBER	NOMENCLATURE/DESCRIPTION	MATERIAL/REFERENCE	SHEET	ITEM NO
						2	(8C12−8MP−8MP−60")	HOSE, 1/2 ID, MIN 2000 PSI, MAWP, 1/2 MNPT BOTH ENDS, 60 L, NEOPRENE INNER TUBE	(GATES)	4	158
						2	50−1112S−E	PRESSURE SNUBBER, 1/2 MPT	ASHCROFT	4	159
								DELETED			160
								DELETED			161
								DELETED			162
								DELETED			163
								DELETED			164
	AR							LIQUID TIGHT FLEX CONDUIT, 1 1/4	ANY BRAND	10	165
	AR							RIGID STEEL CONDUIT, 3/4	ANY BRAND	10	166
	AR							LIQUID TIGHT FLEX FITTINGS, STRAIGHT, 3/4	ANY BRAND	10	167
	AR							LIQUID TIGHT FLEX FITTINGS, 90°, 3/4	ANY BRAND	10	168
		1				1	SS−8−MT	TEE, MALE, 1/2 NPT	CAJUN	4,5	169
						2	SS−8−RA−4	ADAPTER, REDUCING, 1/2 NPT TO 1/4 NPT	CAJUN	4	170
						1	SS−62TF4	VALVE, BALL, 1/4 FPT	WHITEY	4	171
						1	(8C12−8MP−8MP−24")	HOSE, 1/2 ID, MIN 2000 PSI MAWP, 1/2 MPT BOTH ENDS, 24"L, NEOPRENE INNER TUBE	(GATES)	4	172
		1				1	SS−8−UBJ	UNION, BALL JOINT, 1/2 NPT	CAJUN	4	173
						1	SS−8−ST	TEE, STREET, 1/2 NPT	CAJUN	4	174
						1	SS−12−P	PLUG, PIPE, 3/4 NPT	CAJUN	4	175
						1	−006	BRACKET, 11 GA (.120)	ANY GRADE SST	9	176
						2	(8896T105)	U−BOLT, 1/4−20UNC−2A 1.5W X 2.75L (FOR 1" PIPE)	ANY GRADE SST (McMASTER−CARR CAT 105)	9	177
						2	(8896T102)	U−BOLT, 1/4−20UNC−2A .75W X 2.25L (FOR 3/8 PIPE)	ANY GRADE SST (McMASTER−CARR CAT 105)	9	178
						1	45	COUPLING PLUG, 3/8 NOM, 1/2 NPT, 4000 SERIES	HANSEN	9	179
						1		NIPPLE, 1" SCHED 40S, 12"L	ANY GRADE SST	9	180
						1		NIPPLE, 3/8 SCHED 40S, 6"L	ANY GRADE SST	9	181
								DELETED			182
						1	SS−6−BT	BRANCH TEE, 3/8	CAJUN	9	183
						1	SS−6−SE	ELBOW, STREET, 3/8	CAJUN	9	184
1						3	LL3−K21	COUPLING PLUG, 3/8 TYPE 303 SST	HANSEN	9	185
						8		WASHER, FLAT, 1/4	ANY GRADE SST	9	186
		1					(4B15K15)	VENT, DOUBLE OULET, TANK	(McMASTER−CARR CAT 105)	5	187
		1						NIPPLE, 2" NPT, CL150 OR BETTER, 4"L	ANY GRADE SST	5	188
		1					SS−8−HRCG−6	COUPLING, HEX REDUCING, 1/2 TO 3/8 NPT	CAJUN	5	189
		1					(6C12−6MP−6MP−60")	HOSE, 3/8 ID, MIN 2000 PSI MAWP, 3/8 MPT BOTH ENDS, 60"L, NEOPRENE INNER TUBE	(GATES)	5	190
						1	SS−6−UBJ	UNION, BALL JOINT, 3/8 NPT	CAJUN	9	191
						1		NIPPLE, 3/8 SCHED 40S, 2"L	ANY GRADE SST	9	192
						1	SS−12−HRN−8	NIPPLE, REDUCING, HEX, 3/4 TO 1/2 NPT	CAJUN	9	193
		1						BALL VALVE, 150 LB MIN	BRASS OR ANY SST	5	194
		3						NIPPLE, SHORT, 1/2, 150 LB MIN	ANY BRASS, CS, OR GALV	5	195
		1						ELBOW, 45°, FEMALE	ANY BRASS, CS, OR GALV	5	196
		1						REDUCER, BELL, 1/2 FMPT X 3/4 FEMALE HOSE BIB	ANY BRASS, CS, OR GALV	5	197
		1						HOSE TO HOSE FITTING 3/4 MALE TO MALE	ANY BRASS, CS, OR GALV	5	198
						2	H605S−010	FLOW METER, 10 GPM, 1/2 FNPT, SST	HEDLAND PRODUCTS	4	199
21						2	2820−1/2−SS	STRAINER	SPRAYING SYSTEMS, SST	4	200
21						2	CP2507−9−SS	SCREEN, 200 MESH	SPRAYING SYSTEMS, SST	4	201
						2	(6C12 X (2) 6GS−8MP X (2) 6GS1F−4)	HOSE, 3/8 ID, MIN 2000 PSI MAWP, 1/2 MNPT BOTH ENDS, 50" L, NEOPRENE INNER TUBE	(GATES)	4	202
						2		HALF COUPLING, 2 1/2 NPT	ANY GR BRASS	3,9	203
						2		NIPPLE, 2 1/2 NPT, 4" L	ANY GR BRASS	3,9	204
						2		ELBOW, 45°, 2 1/2 NPT	ANY GR BRASS	3,9	205
						4	(8896T75)	U−BOLT W/NUTS AND MOUNTING PLATE FOR 2 1/2" PIPE, 5/16−18UNC	ANY GR SST (McMASTER−CARR)	3,9	206
						1	(46105K42)	VALVE, CHECK, 1/2 MNPT, SOFT SEAT, W.O.G MIN 150 PSI	(McMASTER−CARR, CAT 105) BRASS	9	207
						1	SS−8−HRN−6	NIPPLE, HEX, REDUCING, 1/2 TO 3/8 NPT	CAJON	9	208
						2	SS−8−SE	STREET ELBOW, 1/2 NPT	CAJON, SST	4	209
						2	SS−6−HRN−4	NIPPLE, HEX, REDUCING, 3/8 MNPT TO 1/4 MNPT	CAJON, SST	3,4	210
		AR						PIPE, PVC, SCHED 40, 3" x 8 1/2"L CUT PIPE IN HALF LENGTHWISE	(JIT 450612)	4,5	211
		AR						INSULATING FOAM	(DAP 18826)	4,5	212
		AR						HEAT TRANSFER COMPOUND	(JOHNS MANVILLE Z20)	4,5	213
1							(6C12 X (2) 6GS−6MP X (2) 6GS1F−4)	HOSE, 3/8 ID, MIN 2000 PSI MAWP, 3/8 MNPT BOTH ENDS, 36" L, NEOPRENE INNER TUBE	(GATES)	4,6	214
						3		HEX NUT, #8−32 UNC−2B	ANY GRADE SST	3	215
						3		WASHER, #8 RGLR HLCL SPRING	ANY GRADE SST	3	216
						3		SCREW, RND HD, #8−32 UNC−2A X 3/4L	ANY GRADE SST	3	217

PARTS/MATERIAL LIST (CONTINUED FROM SHEET 1)

QTY REQD −070	−060	−050	−040	−030	−020	−010	PART/DASH NUMBER	NOMENCLATURE/DESCRIPTION	MATERIAL/REFERENCE	SHEET	ITEM NO
								DELETED			109
	3							NIPPLE, CONDUIT, 3/4 X 3, GALVANIZED RIGID	ANY GRADE	10	110
	2							TERMINAL BLOCK, POWER, MAIN 1−#14 TO 2/0, BRANCH 4−#14 TO 4, 3 POLE WITH COVER	SQUARE D CLASS 9080, TYPE LBA362104, LB23 COVER	10	111
						AR		WASHER, FLAT, 3/8	ANY GRADE SST	3	112
		AR					(19285T82)	STRAPPING, 5/8 ZINC COATED	(McMASTER−CARR)	4,5	113
		AR					(14595T7)	SEAL, 5/8 PUSH TYPE	(McMASTER−CARR)	4,5	114
	3						B75	BUSHING, INSULATED, CONDUIT, 3/4	GEDNEY	10	115
	1						PK7GTA	GROUND BAR	SQUARE D	10	116
	1						GJL36050−M05	BREAKER, CIRCUIT, 240 VAC, 50 AMP TRIP, 3 POLE	SQUARE D	10	117
	1						FAL22040	BREAKER, CIRCUIT, 240 VAC, 40 AMP TRIP, 2 POLE	SQUARE D	10	118
	1						RL−6101	RELAY, ISOLATION, 110 VAC	KOBOLD	10	119
	2	2					802	LOCKNUT, SEALING, 3/4 CONDUIT	REGAL	5,10	120
	3	1					STNM−75	CONNECTOR, 3/4, LIQUID TIGHT, NON−METALLIC, STRAIGHT	APPLETON	5,10	121
	AR	AR						CONDUIT, FLEXIBLE, LIQUID TIGHT, 3/4 DIA	ANY GRADE	5,10	122
	AR	AR						WIRE, #8 AWG, THHN	ANY GRADE	5,10	123
	AR	AR						WIRE, #10 AWG, THHN, GREEN	ANY GRADE	5,10	124
	AR	AR						WIRE, #14 AWG, THHN	ANY GRADE	5,10	125
		AR					EMSK3−1−0	CABLE MOUNTS, EPOXY APPLIED	PANDUIT	5	126
	1						BC6031S	FUSEHOLDER, FOR CLASS CC FUSE, 1 POLE	BUSSMAN	10	127
	1						FNQ−R−4	FUSE, 600 VAC, 4 AMP, CLASS CC	BUSSMAN	10	128
	1						BS75S COVER SGN75 GASKET	CONDULET, FORM C, 3/4, WITH COVER AND GASKET	GEDNEY C75		129
	AR							WIRE, #6 AWG, THHN	ANY GRADE		130
	2						BS75S COVER SGN75 GASKET	CONDULET, LL, 3/4, WITH COVER AND GASKET	GEDNEY LL75	10	131
								DELETED			132
								DELETED			133
								DELETED			134
								DELETED			135
								DELETED			136
								DELETED			137
								DELETED			138
	AR						B54−20	FRAMING CHANNEL, 1 5/8 X 13/16 X LAR	B−LINE	3	139
	4						N224−1/4	FRAMING CHANNEL SPRING NUT, 1/4	B−LINE	3	140
	4							HEX HEAD CAP SCREW, 1/4−20 UNC−2A X 3/4 L		3	141
								UNUSED			142
								DELETED			143
								DELETED			144
								DELETED			145
								DELETED			146
								DELETED			147
						AR		SCREW, HEX, 1/2−13UNC−2A X LAR	ASTM A307 CS	3	148
						AR		NUT, HEX, 1/2−13 UNC−2B	ASTM A563 GRADE A	3	149
						AR		WASHER, FLAT, 1/2, TYPE B WIDE	ANY GRADE CS	3	150
						AR		WASHER, LOCK, SPLIT TYPE, 1/2	ANY GRADE CS	3	151
						1	PR59−1A51H9L154	PRESS REGLR, 4000 PSI INLET, CV 1.2, SST, 1/2 FNPT, PANEL MT	GO REGULATOR (CIRCLE SEAL)	3,4	152
						1	−005	BRACKET, 11 GA (.120)	ASTM A240 304 OR 304L SST	9	153
						1		PUMP, ELECTRIC, 7 1/2 HP, 3000 PSI MAX		3,4	154
						2	100−1008−S−L−04L−0	GAUGE, PRESSURE, 0 TO 3000 PSI, 1/2 NPT CONNECTION	ASHCROFT 3000 PSIG	4	155
						1	(8C12−8MP−8MP−36")	HOSE, 1/2 ID, MIN 2000 PSI, MAWP, 1/2 MNPT BOTH ENDS, 36 L, NEOPRENE INNER TUBE	(GATES)	3,4	156
								DELETED			157

FOR PARTS LIST SEE SHEET 1 & 2

THIS SPACE RESERVED FOR BUILDING AND INDEX NUMBERS

BLDG. NO.

INDEX NO.

DWG NO H−2−829939 SH 2 OF REV 2

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

REV NO	DESCRIPTION	REV BY DATE	ENGR COMPANY
2	& 668513 660738, 664423, 664434 660733, 660734, 660735, REVISED PER ECN 660700,	RLM 5/02	
REVISIONS			

	NAME	DATE	COMPANY
DRAWN BY	P.M. McELROY	9/20/99	CODEM
CHECKED	RL MILLER	12/99	FTS
DWG LEAD	H SHUMAKE JR	12/99	CODEM
DOC ENG	RN DALE	12/99	CHG
DESIGN AUTHORITY	GP JANICEK	1/00	LMHC

U.S. DEPARTMENT OF ENERGY
Office of River Protection

CORE SAMPLER SUPPORT TRUCK RST−A

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	200G	3902	H−2−829939	2
SCALE NONE	EDT 624168		SHEET 2 OF	

3005 DOE_TB_F.DWG (01−01)