NOTES FOR DESIGNER: (DO NOT INCLUDE ON CONSTRUCTION DRAWINGS)

14. AS A GENERAL GUIDELINE, PUMPS SHALL BE SPECIFIED AND SELECTED USING THE FOLLOWING PARAMETERS:

    A. 250 GPM AND GREATER: CENTRIFUGAL SINGLE STAGE, DOUBLE SUCTION TYPE WITH FLEXIBLE COUPLING.

    B. 249 GPM AND LESS: CENTRIFUGAL END SUCTION TYPE WITH FLEXIBLE COUPLING AND BACK PULL-OUT DESIGN.

        1. CLOSE COUPLED PUMPS MAY BE UTILIZED WHEN SPACE IS LIMITED. CARE SHOULD BE EXERCISED IN HOT WATER APPLICATIONS.

    C. OPTION: AN IN-LINE CLOSE COUPLED PUMP MAY BE USED FOR CONSTANT COIL CIRCULATION APPLICATION.

    D. SELECT PUMP TO OPERATE WITHIN THE CAPACITY RANGE RECOMMENDED BY THE MANUFACTURER.

    E. SELECT PUMP TO OPERATE ON NEGATIVE SLOPE OF PUMP CURVE.

    F. SELECT A MAXIMUM NOMINAL 1800 RPM OPERATING SPEED, (CONDENSATE RETURN PUMPS MAY BE 3600 RPM).

    G. THE BHP AT DUTY POINT SHALL NOT EXCEED 90% OF INDICATED MOTOR NAMEPLATE HORSEPOWER RATING. THE MOTOR SHALL BE NON-OVERLOADING THROUGHOUT THE PUMP CURVE.

15. PUMP CONCRETE PAD (2004 ASHRAE SYSTEMS & EQUIPMENT HANDBOOK, PAGE 39.13)

    A. MINIMUM WEIGHT OF CONCRETE SHOULD BE 2.5 TIMES THE WEIGHT OF THE PUMP ASSEMBLY.

    B. CONCRETE PAD SHOULD BE AT LEAST 4 INCHES THICK AND 6 INCHES WIDER THAN THE PUMP BASE PLATE ON EACH SIDE.

DRAWING DEVELOPED FOR ML-3/ ML-4 PROJECTS. FOR ML-1/ ML-2, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN IN-SERTED INTO A DRAWING PACK-AGE).

NO	DATE	CLASS REV	ADC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
2	8-14-03	U		EDITORIAL CHANGES & DWG NO. WAS ST6120.	RP	RF	RR	GG	TO
1	9-6-02	U		GENERAL REVISON.	RP	BB	GG	GG	TO

ENGINEERING STANDARDS PROGRAM

ENGINEERING STANDARDS MANUAL

PUMP PIPING DETAIL
DESIGN NOTES

BLDG X TA-X

DRAWN	R.PEARSON
DESIGN	B.BURTSCHELL
CHECKED	G.GREWAL
DATE	6-28-99

SUBMITTED
DISCIPLINE POC: GURINDER GREWAL

APPROVED FOR RELEASE
STANDARDS MANAGER: TOBIN ORUCH

Los Alamos NATIONAL LABORATORY
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SHEET 8
8 OF 8

CLASSIFICATION: U
REVIEWER: LARRY BAYS
DATE:

PROJECT ID: CHAPTER 6
DRAWING NO: ST-D30GEN-4
REV: 2