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

1. WHEN EDITING DETAIL TO SUIT PROJECT, ADD JOB SPECIFIC REQUIREMENTS AND DELETE ONLY THOSE PORTIONS THAT DO NOT APPLY. TO SEEK A VARIANCE FROM APPLICABLE REQUIREMENTS, CONTACT THE ESM MECHANICAL POC.

2. REFER TO THE FOLLOWING LANL STANDARDS FOR ADDITIONAL REQUIREMENTS:
   A. ENGINEERING MANUAL MECHANICAL CHAPTER.
   B. MECHANICAL DRAWING ST–D30GEN–4, PUMP PIPING DETAILS.
   C. MECHANICAL DRAWING ST–D2020–2, PRV PIPING DETAIL.
   D. MASTER SPECIFICATION 01 3545, WATER DISCHARGE REQUIREMENTS.
   E. MASTER SPECIFICATION 23 2113, HYDRONIC PIPING.
   F. MASTER SPECIFICATION 23 2500, HVAC WATER TREATMENT.
   G. MASTER SPECIFICATION 23 6509, INDUCED DRAFT COOLING TOWERS, STEEL.
   H. MASTER SPECIFICATION 23 6511, INDUCED DRAFT COOLING TOWERS, FIBERGLASS.

3. WHEN TOWER IS USED DURING WINTER SEASON WITH A REFRIGERANT CHILLER, PROVIDE A DIVERTING VALVE TO MAINTAIN TOWER WATER SUPPLY TEMPERATURE AT CHILLER CONDENSER, NO LOWER THAN 60°F. LOCATE DIVERTING VALVE IN EQUIPMENT ROOM.

4. SELECT TYPE OF WATER LEVEL ALARM (AUDIBLE, LIGHT, ETC.) AS DETERMINED BY SITE REQUIREMENTS.

5. SIZE COOLING TOWER DRAIN AND OVERFLOW PIPING AS REQUIRED. MINIMUM SIZE TO MATCH COOLING TOWER CONNECTIONS.

6. ANALYZE SYSTEM (PIPING WATER LEVELS, DIVERTING VALVE OPERATION, ETC.) AND HEAT TAPE AND INSULATE TOWER PIPING AS REQUIRED TO PREVENT FREEZING.

7. DUAL PARALLEL STRAINERS MAY BE REQUIRED IN SYSTEMS TO AVOID SHUTTING DOWN THE CHILLED WATER SERVICE DURING MAINTENANCE ACTIVITIES.

DRAWING DEVELOPED FOR ML–3/ ML–4 PROJECTS. FOR ML–1/ ML–2, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN INSERTED INTO A DRAWING PACKAGE).

NO	DATE	CLASS REV	ADC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP

ENGINEERING STANDARDS PROGRAM

ENGINEERING STANDARDS MANUAL

COOLING TOWER & CHILLER DESIGN NOTES

BLDG X TA–X

DRAWN	R.PEARSON
DESIGN	R.FROST
CHECKED	J.MACY
DATE	8–11–05

SUBMITTED
DISCIPLINE POC: CHARLES DuPRE

APPROVED FOR RELEASE
STANDARDS MANAGER: TOBIN ORUCH

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET 2 OF 2

CLASSIFICATION: U
REVIEWER: LARRY BAYS
DATE:

PROJECT ID: CHAPTER 6
DRAWING NO: ST–D3030–1
REV: 0