From: Liz English [mailto:lenglish@lanl.gov]
Sent: Thursday, January 06, 2011 8:48 AM
To: Hansen, Amanda
Cc: Owens, Kirk W.
Subject: FW: NEPA Data Call - Fluorinated Gases at CMR and CMRR

Amanda-

Here is the rest of the story. Please let me know if you need more information.

Thanks

Liz English
CMRR Safety and Environmental Compliance
Office: (505) 665-9967
Mobile (505) 412-3835
lenglish@lanl.gov

Liz
I attached the chiller refrigerant info from the submittal information on file. Chillers were procured and installed in 2007/2008. Startup in 2009 0r 10??
From the attached info

- 4 chillers w/ 2 circuits each
- RTAC400 – 4 circuits @415 lbs ea. = 1660 lbs.
- RTAC450 – 2 circuits @ 415 lbs + 2 circuits @ 460 lbs = 1750 lbs
- Total for 4 chillers = 3410 lbs.

Hope this is sufficient.
LM

From: Liz English [mailto:lenglish@lanl.gov]
Sent: Tuesday, January 04, 2011 10:58 AM
To: lmmartinez@lanl.gov
Subject: FW: NEPA Data Call - Fluorinated Gases at CMR and CMRR

Hi, Leroy-

I am looking for information about the use of fluorinated gases at CMRR-NF and RLUOB. Don Shoemaker reports that you may have that information. Please see below – thanks. I've attached the parallel information that was already provided for current/past ops (just FYI) and now am seeking information on projected use. Is there a chance of getting this information today?

Thanks
Liz English
CMRR Safety and Environmental Compliance
Office: (505) 665-9967
Mobile (505) 412-3835
lenglish@lanl.gov

From: Shoemaker, Donald [mailto:donalds@lanl.gov]
Sent: Tuesday, January 04, 2011 10:26 AM
To: Wong, Amy S; English, Elizabeth W
Subject: RE: NEPA Data Call - Fluorinated Gases at CMR and CMRR

In this case, Liz I suggest you talk with Leroy Martinez in Engineering, he should be able to pull up the relevant refrigerant specs and construction submittals

From: Wong, Amy S
Sent: Tuesday, January 04, 2011 10:08 AM
To: Shoemaker, Donald; English, Elizabeth W
Subject: RE: NEPA Data Call - Fluorinated Gases at CMR and CMRR

Don,

From the program operations perspective, we do not anticipate fluorinated gases based on the list that we received.

However, I don't know if there are any refrigeration units of the facility system that may contain fluorinated gases (Freon). Therefore I asked Liz to contact you or engineering team.

Hopefully this clarifies the request.

Thanks. Amy

Tag Data - Air-Cooled Helical Rotary Water Chillers (Qty: 4)

Item	Tag(s)	Qty	Description	Model Number
A1	PG-CWR-01, PG-CWR-02	2	Trane Model RTAC-450	RTAC450
A2	PG-CWR-03, PG-CWR-04	2	Trane Model RTAC-400	RTAC400

Product Data - Air-Cooled Helical Rotary Water Chillers

All Units

Air Cooled Series R(TM) Model RTAC
460 V/60 Hz/3 Phase
C/UL Listing
ASME
2 Pass Arrangement, insulated
Low Ambient Operation to 0 deg. F
Aluminum Fins
Wye-delta closed transition starter
Single point power connection with factory mounted and wired Circuit Breaker - HACR rated
TCI for BACnet Interface to Trane BCU (Fld)
150 psi NEMA-1 flow switch (Fld)
With suction service valves
Raised face flange kits for the water connections on the evaporator
Building Control Unit (BCU) with bridge for Modbus interface (fld)
Louvered panels for condenser coil protection
Elastomeric isolators (Fld)
2-5th Year Replacement Compressor Warranty including Labor and Refrigerant
1st Year Parts, Labor and Refrigerant Warranty
Start-up & Supervision

Item: A1 Qty: 2 Tag(s): PG-CWR-01, PG-CWR-02

450 Nominal Tons
39F or less leaving fluid temperature, with evaporator heaters
Ice-making control

Item: A2 Qty: 2 Tag(s): PG-CWR-03, PG-CWR-04

400 Nominal Tons
Std 40-60F leaving fluid temperature, with evaporator heaters

General Information

Table 2 General Data — 275- 500 Ton 60 Hz Units - Standard Efficiency

Size		275	300	350	400	450	500
Type		STD	STD	STD	STD	STD	STD
Compressor							
Quantity		3	3	3	4	4	4
Nominal Size	(tons)	85/85 100	100/100 100	120/120 100	100/100 100/100	120/120 100/100	120/120 120/120
Evaporator							
Water Storage	(gallons)	60	65	70	81	84	89
	(liters)	229	245	264	306	316	337
Min. Flow	(gpm)	309	339	375	404	422	461
	(l/sec)	20	21	24	26	27	29
Max. Flow	(gpm)	1134	1243	1374	1483	1548	1690
	(l/sec)	72	78	87	94	98	107
Condenser							
Quantity of Coils		8	8	8	8	8	8
Coil Length	(inches)	180/108	216/108	252/108	216/216	252/216	252/252
	(mm)	4572/2743	5486/2743	6401/4572	5486/5486	6401/5486	6401/6401
Coil Height	(inches)	42	42	42	42	42	42
	(mm)	1067	1067	1067	1067	1067	1067
Fins/Ft		192	192	192	192	192	192
Number of Rows		3	3	3	3	3	3
Condenser Fans							
Quantity		10/6	12/6	14/6	12/12	14/12	14/14
Diameter	(inches)	30	30	30	30	30	30
	(mm)	762	762	762	762	762	762
Total Airflow	(cfm)	147340	165766	184151	221016	239456	257991
	(m^3/hr)	250307	281610	312843	375471	406797	438285
Nominal Fan Speed	(rpm)	1140	1140	1140	1140	1140	1140
	(rps)	19	19	19	19	19	19
Tip Speed	(ft/min)	8954	8954	8954	8954	8954	8954
	(m/s)	45	45	45	45	45	45
Min Starting/Oper Ambient							
Std Unit	(Deg F)	25	25	25	25	25	25
	(Deg C)	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Low Ambient	(Deg F)	0.0	0.0	0.0	0.0	0.0	0.0
	(Deg C)	-17.8	-17.8	-17.8	-17.8	-17.8	-17.8
General Unit							
Refrigerant		HFC-134a	HFC-134a	HFC-134a	HFC-134a	HFC-134a	HFC-134a
No. of Independent Refrigerant Circuits		2	2	2	2	2	2
% Min. load		15	15	15	15	15	15
Refrigerant Charge	(lb)	365/200	415/200	460/200	415/415	460/415	460/460
	(kg)	166/91	188/91	209/91	188/188	209/188	209/209
Oil Charge	(gallons)	4.6/2.1	5.0/2.1	5.0/2.1	5.0/5.0	5.0/5.0	5.0/5.0
	(liters)	17.4/8	19/8	19/8	19/19	19/19	19/19
Base Length	(feet)	30	36	36	39	45	45

1. Data containing information on two circuits shown as follows: CKT1/CKT 2.
2. Minimum start-up/operating ambient based on a 5 mph wind across the condenser.