COMBUSTION RESEARCH LAB

CELL 12 FACILITY OUTLINE

DESCRIPTION :

CRL Cell 12 contains a Spray Test Rig and instrumentation for studying multi-phased flow. The facility consists of a test cell, adjacent control room, an outside water storage tank next to the cell, a portable liquid nitrogen dewar, and gaseous nitrogen, service-air, and combustion-air services. Escort service is used to record data and calibrate flow rates, and a Norland computer is used to process dropsize measurement data obtained with the NASA Lewis developed Scattered Light Scanner. Data reduction is obtained for the tests by using main-line computer systems.

CAPABILITIES :

* OBTAIN BASIC TWO-PHASE FLOW DATA INCLUDING LIQUID PARTICLE-SIZE MEASUREMENTS OF SPRAYS WITH CHARACTERISTIC DROPSIZE AS SMALL AS 5 MICRON
* LIQUID-NITROGEN PRESSURES UP TO 325 PSIA AND WATER PRESSURE UP TO 1000 PSIA
* NITROGEN GAS PRESSURE UP TO 1000 PSIA
* COMBUSTION AIR UP TO 2 LB/SEC AT 125 PSIA
* SERVICE AIR AT 40 PSIA

COMPUTER SUPPORT :

* ACCESS TO MAINFRAMES VIA MODEM
* NORLAND COMPUTER

DATA ACQUISITION SYSTEMS :

* ESCORT - 80 data channels at 1 sample/sec./channel
* SCATTERED LIGHT SCANNER - Developed at NASA, Lewis
* VIDEO CAMERA AND VCR - Monitored from Control Room

SERVICES :

* LN2 VIA DEWAR
* GN2 VIA CRL CENTRAL SUPPLY - 2200 PSIG MAX
* GHe VIA CRL CENTRAL SUPPLY
* AIR VIA CENTRAL SUPPLY - 125 PSIG MAX
* CITY WATER SUPPLY - 40 PSIG

NASA
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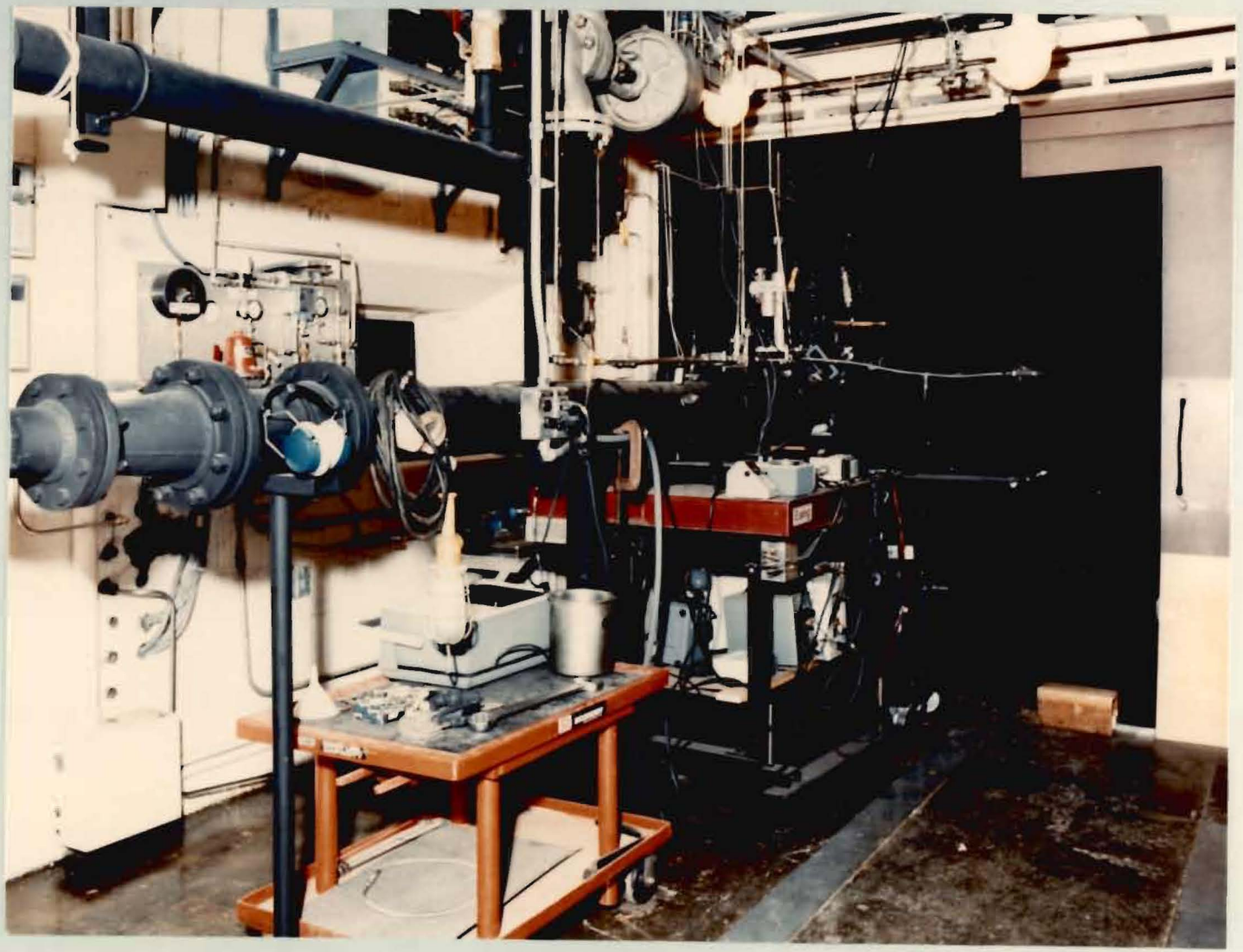
COMBUSTION RESEARCH LAB
CELL 12 CONTROL ROOM

CD-88-35797

NASA
C-88-08826

COMBUSTION RESEARCH LAB
CELL 12



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COMBUSTION RESEARCH LABORATORY

FACILITIES CATALOG

Prepared for

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