CNS STATION BLACKOUT
CONTROL ROOM HEATUP
ANALYSIS

SHEET 1 OF 68

JOB NO. NP-110 DATE 11/30/89

PROJECT CNS STATION BLACKOUT (SBO)

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E E Holcomb

REVIEWER J Brandon APPROVED [illegible] 1/9/90

CALCULATION NO. NPP1-SBO-007

CALCULATION NPP1 SBO-007

COOPER NUCLEAR STATION CONTROL ROOM HEATUP ANALYSIS

JOB NO. NP-110 DATE 11/30/89

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SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E E Holcomb

REVIEWER [illegible] APPROVED [illegible]

CALCULATION NO. NPP1-SBO-007

REVIEWER'S STATEMENT

THIS CALCULATION WAS REVIEWED AND FOUND TO BE COMPLETE AND CORRECT IN ITS ASSUMPTIONS, CALCULATIONS REFERENCES AND CONCLUSIONS.

THE REVIEW CONSISTED OF:

- AN EXAMINATION OF THE APPROPRIATENESS OF THE USE OF "HEATING-6" AND "CONTEMPT" COMPUTER CODES FOR THIS ANALYSIS.
- AN EXAMINATION OF THE APPROPRIATENESS OF USING THE REFERENCED SOLAR RADIATION AND AIR TEMPERATURE DATA FOR THIS ANALYSIS.
- HEAT TRANSFER CALCULATIONS WERE CHECKED FOR NUMERICAL ACCURACY AND WITH THEIR SOURCE DOCUMENTS IN ORDER TO DETERMINE IF THEIR USE IS APPROPRIATE IN THIS CALCULATION.
- MATERIAL DIMENSIONS AND THERMAL PROPERTIES WERE CHECKED AGAINST THEIR REFERENCES.
- ELECTRICAL LOADS AND THEIR CONVERSION CALCULATIONS WERE CHECKED WITH THIER REFERENCED SOURCE.

JOB NO. NP-110 DATE 11/30/89

PROJECT CNS STATION BLACKOUT (SBO)

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR EE Hlcomb

REVIEWER JB APPROVED

CALCULATION NO. NPPI-SBO-007

REVIEWER'S STATEMENT (CONT'D)

- COMPUTER CODE INPUT DECKS WERE SPOT CHECKED FOR ACCURACY.
- MODELING ASSUMPTIONS WERE REVIEWED FOR REASONABLENESS AND JUDGED TO BE CONSERVATIVE.
- THE RESULTS OF ANALYSIS WERE REVIEWED AND WERE JUDGED TO BE REASONABLE.
- THE CALCULATION WAS REVIEWED FOR COMPLETENESS AND CLARITY.

John Brandon
12/19/89

JOB NO. NP-110 DATE 11/30/89
PROJECT CNS STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR EE Ericsson
REVIEWER [illegible] APPROVED
CALCULATION NO. NPP1-SBO-007

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III. Monthly Summary Solar Radiation Data - June 1977

IV. CNS Control Room Roof Insulation Information

V. Letter EEH-89-084 from E.E. Holcomb, Enercon Services, Inc. to W. L. Swantz, NNPD, "CNS Control Room Electrical Load Summary", Dated 11/14/89.

VI. Details of Leakage Coefficient Calculations for CONTEMPT-LT/028 Input Deck.

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JOB NO. NP-110 DATE 11/30/89
PROJECT CNS STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E Holcomb
REVIEWER ____ APPROVED ____
CALCULATION NO. NPP1-SBO-007

OBJECTIVE

The purpose of this calculation is to determine the temperature of the Cooper Nuclear Station (CNS) Control Room during a postulated station blackout (SBO) event lasting 4 hours.

CALCULATION OVERVIEW

This calculation involves the following principal steps:

1) A brief introduction is provided.

2) The problem approach is discussed. Key assumptions and conservatism are identified.

3) The ambient air and solar insolation boundary conditions are developed.

4) Internal heat loads are quantified. Initial conditions are given for the control room and heat structures. Temperatures in the spaces adjacent to the control room are discussed.

5) The control room analytical model is developed. Individual heat structure models are detailed, and boundary conditions for each slab are discussed.

6) Convective heat transfer coefficients are calculated, for those heat structures where default correlations are not used.

7) Radiative heat transfer configuration factors are provided as required.

8) A model for air infiltration into the control room is developed.

9) Results are presented for a 4-hour simulation of the control room heatup.

10) The necessary references and figures complete the main part of the document. Supporting documentation is included as attachments to the calculation.

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PROJECT CNS STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E Holcomb
REVIEWER _____ APPROVED _____
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1.0 INTRODUCTION

Station blackout and related issues are being addressed by the Nebraska Public Power District (NPPD) in response to the Station Blackout Rule, 10 CFR 50.63, and Regulatory Guide (RG) 1.155. NUMARC 87-00 (Reference 1) also provides guidance that is in large part identical to RG 1.155, and adherence to the guidelines in NUMARC 87-00 is sufficient to demonstrate compliance with the SBO Rule.

NUMARC 87-00 requires that temperature severity be assessed in areas of the plant containing equipment whose function is essential to the mitigation and control of an SBO event, and also in areas where operators are required to perform manual operations. Areas containing essential equipment and whose steady state temperature would be expected to exceed 120 degrees Fahrenheit are designated as SBO dominant areas of concern (DAC). Areas requiring operator presence must be addressed for habitability concerns, especially if the area temperature is expected to exceed 110 degrees F.

The subject of this calculation is the CNS Control Room heatup during a postulated SBO event in which ventilation is lost for 4 hours before offsite AC power can be restored. Four hours is the required CNS SBO coping duration, determined in Reference 2. Insofar as the Control Room is affected, SBO occurrence is accompanied by a loss of forced ventilation and normal lighting, and a loss of power to non-essential electrical panels. Therefore, heat loads in the room are reduced because of the loss of offsite AC power. The problem is basically to determine the magnitude of

the remaining loads and to ascertain the steady state room temperature for this situation, i.e. internal room heating less than normal but without the benefit of air conditioning. The methodology applied to problem is discussed in Section 2.

1.1 CONTROL BUILDING LAYOUT

The site layout at CNS is shown in Figure 1. The Control Building is located on the north side of the reactor complex, between the Radwaste and Turbine Generator Buildings. The Control Building contains (at elevation 932' - 6") the Control Room and the Computer Room, which are shown in plan view in Figure 2. These two rooms are connected by the double doors on the east side of the Control Room. Another set of double doors, at the southeast corner of the Control Room, leads to the Turbine Generator Building.

The heatup analysis herein focuses on the thermal response of the Control Room, the boundary of which is defined by Figure 2.

1.1.1 CONTROL ROOM DETAIL

It is useful at this point to introduce some details of the Control Room construction, to support discussions in the sequel. Extracted from Burns & Roe Drawing 4526, Figures 3a and 3b show cross sections of the Control Room. These sections illustrate the interior wall and ceiling construction in relation to the concrete building envelope. The interior ceiling, constructed of acoustic tile and gypsum board, covers most of the Control Room area defined in Figure 2, except for the "Access Area" regions on the south and west sides of the Control Room, exterior to the outer rows of electrical panels.

2.0 METHODOLOGY OVERVIEW

The CNS Control Room heatup is determined computationally, using the HEATING-6 (Reference 3) and CONTEMPT-LT/028 (Reference 4) computer codes as the primary analytical tools. The Control Room is treated as a single, well-mixed volume, and one-dimensional models are employed for heat conduction through structures.

Appendix E of NUMARC 87-00 provides a simplified methodology that can be used for some room heatup calculations. In the NUMARC methodology, it is assumed that the temperature of major heat sinks, such as the walls and ceiling, is constant. With respect to the CNS Control Room, two aspects of the ceiling heat transfer prevent direct application of the NUMARC methodology:

i) The roof of the Control Room is subjected to transient solar heating, therefore, the assumption of a constant temperature has to be justified. Also, the roof might prove to be a heat source on a summer day instead of a heat sink.

ii) The CNS Control Room has a suspended interior ceiling that is composed of acoustic tile and gypsum board. The assumption of a constant temperature for these relatively thin layers of material would be questionable. (See Figures 3a & 3b).

Highlights of the problem approach and key assumptions are presented in the next few subsections.

2.1 PROBLEM APPROACH

The CNS Control Room heatup problem is divided into two principal parts. First, the steady periodic temperature of the solar heated roof and ceiling heat structures is

determined, to establish roof initial conditions at the onset of the SBO. This computation is performed with the HEATING-6 computer code. HEATING-6 was chosen for this phase of the calculations, because of tractability in treating the solar heat flux term and because of code features which facilitate treatment of heat transfer in the air space between the Control Room tile ceiling and concrete roof. Since the CNS Control Room roof is constructed of concrete and is over two feet thick, the thermal capacitance and time constant of the roof have a bearing on the problem. Therefore, the HEATING-6 simulation is performed for about four days to ensure that a meaningful steady state is obtained. The HEATING-6 code input model development and the results of the steady state computations are detailed in Attachment I.

For the second phase of the problem, the temperatures obtained from HEATING-6 are used to initialize the roof heat structure for the Control Room transient heatup calculations over the 4-hour SBO time period.

The transient computations are performed with the CONTEMPT-LT/028 computer program. The Control Room is treated as a well-mixed lumped volume, for reasons to be discussed in the sections which follow. Six major heat structures (i.e. the walls, roof/ceiling and floor) are modelled. Minor heat structures, including passive heat sinks, are not considered. The roof, air space and ceiling transient response is computed, using simplified external boundary conditions which are based on the results of the HEATING-6 analysis. Control Room internal heat loads consist mainly of electrical equipment, with a minor amount (i.e. < 1 KW) contributed by personnel. The electrical load determination is detailed in Section 4 and its supporting attachments. No credit is taken for forced ventilation (e.g. from battery-powered fans) or opening of doors. The calculation does, however, model air leakage from the Control Room via infiltration. Details of the computer code input model construction are provided in

Sections 5 through 8. The results of the transient computations with CONTEMPT-LT/028 are presented in Section 9. Key assumptions for the transient analysis are highlighted in Section 2.2.

2.1.1 COMPUTER CODE STATUS

The computer code calculations used in this were run on mainframes at Power Computing Company in Dallas, Texas. Both codes exist in a quality assured, fully configured status and are controlled by the PCC QA program.

The HEATING-6 computations were performed with QA Version 0584. HEATING-6 is a proven product which has been in the commercial marketplace for several years. Developed at the Oak Ridge National Laboratory, it has been subjected to extensive testing and assessment, as documented in Reference 3A.

CONTEMPT-LT/028 was developed at the Idaho National Engineering Laboratory for analysis of containment behavior. It has generalized compartment modelling features which make it well suited to room heatup analysis. Version JUL82, installed in the PCC QALIB and residing on the NOS2 System for the CYBER 990 computer, was utilized for the computations in calc. NPP1-SBO-007. Like HEATING-6, the code has undergone thorough testing prior to installation in PCC QALIB.

2.2 ASSUMPTIONS AND CONSERVATISM

2.2.1 The SBO is assumed to occur from 14:00 to 18:00 hours. The combination of highest ambient temperatures and highest roof temperatures occurs during this time

interval, based on the results in Attachment I.

2.2.2 The net free volume of the control room includes all of the enclosed volume. (But see Item 2.2.4). The volume of electrical panels, furniture, people, etc. is not subtracted from the room volume since these are not physically modeled. This approach results in a more rapid energy deposition to the room than would actually occur, because electrical energy is immediately dissipated in the room air rather than heating the physical mass of the panels. Conservatively, no credit is taken for passive heat sinks.

2.2.3 Control room and access area (Figure 2) are lumped together as one volume, since both areas contain electrical panels which would be active during SBO.

2.2.4 The air volume between the control room suspended ceiling and the concrete roof slab is not included in the control room net free volume calculation.

2.2.5 The internal energy generated in the control room is assumed to be evenly distributed throughout the room as opposed to modeling localized sources because:

2.2.5.1 The personnel and emergency lighting loads are distributed throughout the room.

2.2.5.2 The computer system heat load results from a total of eleven items, the largest of which is rated at 600W. Terminals, CRTs, etc. are considered to be distributed throughout the room rather than concentrated at a single location.

2.2.5.3 The majority of electronic panels have open backs, which greatly enhances panel cooling and energy distribution. The active panels during SBO are distributed throughout the room. The largest individual panel load is about 2.3KW, which is about the same heat as generated by a kitchen stove burner. Individual panel loads are delineated in Section 4. Also see Figure 4.

2.2.5.4 CNS procedures direct the control room operators to obtain portable supply fans in the event of a ventilation failure that cannot be readily corrected, to carry away heat from the control room console. (No credit for fan cooling has been taken in the analysis. Heat transfer from the room air to the major structures is modelled by natural convection).

2.2.6 Stored energy within the electrical panels and lighting, which were energized prior to the onset of the SBO, is neglected. This is considered to be a small amount of energy, and neglecting it should be more than offset by not taking credit for the control room interior passive heat sinks.

2.2.7 The initial equilibrium temperature of the Control Room just prior to loss of HVAC is assumed to be 23 degrees C. See also Section 4.4.

2.2.8 The areas immediately adjacent to the Control Room (see Figures 1 and 2) are assumed to be at a constant temperature of 90 degrees F for the 4-hour SBO. Further discussion regarding this assumption is provided in Section 4.5.

2.2.9 Referring to Figure 2, there are 3 doors between the main portion of the control room and the "Access Areas" on the west, south and east sides. Further, there are two sets of double doors between the Control Room and adjoining areas. Very conservatively, no explicit credit has been taken for opening of doors in the analysis. Implicitly, any opening of doors would further support the assumption that the room is well-mixed.

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3.0 EXTERNAL HEAT LOADS

3.1 EXTERNAL AIR TEMPERATURE

The outside air temperature data used in this analyses are ASHRAE 1% design values based on US Weather Bureau records for Omaha, Nebraska. (Use of data from Omaha was considered appropriate for the reasons listed in Section 3.2). The data are presented in Table 1, page 23.10 of ASHRAE (Reference 5). The 1% high temperature value is 94 degrees Fahrenheit, and a conservative value of 76 degrees F was assumed to be the low temperature. The high and low values were used to develop a sinusoidal function of ambient temperature vs. time, which is given in Attachment I.

3.2 SOLAR HEAT FLUX

Solar energy is conservatively assumed to irradiate the entire surface of the control building roof for the entire solar day. Shadows cast on the Control Building roof from other structures were ignored. (Roof elevations are indicated on Figure 1. The Turbine Building, to the east, is 58 feet higher than the Control Building. The Reactor Building, on the south side, is 100 feet higher). The waterproofing material on the surface was assumed to be asphalt. An absorptivity of 0.94 is used for solar heating, based on the 0.938 solar cell value in Reference 6 and the carbon black value in Reference 7. While Reference 8 indicates that an asphalt emissivity value of 0.93 would be a good choice, a slightly conservative value of 0.90 is assumed for reradiation from the heated asphalt surface.

The solar heat flux data used in this analysis are from the National Oceanic and Atmospheric Administration (NOAA) report titled "Monthly Summary Solar Radiation Data". Data from Omaha, Nebraska were used because of its proximity to CNS. The available edited data from June of 1977 to June of 1989 were

examined. (Reference 9, Attachment III). Omaha, at 41 degrees 22 minutes north latitude, is located sufficiently close to Brownville, at 40 degrees 21 minutes north latitude, such that the Omaha data are considered applicable to CNS. The Omaha data are considered slightly conservative because of a slightly longer day length. Climates are very similar, because Brownville and Omaha are both located on the Missouri River.

A typical day near the summer solstice was selected to represent the CNS roof solar heat flux. The typical day was one which exhibited clear sky features and had a combination of peak mid-day total heat flux and maximum integrated heat flux. June 19, 1977 well fits these criteria, as seen in Attachment III. The data from 6 to 7 AM are indicated to be questionable but were in the same range as other data for that month and thus have been retained. Data from 7 to 8 AM appear anomalously low, possibly indicative of a cloud cover. These data have been edited by taking the maximum, non-questionable value for that time period during the month of June. This "typical day" is in fact considered a representative upper bound of summer conditions. This heat flux condition is assumed to persist for 4 days in the steady periodic solution in Attachment I.

Based on the development in Reference 7, the heated roof reradiates to the sky according to

(1) $q''_{out} = \epsilon * \sigma * (TR^{**}4 - TSKY^{**}4)$, where

TR and TSKY are the roof and sky absolute temperatures, respectively, sigma is the Stefan-Boltzmann constant, epsilon is the roof emissivity, and q" out is the net radiative heat flux between the roof and the sky.

The sky temperature is related to the ambient temperature, TAMB, by

(2) TSKY = 0.0552 * TAMB**1.5, where

both TSKY and TAMB are in degrees Kelvin, and TAMB varies with time as discussed in Section 3.1.

4.0 INTERNAL HEAT LOADS

4.1 ELECTRICAL EQUIPMENT HEAT LOADS

To determine the Control Room electrical loads, all breakers powering Control Room equipment which would be active during an SBO were examined from the standpoint of determining those which would generate heat in this room. (See NPPD Calculation NEDC-89-1947 for the detailed loads breakdown). The systems of interest are the 125VDC system and the No-Break Power Panel (NBPP), i.e. uninterruptible AC circuits powered through inverters. The electrical loads in the subsections which follow reflect loads which terminate and dissipate heat in the Control Room. Power supplies and other equipment located exterior to the Control Room were not included in the load summaries.

The CNS Control Room electrical loads are summarized in Attachment V and its exhibits and are as follows:

4.1.1 ELECTRICAL PANEL LOADS

AC Loads

No-Break Power Panel 4753W

DC Loads

Div. I & II	2721W

4.1.2 EMERGENCY LIGHTING LOAD

(30 - 12W bulbs)	360W
(Indicating Lights)	344W

4.1.3 COMPUTER SYSTEM LOAD

(CRTs, etc.)	3960W

-See Exhibit B of Att. V-

4.1.4 ANNUCIATOR LOAD 1938W

-See Exhibit D of Att. V-

4.1.5 SECURITY SYSTEM LOAD

SAS Console	1494W

-See Exhibit C of Att. V-

The analysis results will show that it is unnecessary to power down the security system from the standpoint of control room heatup. The inclusion of the SAS load is conservative, because the security cubicle is outside of the control room proper.

4.2 PERSONNEL HEAT LOADS

8 people (3000 BTU/hr)	879W

(Reference 10, page 47)

4.3 SUMMARY OF LOADS

The total heat load is 16,449W .

4.4 CONTROL ROOM INITIAL HEAT STRUCTURE AND BULK AIR TEMPERATURES

The control room, initially air conditioned, is assumed to have a bulk air temperature of 23 degrees C (73.4 degrees F) at the start of the SBO. At time zero the air conditioning is lost. One side of each heat structure is in contact with the Control Room air. The initial temperature of each heat structure is determined via the CONTEMPT-LT/028 code, in which a steady state temperature profile is established for each slab prior to commencement of the transient computations.

One comment is in order regarding the heat structure initialization. Adjoining rooms on the south and east and beneath the Control Room are air-conditioned spaces, as will be discussed in the next section. Since interior climate control is continuous, the walls between these spaces would be at approximately the same temperature as the surrounding room air at the onset of an SBO, i.e. about 73 deg. F. The heat structure initialization does not take credit for this. Very conservatively, the side of the structure not in contact with the Control Room air is assumed initially to be at the temperature of the adjoining space, which is 90F.

4.5 ADJOINING ROOM TEMPERATURES

A constant temperature of 90 degrees Fahrenheit is assumed for the bulk room air temperature of the adjoining rooms. This boundary temperature is held constant for the SBO duration.

a. This assumption is based on the results of the HEATING-6 analysis discussed in Section 7.1 and the reasoning that interior walls and rooms not exposed to solar flux and having insignificant internal heat loads will be at lower temperatures.

b. It is considered conservative, since the normal operating temperatures of the spaces surrounding the Control Room are less than 90 degrees F.

Refer to Figures 1 & 2. The Computer Room, on the east, is normally air conditioned and would have no significant sources of heat during an SBO. (Procedures dictate that the doors between the Control and Computer Rooms be opened in the event of loss of Control Room ventilation, although the analysis has not modelled this large flow path). On the south, the access corridor (i.e. the "Office Bldg. Controlled Corridor") is normally air conditioned and has no heat sources. The access corridor acts as a buffer zone between the Control and Reactor Buildings. The two are separated by massive concrete walls. Similarly, the cable room, immediately beneath the control room, is part of the Control Bldg. envelope and is also air conditioned. Most of the electrical equipment in this room would be inactive during the SBO. Temperatures in the Radwaste and Turbine Generator Buildings normally do not exceed about 85 deg. F. The assumption of a constant temperature of 90F for these adjoining areas is considered conservative.

c. Using the Appendix R drawings (Reference 15) and Burns & Roe Drawing No. 2066, it can be seen that the Control Room is far away and well insulated from areas that would be heated during an SBO (e.g. the drywell, RCIC room and the DC switchgear rooms). In all cases, separation from the Control Room and heated areas is by at least two major floors or walls.

d. It was necessary to select one temperature for all adjoining rooms because of code input constraints.

5.0 CONTROL ROOM MODELING

Major features of the CONTEMPT-LT/028 model of the CNS Control Room are shown in Figure 5. The modelling approach has been discussed in previous sections. Modelling detail reduces basically to calculation of the room net free volume, to definition of the heat slab areas, thicknesses and constituent materials, to modelling of air infiltration, specification of boundary conditions and internal energy generation, then supplying the necessary control cards required by the input processor. Whenever possible, the LT/028 model development relies on data generated in the HEATING-6 model development in Attachment 1.

5.1 CONTROL ROOM AND ACCESS AREA VOLUMES

The dimensions of the Control Room envelope have been presented in Figures 2 and 3. From sheet 24, the Control Room net free volume (NFV) is:

NFV = 54,018 ft**3

The Control Room is simulated as a "Drywell" (i.e. compartment volume no. 3) in the CONTEMPT-LT/028 deck. This is done because of the greater modelling latitude when using this compartment option.

5.2 CONTROL ROOM CEILING AND CONCRETE ROOF - HS2

Based on the discussion in Section IV of Attachment I and on Figures 3a & 3b, the construction of the suspended ceiling and roof is illustrated in Figure 6. This figure also indicates the application of boundary conditions. At the top of the concrete slab, a large heat transfer coefficient (HTC) is used

1) ACCESS AREA VOLUME (SEE FIGURES 2 and 3 FOR BASIS OF SKETCH BELOW)

SOUTH VOLUME

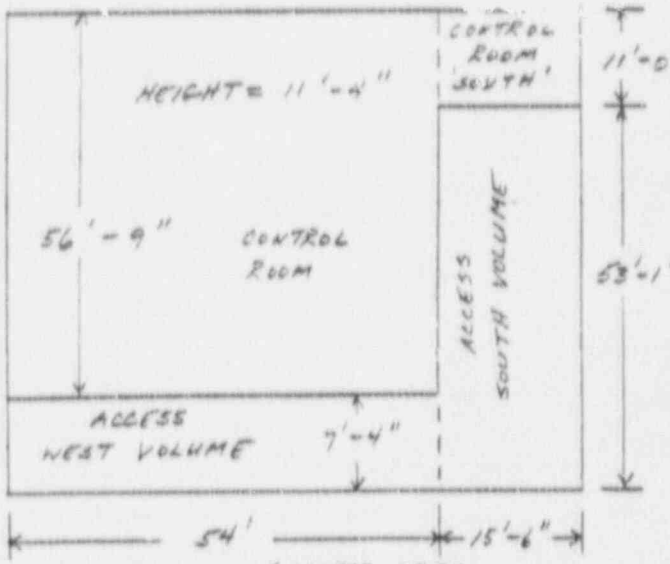
$V_S = 53.083' \times 15.5' \times 14.25'$

$= 11,724.8\ ft^3$ ✓

WEST VOLUME

$V_W = 54' \times 7.33' \times 14.25'$

$= 5640.4\ ft^3$ ✓



TOTAL ACCESS VOLUME

$V_{AT} = 11,724.8 + 5640.4 = 17,365.2\ ft^3$ ✓

2) CONTROL ROOM VOLUME BENEATH SUSPENDED CEILING

MAIN ROOM (V_{CRM})

$V_{CRM} = 56.75 \times 54' \times 11.33' = 34,720.8\ ft^3$ ✓

'SOUTH' PORTION (V_{CRS})

$V_{CRS} = 11' \times 15.5' \times 11.33' = 1,931.8\ ft^3$ ✓

$V_{CRM} + V_{CRS} = 36,652.6\ ft^3$ ✓

3) FOR 'LTSB' MODEL, NET FREE VOLUME (NFV)

$NFV = V_{AT} + (V_{CRM} + V_{CRS}) = 17,365.2 + 36,652.6\ ft^3 = 54,017.8\ ft^3$ ✓

to impress a constant surface temperature of 90 degrees F on the slab. The 90 F value is bounding and based on Figure 1-7 of Att. I. For the air space, heat exchange by natural convection and thermal radiation is allowed. Finer noding is used for the air region adjacent to the thinner layers (i.e. the tile & gypsum) consistent with code manual recommendations for mesh spacing at material interfaces. The acoustic tile is coupled to the room air via a temperature-dependent, natural convective HTC. Heat transfer coefficients for this heat structure (HS) are developed in Sections 6.1.1 and 6.1.2. Material properties are taken from Sect. IV-B of Att. I.

5.3 NORTH WALL - HS1

The north wall heat structure model is shown in Figure 7. The right side of the structure is connected to the control room air via the CONTEMPT-LT/Ø2B default correlation for natural convection to vertical surfaces (Ref. 4). The left side is exposed to the outside air temperature, discussed in Section 3.1. A constant HTC of Ø.2 Btu/hr-ft2-degf is used for the north wall exterior, based on values obtained while initializing the heat slabs with the code. The above HTC takes no credit for wind cooling of the north wall and is conservative with respect to heat losses. (Control Room interior wall natural convection heat transfer coefficients calculated with the code default correlation are about Ø.4 to Ø.5, for example). Heat transfer across the interior air space in the wall considers natural convection and thermal radiation, discussed in Sections 6.2.1 and 6.2.2.

From Dwg. 4526, Section F2 and Detail 1Ø (Figure 8) the interior panels are 5/8" thick. The thin plastic laminate facing is neglected. The panels are assumed to be Douglas Fir plywood. From Reference 5, Table 3A, p. 22.13, the thermal properties are:

density = 34 lbm/ft**3;

thermal conductivity = 0.067 Btu/hr-ft-degf;

specific heat = 0.29 Btu/lbm-degf.

5.4 SOUTH WALL - HS4

The south wall heat structure model is shown in Figure 9. The wall is taken to be a 2-feet-thick concrete slab. It is assumed that the wall is unfaced, since the spaces adjacent to the wall are access areas. Both sides of the wall are convectively coupled to air in the surrounding spaces via the code's default correlation, as was done for the north wall. The Office Building Controlled Corridor is considered to remain at a constant temperature of 90 F.

5.5 WEST WALL - HS5

The west wall modelling, illustrated in Figure 10, is identical to the south wall modelling, except the left and right sides of the structure are switched.

5.6 EAST WALL - HS6

The east wall model, based on Dwg. No. 4526 and Detail No. 10, is shown in Figure 11. This wall is assumed to be faced on both sides, with the facing construction the same as discussed in Section 5.3. Natural convection to the adjacent rooms again uses the code default correlation. Natural convection and thermal radiation are modelled in the all interior air spaces via an equivalent conductance, see Section 6.2.1.

5.7 FLOOR - HS3

The floor heat structure is simulated as an 8-inch-thick concrete slab, as shown in Figure 12. The bottom of this slab is convectively coupled to the cable room air by a temperature-dependent natural convective HTC, which is entered as tabular input in the LT2B deck. This table is developed in Section 6.1. The approach for the bottom side of this slab is the same as used for the Control Room ceiling. For the top surface of the slab, a constant value of 0.21 is used for the heat transfer coefficient, as explained in Item vi) of Section 6.6.1.

5.8 HEAT SLAB AREAS

Using Figures 2 & 3, the heat structure areas are determined, as listed below:

HS1 - NORTH WALL - AREA = 64.0833' * 11.3333' = 726.3 ft2

HS2 - CEILING - AREA = 56.75' * 54' + 15.5' * 11'

= 3,235 ft2

(See also sheet 24).

HS3 - FLOOR - AREA = 69.5' * 64.0833' = 4,454 ft2

HS4 - SOUTH WALL - AREA = 64.0833' * 14.25' = 913.2 ft2

HS5 - WEST WALL - AREA = 69.5' * 14.25' = 990.4 ft2

HS6 - EAST WALL - AREA = 69.5' * 11.3333' = 787.7 ft2

6.0 CONVECTIVE HEAT TRANSFER

6.1 CEILING AND FLOOR

6.1.1 HEAT EXCHANGE WITH CONTROL ROOM AIR

For the floor and ceiling, the characteristic lengths are quite large. Approximate heat transfer coefficients are chosen based on the following approach:

i) The surface temperature is assumed to be approximately equal to 90 deg. F for purposes of HTC calculations.

ii) To calculate 'h', the following correlation from Ref. 5 for turbulent natural convection is used for the ceiling:

$$Nu = 0.13 * (Gr\ Pr)^{**}0.33 .$$

This equation has the advantage that the heat transfer coefficient is independent of the characteristic length (L). The equation is valid for GrPr up to 1.0E+12.

iii) To take into account the range of validity, the Rayleigh number is set to the above value, then the allowable values of the characteristic lengths are determined, as shown on sheet 30. It is seen that the allowable value of 'L' depends on the temperature difference. From Dwg. No. 4526, the largest characteristic length is about 33 to 37 feet on the main control room floor, in reasonably good agreement with the maximum allowable values of 'L' for temperature differences (i.e. Tf - Ts) of 20F or less. Using the cube root of the air space volume between

the suspended ceiling and the luminous grid, a value of 'L' of about 20 feet results, with resultant values of Gr*Pr indicated to be within the range of validity of the correlation (column 8).

iv) It does not matter what value of 'L' is chosen for the heat transfer coefficient calculations, as 'h' depends primarily on delta 'T'. Scoping calculations with the 'LT2B' model indicated that a surface temperature of 90F and delta 'T' values of 5 to 10F are reasonable assumptions.

v) The values of 'h NC' indicated on sheet 30 were entered into the input deck as a temperature dependent function for the ceiling. For small values of delta 'T', an average value of h = 0.4785 at Tf = 90F is used based on sheet 30.

vi) For the floor, p. 2.13 of Ref. 5 indicates that a value somewhat less than 1/2 the ceiling value is appropriate. Using a reduction ratio of 12/27, based on the ratios of coefficients in the laminar flow equations in Table 5, p. 2.12, and an assumed delta 'T' of 10F, a heat transfer coefficient of about 0.21 results. This is applied to the floor as a constant value using a tabular function of time in the LT2B input deck.

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CONTROL ROOM CEILING

h HORIZONTAAL SURFACE
HOT PLATE FACING UP
COLD PLATE FAACING DOWN
CHARACTERISTIC DIMENSION (ft) 20.0000 ^40.000 (in)
********* ********

ASHRAE HANDBOOK 1977 -- p. 2.12 TABLE 5 SEC. 11.

HOT PLATE FACING UP ----- COLD PLATE FACING DODOWN
(HOT GRILL IN COLD KITCHEN) (COLD CEILING IN WARM ROOM)

NU=0.56*(GR*PR)^1/4
1.0E+04<GR*PR<1.0E+08

$$GR*PR = \frac{\beta*(Tf-Ts)*(L/12)^3*3600^2*PR}{Tf(R)*\nu^2}$$

NU=0.13*(GR*PR)^1/3
1.0E+08<GR*PR<1.0E+12

SURFACE TEMP (F) 90
****

1 NATURAL CONVECTION 16-Nov-89 NATURAL CONVECTION

k Btu/hrftF	VISC (ft2/hr)	PR	FILMTEMP Tβ (F)	GASTEMP Tf (F)	L (ft) H-U,C-D	GR*PR HOR SURF H-U,C-D	GR*PR HOR SURF H-U,C-D	NU NC HOR SURF H-U,C-D	h NC HOR SURF H-U,C-D
0.01466	0.5685	0.712	60	30	20.00	9.0032E+11	9.0032E+11	1255.283	0.9201
0.0149	0.58815	0.7105	70	50	24.60	1.0000E+12	5.3764E+11	1057.075	0.7880
0.01516	0.6078	0.709	80	70	32.11	1.0000E+12	2.4170E+11	809.785	0.6138
0.01529	0.6179	0.7083	85	80	41.17	1.0000E+12	1.1465E+11	631.545	0.4828
0.01541	0.628	0.7075	90	90	ERR	1.0000E+12	0.0000E+00	0.000	0.0000
0.01554	0.6381	0.7068	95	100	42.60	1.0000E+12	1.0345E+11	610.261	0.4742
0.01566	0.6482	0.706	100	110	34.39	1.0000E+12	1.9675E+11	756.110	0.5920
0.01578	0.6585	0.70525	105	120	30.54	1.0000E+12	2.8074E+11	851.225	0.6716
0.01613	0.6895	0.703	120	150	25.45	1.0000E+12	4.8537E+11	1021.649	0.8250
0.01664	0.7316	0.7	140	190	22.84	1.0000E+12	6.7141E+11	1138.344	0.9431
0.01712	0.7747	0.698	160	230	21.66	1.0000E+12	7.8742E+11	1200.456	1.0276
0.01759	0.8187	0.696	180	270	21.08	1.0000E+12	8.5436E+11	1233.550	1.0849
0.01806	0.8636	0.694	200	310	20.81	1.0000E+12	8.8713E+11	1249.124	1.1280
0.01853	0.9095	0.693	220	350	20.74	1.0000E+12	8.9728E+11	1253.871	1.1617
0.01899	0.9561	0.691	240	390	20.79	1.0000E+12	8.9018E+11	1250.555	1.1874
0.01945	1.0034	0.689	260	430	20.93	1.0000E+12	8.7226E+11	1242.117	1.2080
0.0199	1.0517	0.688	280	470	21.13	1.0000E+12	8.4800E+11	1230.482	1.2243
0.02034	1.1009	0.687	300	510	21.38	1.0000E+12	8.1889E+11	1216.236	1.2369

For the floor structure, use a multiplier of 12/27 on the heat transfer coefficients listed on the previous page.

ΔT	h_{NC}	$h_{NC} * 12/27$
20 F°	0.6138	0.2728
10	0.4828	0.2146
10	0.4742	0.2108
20	0.5920	0.2631

Choose h_{NC} = constant = 0.21 Btu/hr-ft²-°F, based on an assumed average ΔT of 10 F° for the transient. If ΔT exceeds this value, the choice of h_{NC} is conservative with respect to cooling of the room. ✓

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6.1.2 CEILING AIR SPACE

(See next four sheets).

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PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Wiemke

REVIEWER [illegible] APPROVED

CALCULATION NO. NPPI-SB0-007

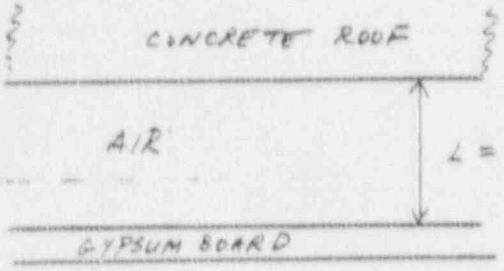
AIR SPACE ABOVE SUSPENDED CEILING

Parker (Ref. 14, p. 288) gives the relationship for determining the natural convective heat transfer coefficient for convection in an enclosed space, where heat is transferred by a fluid placed between two horizontal plates with the room plate at a higher temperature.

$$Nu_L = 0.069 \sqrt[3]{Gr_L}\, Pr^{0.074}$$

for $0.02 < Pr < 8750$ and $3 * 10^5 < Gr_L Pr < 7 * 10^9$.

The above equation is used to determine the natural convective heat transfer coefficient (h_{AC}) from the bottom of the concrete roof slab to the top surface of the gypsum board which covers the control room.



In the above equation the Grashof number, Gr_L, is based on the plate spacing, and Nu_L and Pr are the Nusselt and Prandtl numbers, respectively.

From the HEATING-6 results in Attachment 2, there is a temperature gradient of approximately 3F° across the ceiling air space. The average temperature in the air space during the transient is not known, but it should be somewhat higher than at steady state due to room heating. Let T_m = 85°F.

$$Nu_L = 0.069 (Gr_L)^{1/3} Pr^{0.074}, \quad L = 2.8125'$$

$$Gr_L = \frac{32.174 ft}{sec^2} * (2.8125 ft)^3 \frac{3600^2}{(459.69+85)} * 3F^\circ * \frac{hr^2}{0.6179^2 ft^4}$$

$$= 1.3382 * 10^8$$

@ T_m = 85°F, Pr = 0.70825

$$\Rightarrow Nu_L = 34.4015$$

$$h_{NC} = Nu_L \frac{k}{L} = Nu_L * \frac{0.01528...}{2.8125'} = 0.1870$$

As ΔT increases above the 3F° value used, the heat transfer coefficient will also increase. Use of the above value will, therefore, be conservative with respect to cooling of the room.

For the ceiling air space, heat transfer is treated as combined natural convection and thermal radiation via an effective thermal conductivity. A linearized radiative heat transfer coefficient (h_R) is determined, based on T_m = 65° and ΔT = 3F°, (assumed above). As temperatures increase, h_R would increase. ✓

The effective thermal conductivity is the sum of the natural convective and linearized radiative heat transfer coefficients, multiplied by the node thickness. Calculations are shown on the next page.

This procedure enables inclusion of conduction and thermal radiation in the CONTEMPT-LT/028 model without the complexity of additional heat structures or additional compartments. Isolation of the ceiling air space from the control room volume beneath the tile is maintained. *

The implementation procedure is consistent with the finite differencing procedures for CONTEMPT-LT/028 code. The procedure is also consistent with the treatment presented in Reference 3 for HEATING-6, which does have the latitude for direct inclusion of convective and radiative heat transfer across air regions. ✓

* It should be mentioned that the assumption of total isolation is conservative, as the ceiling air space actually is in natural communication with the control room access area, see Figures 2 and 3a. ✓

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PROJECT CNS STATION BLACKOUT
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E Holcomb
REVIEWER APPROVED
CALCULATION NO. NPPI-580-007

ROOF/CEILING

$h_{NC} = h_{NC}(T_m)$ $\quad T_m = \frac{T_1 + T_2}{2}$ ✓

$h_R = \mathcal{F}_{12}\,\sigma\,(T_1^2 + T_2^2)(T_1 + T_2)$ ✓

T_1	T_2	h_{NC}	h_R	$(h_{NC} + h_R)\bar{\delta}$
76.5°F	83.5	0.1870	0.9430	0.4540 $\frac{Btu}{ft^2 - hr - °F}$ ✓

where $\bar{\delta} = 2.8125'/7$ NODES $= 0.4018$ ft, avg. node spacing.* ✓

$T(°R) = T(°F) + 459.69$

@ $T_m = 85°F$, $\rho = 0.07284$ lb_m/ft^3

$c_p = 0.240525$ $Btu/lb_m - °F$ ✓

$\Rightarrow \rho c_p = 0.01752$ $Btu/ft^3 - °F$ ✓

* The following are implemented in the input deck (Att. VII) for the individual regions of the ceiling air space:

$\delta_1 = \frac{12.4792 - 12.1042}{2 \text{ NODES}} = 0.1875$ ft — 1ST AIR REGION ✓

$\Rightarrow (h_{NC} + h_R)\delta_1 = 0.2119 = k_{eff_1}$ ✓

$\delta_2 = \frac{14.9167 - 12.4792}{5 \text{ NODES}} = 0.4875$ ft — 2ND AIR REGION ✓

$\Rightarrow (h_{NC} + h_R)\delta_2 = 0.5509 = k_{eff_2}$ ✓

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6.2 NORTH AND EAST WALLS

6.2.1 WALL AIR SPACES

The procedure used for the wall air spaces is similar to the procedure defined in Section 6.1.2 except that a different convective heat transfer correlation is used to account for the vertical orientation of the walls. A constant, slightly conservative value of the heat transfer coefficient is calculated and used to determine an effective thermal conductivity for the air spaces. As mentioned, this method simplifies the model by reducing the number of heat structures required. The procedure is detailed on the next few pages.

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PROJECT ENS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E. Whitcomb

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CALCULATION NO. NPPD-SB0-007

h_{NC} FOR NORTH and EAST INTERIOR WALLS OF CONTROL ROOM

From Reference 14, p. 289, h_{NC} can be calculated between opposing vertical walls of an enclosure by using the following equations:

$$Nu_L = \frac{h\,L}{k_f} = 0.18\,(Gr_L)^{1/4}\left(\frac{H}{L}\right)^{-1/9}$$

for $2 * 10^4 < Gr_L < 2 * 10^5$

or

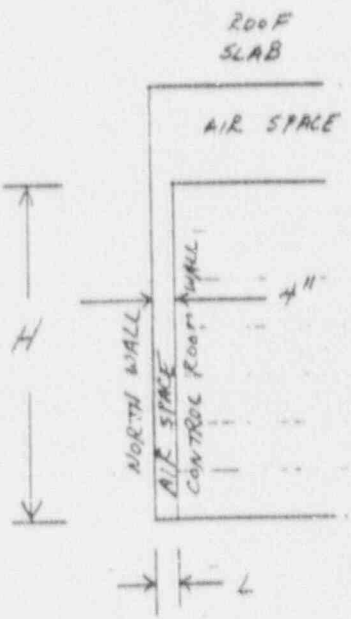
$$Nu_L = 0.065\,(Gr_L)^{1/3}\left(\frac{H}{L}\right)^{-1/9}$$

for $2 * 10^5 < Gr_L < 11 * 10^6$

These equations are valid for $H/L > 3$. Referring to the figure on the right,

$$H/L = \frac{11.33}{0.33} = 34 >> 3.$$

Because H/L is large, the air space within the wall is considered to be an enclosed region, ignoring the air space above. Using the above equations, h_{NC} can be evaluated for desired values of air space and wall surface temperatures.



The temperature gradient across the air space and the average temperature during the transient are unknown. Assume that the ΔT is $4F^\circ$ and that the mean temperature is $85^\circ F$.

$$Gr_L = 32.174 \frac{ft}{sec^2} * \frac{3600^2}{(85+459.69)} * {}^\circ F * (1/3\ ft)^3 * \frac{hr^2}{0.6179^2\ ft^4}$$

$$= 2.9704 * 10^5$$

$$Nu_L = 0.065 (Gr_L)^{1/3} \left(\frac{H}{L}\right)^{-1/9}$$

$$= 0.065 * (2.9704 * 10^5)^{1/3} * (34)^{-1/9}$$

$$= 2.9309$$

$$\Rightarrow h_{NC} = Nu_L \frac{k}{L} = Nu_L * \frac{0.015285}{1/3\ ft} = 0.1344 \frac{Btu}{hr - ft^2 - {}^\circ F}$$

Larger values of h_{NC} result at larger values of the temperature difference, even accounting for natural property (i.e. air) variations. The assumptions above should therefore be conservative with respect to heat loss through heat walls. Using the above h_{NC}, in combination with a radiative heat transfer coefficient, an effective thermal conductivity can be determined, similar to the procedure used for the roof air space.

NORTH & EAST WALLS

$h_{NC} = h_{NC}(T_1, T_2)$ $\quad T_m = (T_1 + T_2)/2$

** $h_R = \mathcal{F}_{12} \cdot \sigma * (T_1^2 + T_2^2)(T_1 + T_2)$

T_1	T_2	h_{NC}	h_R	$(h_{NC} + h_R)\bar{\delta}$ *
87°F	83°F	0.1344	0.7424	0.0731

$\bar{\delta} = \frac{1/3 \text{ ft}}{4 \text{ NODES}} = 1/12 \text{ ft}$

@ 85°F, $\rho = 0.07204 \text{ lbm/ft}^3$

$c_p = 0.240525 \text{ Btu/lbm-°F}$

$\rho c_p = 0.01752 \frac{\text{Btu}}{\text{ft}^3\text{-°F}}$

* This value = the effective thermal conductivity for the north and east walls as implemented in AFT, V11.

** See Section 7.2 for $\mathcal{F}_{12}$.

6.2.2 NORTH WALL EXTERNAL HEAT TRANSFER COEFFICIENT

In Section 5.3, it was noted that a constant HTC of 0.2 was used for heat transfer from the north wall exterior to the ambient air. On the next few pages, calculations are provided which indicate that this is a reasonable assumption for the anticipated range of conditions.

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PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Valeant

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CALCULATION NO. NPPI-SBO-007

Ref. 4,

EQN (E-27): $h_c = 0.13\left[\rho_f^2 g \beta_f \Delta T c_{pf} k_f^2 / \mu_f\right]^{1/3}$

Let $T_s = 90\,^\circ F$

$T_f = 100\,^\circ F \Rightarrow \Delta T = 10\,F^\circ$

$\Rightarrow T_\infty = 95\,^\circ F$ Assume dry air – v. little difference. ✓

$\rho_f = 0.07153$ lb_m/ft^3 ✓

$c_{pf} = 0.240575$ $Btu/lb_m - {}^\circ R$ ✓

$k_f = 0.01554$ $Btu/hr - ft - {}^\circ F$ ✓

$\nu_f = 0.04562$ $lb_m/ft - hr$ ✓

$$\Rightarrow h_c = 0.13\left[0.07153^2 \frac{lb_m^2}{ft^6} \cdot 32.174 \frac{ft}{sec^2} \cdot \frac{1}{(459.69+100)\,{}^\circ R} (100-90)\,{}^\circ F \frac{3600^2\,sec^2/hr^2}{} \right.$$

$$\left. \cdot 0.240575 \frac{Btu}{lb_m - {}^\circ R} \cdot 0.01554^2 \frac{Btu^2}{hr^2 - ft^2 - {}^\circ F^2} \cdot \frac{1 \cdot ft \cdot hr}{0.04562\, lb_m}\right]^{1/3}$$

$$= 0.4742 \frac{Btu}{hr - ft^2 - {}^\circ F}$$ ✓

$T_f = 80°F$ $\Rightarrow \Delta T = 20F°$ ✓

$\Rightarrow T_m = 85°F$

$\rho_f = 0.07284$ ✓

$c_{pf} = 0.240525$ ✓

$k_f = 0.01529$ ✓

$\nu_f = 0.04499$ ✓

$\Rightarrow h_c = 0.4828$ $Btu/hr-ft^2-°F$ ✓

The average of the two,

i.e. let $h_c(t) = CONST. = .1785$ ✓

However, note $h_c = 0.19$ if $|\Delta T| < 1.0$, per Ref. 4.

Considering this, and the calc. on next sheet, choice of $h_c = 0.2$ appears reasonable ✓ and slightly conservative. The effect of a small temperature difference is evaluated on the next sheet.

For $T_f = 86°F$ and $T_s = 84°F$, $\Rightarrow \Delta T = 2F°$.

$\Rightarrow T_m = 85°F$, and previous properties.

At $\Delta T = 2F°$,

$\Rightarrow h_c = 0.2815 \ \frac{Btu/hr}{ft^2 - °F}$

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7.0 RADIATIVE HEAT TRANSFER

7.1 EXTERIOR RADIATION

Solar radiation was previously discussed in Section 3.2. Also see Section V.B.2 of Attachment I.

Because direct application of a heat flux boundary condition to a structure is not possible using the CONTEMPT-LT/028 computer code, the steady periodic temperatures of the ceiling and roof heat structures were first determined using the HEATING-6 conduction code, which does allow heat flux boundary conditions. For the CONTEMPT analysis, the temperature at the top of the roof was then entered as constant boundary temperature and applied to the structure surface using a large heat transfer coefficient, effectively forcing the roof surface temperature to the bounding value determined in the HEAT [illegible]-6 calculation.

Attachments I and II are the HEATING-6 code thermal model development calculation and printed code output, respectively. Section 3.2 above and the Attachments detail the methodology used in applying the solar heat flux. Attachment I shows the resultant calculated temperatures (Figure I-7) that were used as the basis for the initial conditions for the CONTEMPT-LT/028 analysis.

7.2 INTERIOR RADIATION

To evaluate the radiant heat transfer coefficient in the wall and ceiling internal spaces, the assumed geometry is parallel surfaces of infinite extent. The overall configuration factor then depends only on the emissivities of the opposing surfaces, as indicated on the next two pages. This information is used as input to Sections 6.1.2 and 6.2.1 for calculation of the linearized radiative heat transfer coefficient.

INTERIOR RADIATION CALCULATION

For the ceiling in space,

Shape factor $\mathcal{F}^{\ell}_{12} = \dfrac{1}{1/\epsilon_1 + 1/\epsilon_2 - 1}$ (*)

ϵ_1 = emissivity of Concrete = 0.94 — Omega 1985 p. T-28

ϵ_2 = emissivity of gypsum covering Assume 0.90 — Omega 1985 p. T-28

$$\mathcal{F}^{\ell}_{12} = \frac{1}{1/0.94 + 1/0.90 - 1}$$

$\mathcal{F}^{\ell}_{12} = 0.8511$ ✓

The Radiative heat Transfer is:

$Q_{12} = \mathcal{F}^{\ell}_{12}\, \sigma\, (T_1^4 - T_2^4)$ where

σ = Stefan-Boltzmann = 0.1714×10^{-8} BTU/ft²-hr-°R⁴

$Q_{12} = (0.85)(0.1714 \times 10^{-8}\ \text{BTU/ft}^2\text{-hr-}^\circ\text{R}^4)\,\Delta T^4$

$Q_{12} = 1.4588 \times 10^{-9}\ \text{BTU/ft}^2\text{-hr-}^\circ\text{R}^4\,(T_1^4 - T_2^4)$ ✓

(*) See Reference 7.

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PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Holcomb

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CALCULATION NO. NPPD-580-007

For the north and east wall interior -

$$\frac{1}{\gamma_{12}} = \frac{1}{\frac{1}{\epsilon_1} + \frac{1}{\epsilon_2} - 1}$$

$\epsilon_1 = 0.94$ for concrete

For ϵ_2, see below.

$$= \frac{1}{\frac{1}{0.94} + \frac{1}{0.7} - 1}$$

$\Rightarrow \gamma_{12} = 0.6701$ ✓

Nothing is known about the back surface of the faced panels. Assume $\epsilon = 0.7$. ✓

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8.0 AIR LEAKAGE

Because of the temperature difference between the Control Room and adjoining areas, some air flow will occur, mainly through the doors to the Computer Room and the doors leading to the Turbine Building. The following assumptions are made in order to calculate the air exchange:

a. All doors to the Control Room are assumed to be closed, and only one set of doors is considered to leak. Since AP 2.4.8.4.8 requires that the doors to the Control Room and the Computer Room be opened in the event of loss of ventilation, this approach is conservative.

b. The door crack width is assumed to be Ø.1 inch on the sides and top, and 1/2 inch on the bottom.

c. The air exchange rate (Q) is determined via Figure 7 on p. 21.7 of ASHRAE. "Q" is then equated to the flow rate which would be calculated by "LT2B", and loss coefficients are determined as a function of differential pressure for input to the code.

d. The leakage rate from the control room is always less than Ø.35 AX/HR during the 4 hour SBO, which is a very "tight" room; thus indicating that the methodology is conservative. (See Figure 13.)

e. Calculations of leakage coefficients are provided in Attachment VI to support the values used in the input deck.

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9.Ø RESULTS

Results of the analysis using the CONTEMPT-LT/Ø2B computer code are plotted in Figure 14. The Control Room heats up quickly to about 92 degrees F in the first 3Ø minutes after loss of HVAC. The heatup rate slows, with a gradual increase toward equilibrium noted thereafter. The calculated maximum air temperature after 4 hours is 1ØØ.3 degrees F. The heatup rate between hours 3 and 4 is 1.Ø5 degrees Fahrenheit per hour. Digital temperature data are listed on the code output provided in Attachment VII.

9.1 TIMESTEP CONTROL

A timestep of Ø.1 seconds was used for entire 4-hour simulation. The results would not be expected to be sensitive to timestep reductions below this value, say to Ø.Ø1 second, because of the relatively slow nature of the room heatup process.

Adequate choice of timestep is indicated by the convergence ratio 'DE/E' listed on the 'LT2B' output in Attachment VII. This ratio is of the order of 1.E-Ø6 for the entire transient. Per Reference 4, timestep reductions are warranted when this ratio exceeds about 1.E-Ø3.

The Control Room air temperature was printed every 1Ø seconds for the first minute of the transient, every minute for the next 39 minutes, and every five minutes thereafter. Heat structure print frequency was somewhat less, to reduce the size of the output listing.

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10.0 CONCLUSIONS

On the basis of Reference 1, the discussion in Section 1.0 and the computed results, it is concluded that the Control Room at Cooper Nuclear Station would not be a dominant area of concern during a postulated 4-hour station blackout event, since the calculated room temperature is significantly less than 120 degrees Fahrenheit.

Since the calculated maximum room temperature is less than 110 degrees Fahrenheit, with margin, it is concluded that there would be no habitability concerns with respect to performance of operator actions in the Control Room during the 4-hour period.

The computed results have been arrived at using a conservative approach and several, significantly conservative assumptions. There is, therefore, good confidence that the results would bound the actual room temperature for the postulated SBO scenario.

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12.0 FIGURES

FIGURE 1

EXTRACTED FROM DWG. 4176

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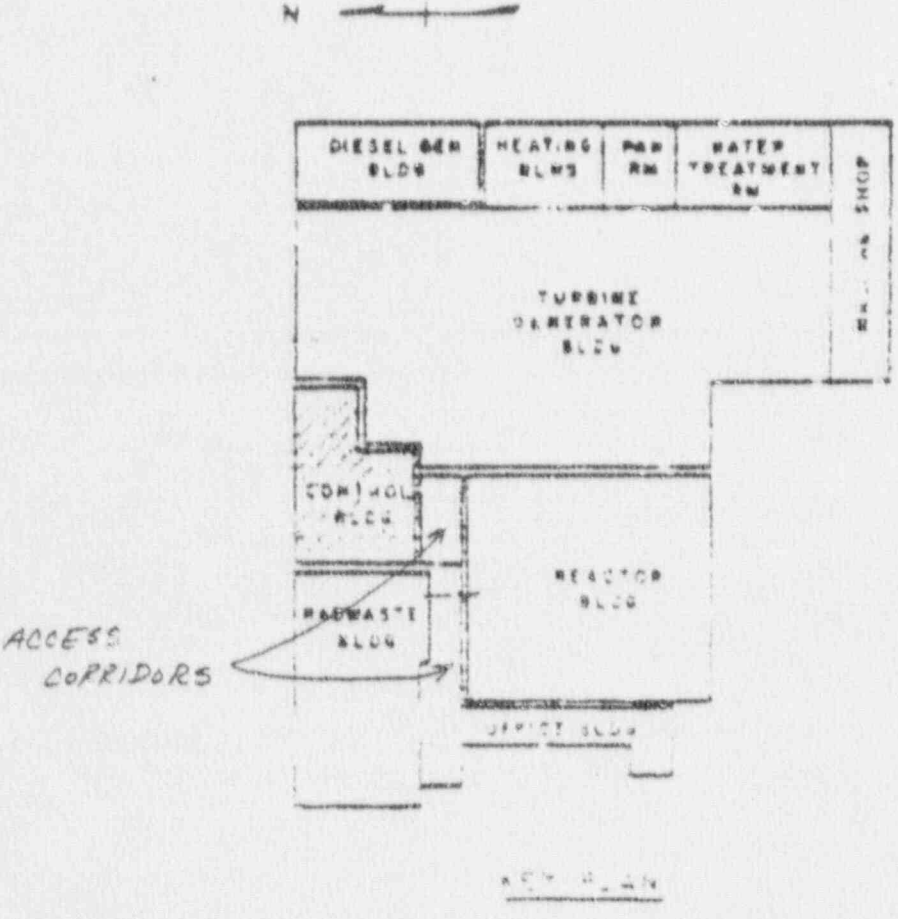
N.P.P.D., R.A.D.

ROOF ELEVATIONS

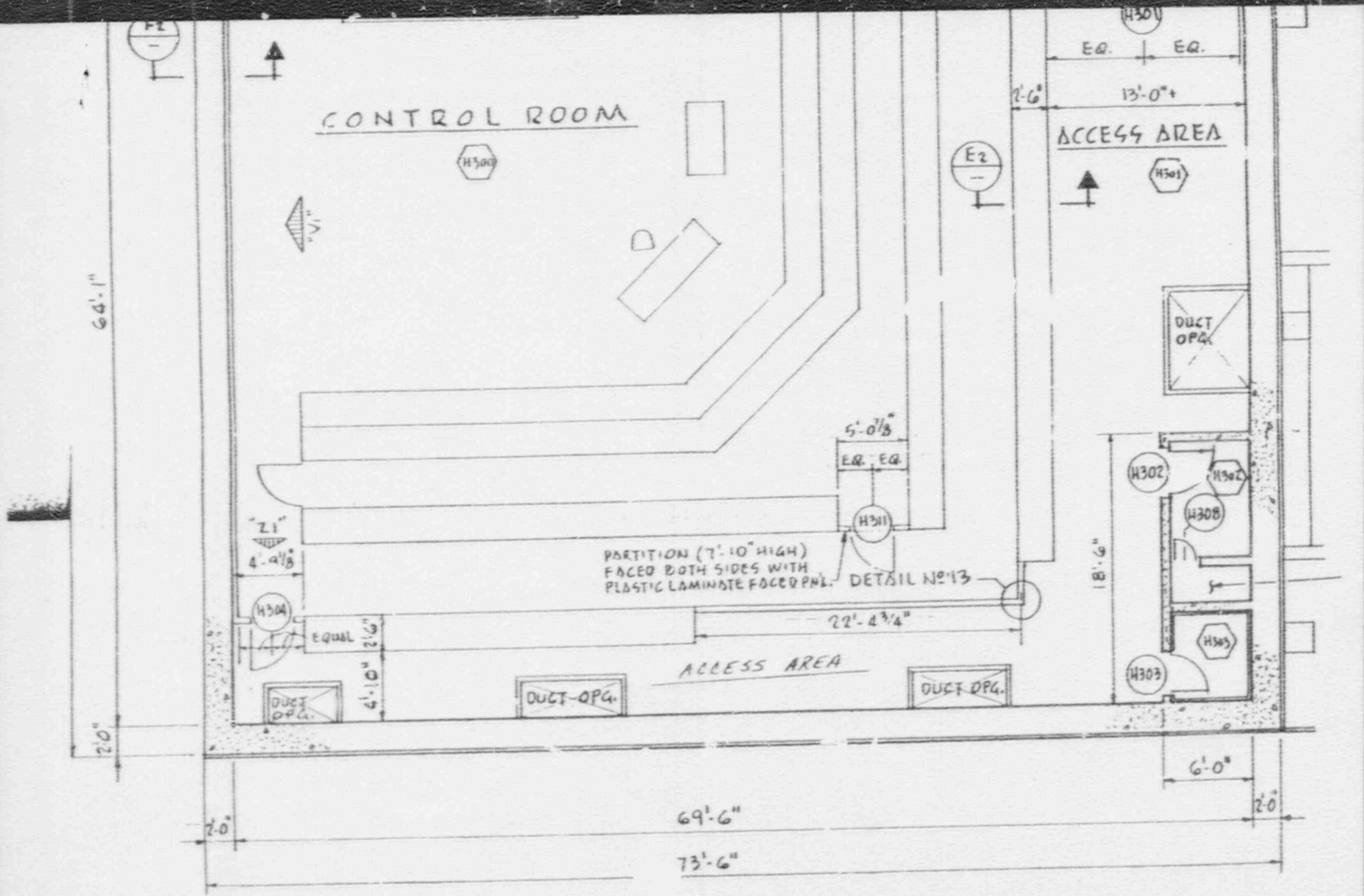
CONTROL BLDG.	949' - 1½"
REACTOR BLDG.	1049' - 10"
TURBINE BLDG.	1007' - 4½"
RADWASTE BLDG.	952' - 10"



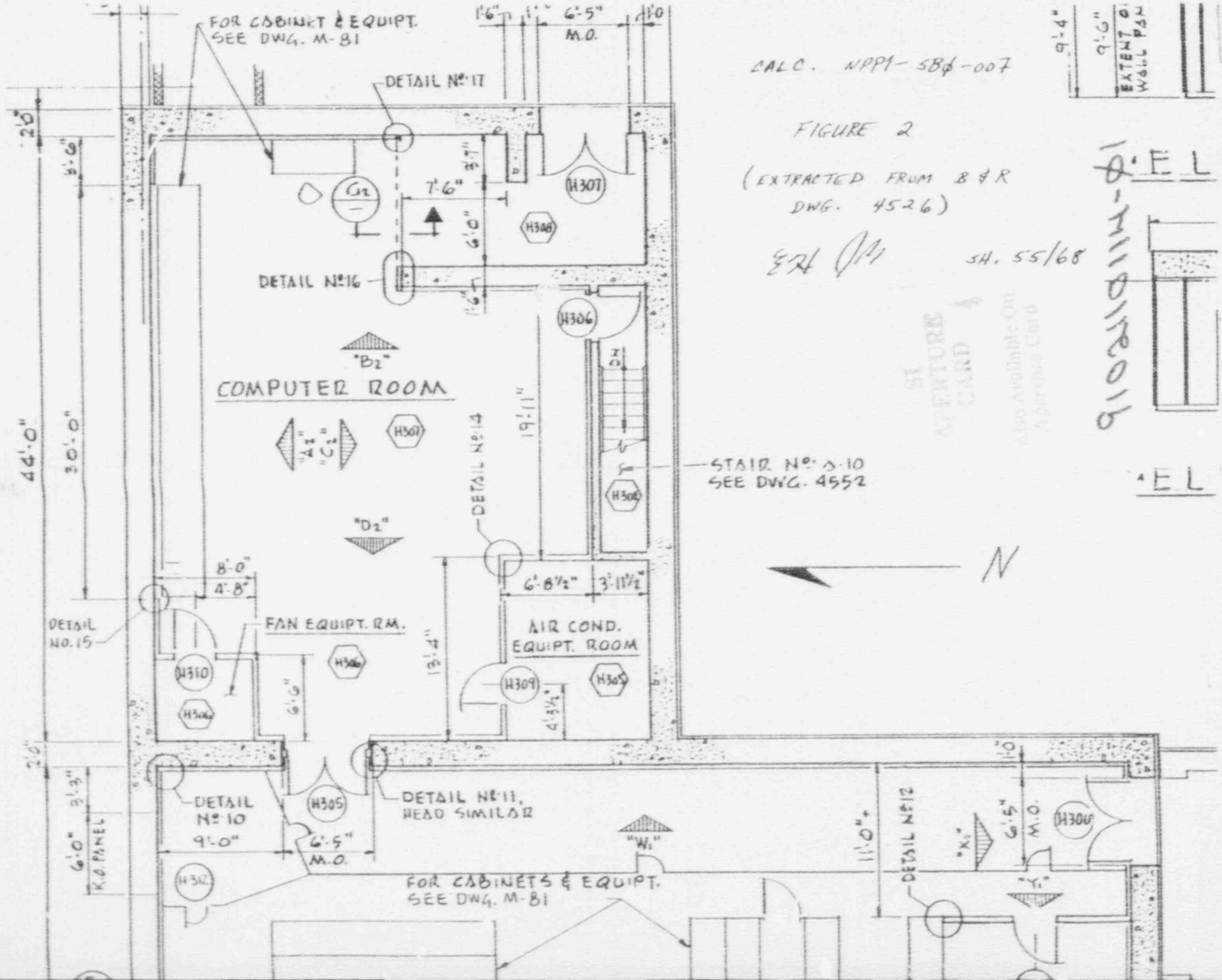
ROOF PLAN

RAL CONCRETE NOTES & MISCELLANEOUS
E DETAILS SEE DWG. 4226.
ENSIONS & LOCATION OF ROOF SLAB
TIONS NOT NOTED SEE DWG. 4177

R SHALL EXAMINE THIS DRAWING FOR ITEMS
PART OF CONTRACT E-69-28, ESSENTIALLY
AND REFINE FOR CONSTRUCTION



FLOOR PLAN @ ELEVATION 932'-6"


FOR CABINET & EQUIPT. SEE DWG. M-81
DETAIL Nº 17
6'-5" M.O.
CALC. NPP1-58Ø-007
FIGURE 2
(EXTRACTED FROM B & R DWG. 4526)
EXTENT OF WALL PAN
DETAIL Nº16
H307
H308
H306
"B2"
COMPUTER ROOM
"A2"
"C2"
H301
DETAIL Nº14
STAIR Nº 5-10 SEE DWG. 4552
"D2"
N
8'-0"
4'-8"
DETAIL NO.15
FAN EQUIPT. RM.
H310
H302
H304
AIR COND. EQUIPT. ROOM
H309
H305
DETAIL Nº10
9'-0"
6'-5" M.O.
DETAIL Nº11, HEAD SIMILAR
H305
H312
"W1"
FOR CABINETS & EQUIPT. SEE DWG. M-81
DETAIL Nº12
H300
"X1"
"Y1"
44'-0"
30'-0"
19'-11"
13'-4"
6'-0" K.D. PANEL
3'-3"
6'-8½"
3'-11½"
6'-6"
4'-3¼"
11'-0"
9'-6"
9'-4"
EL
EL

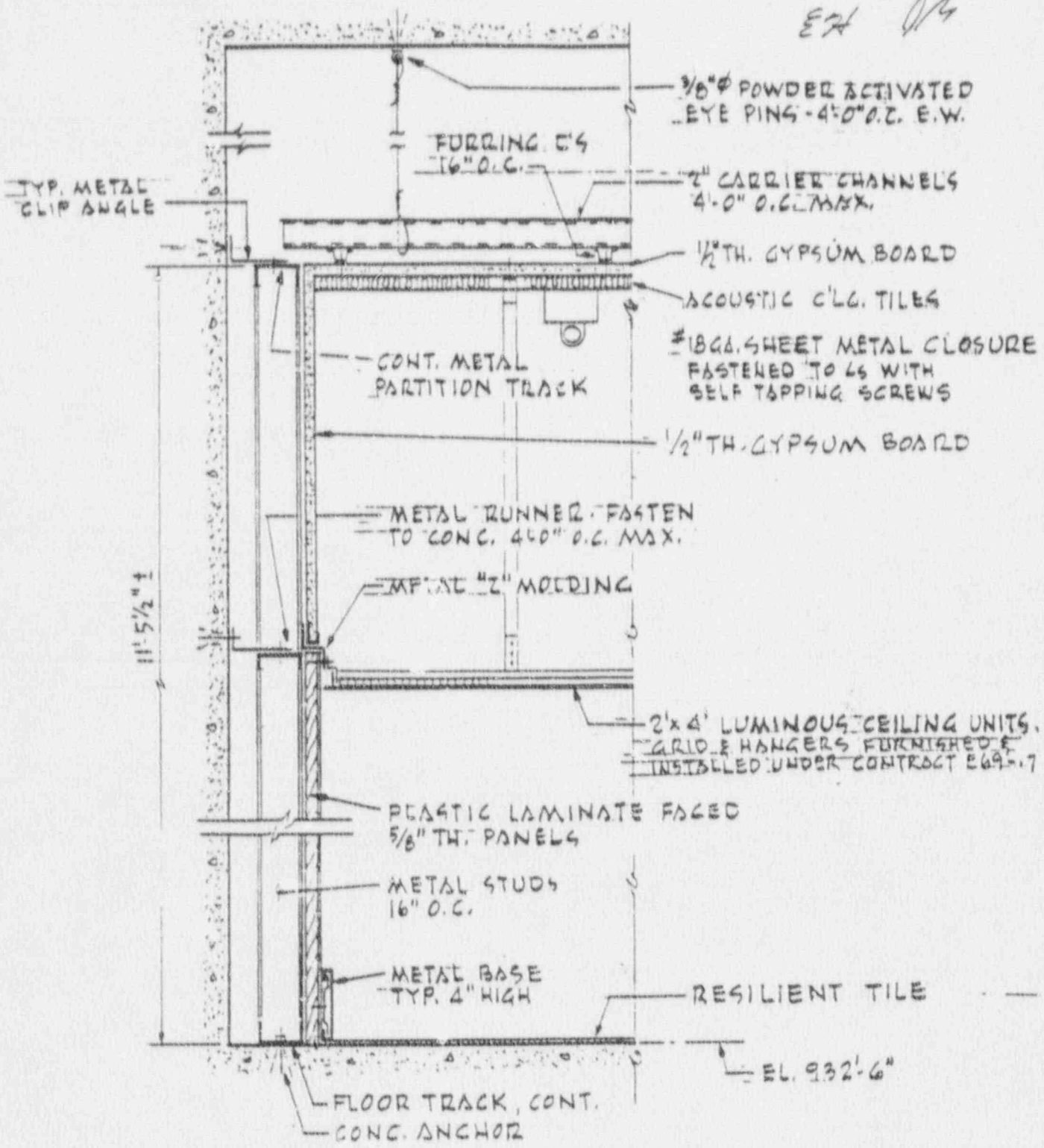
57/68

NPP1 - SBΦ - 007

EA

ELEVATION "C2"

SCALE: 1/8" = 1'-0"



SECTION F2

SCALE: 1½" = 1'-0"

FIGURE 3b
DWG 4526

NPPI-SBΦ-007 56/68

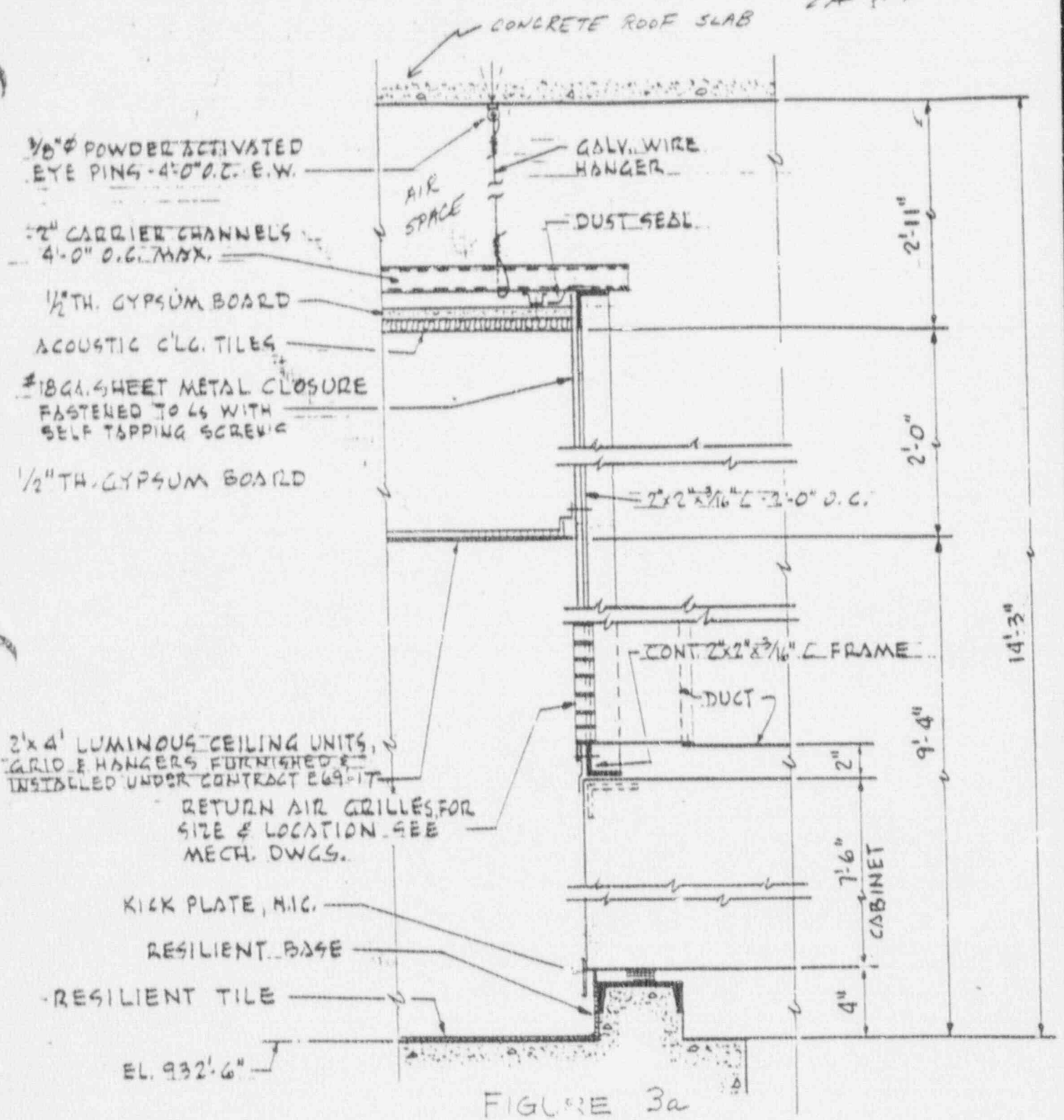


FIGURE 3a

DWG. 4526

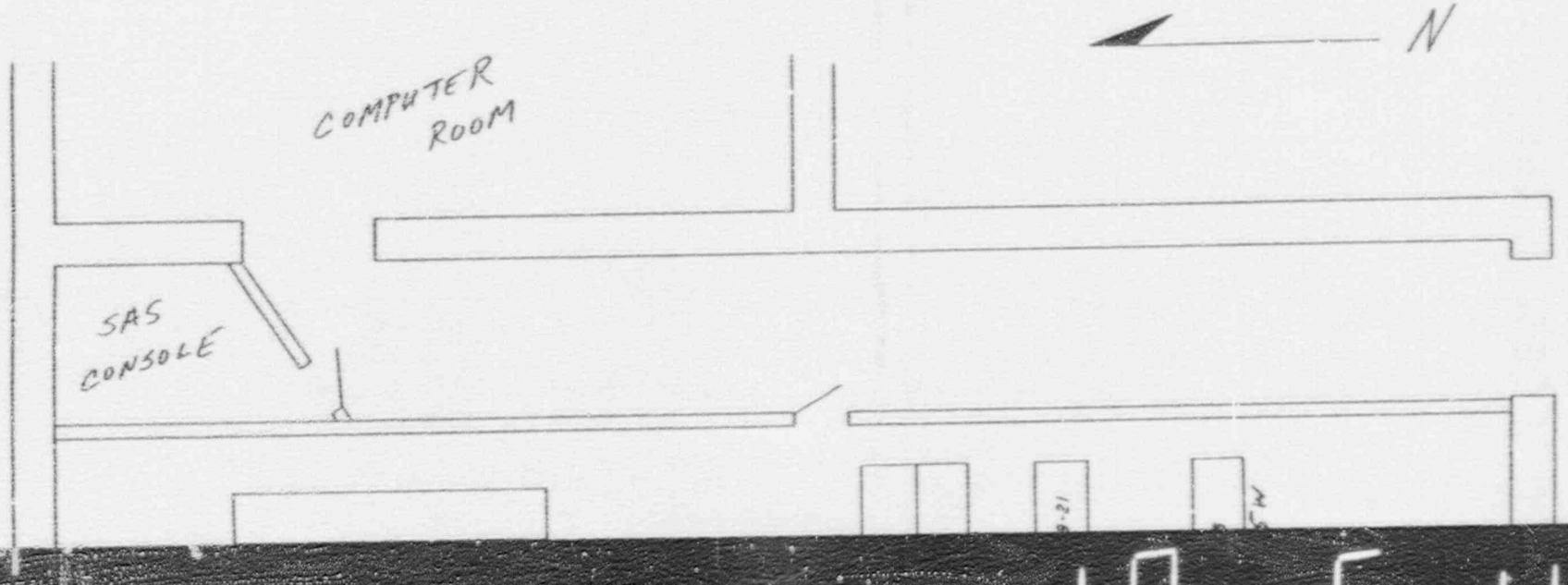
SECTION E2/1

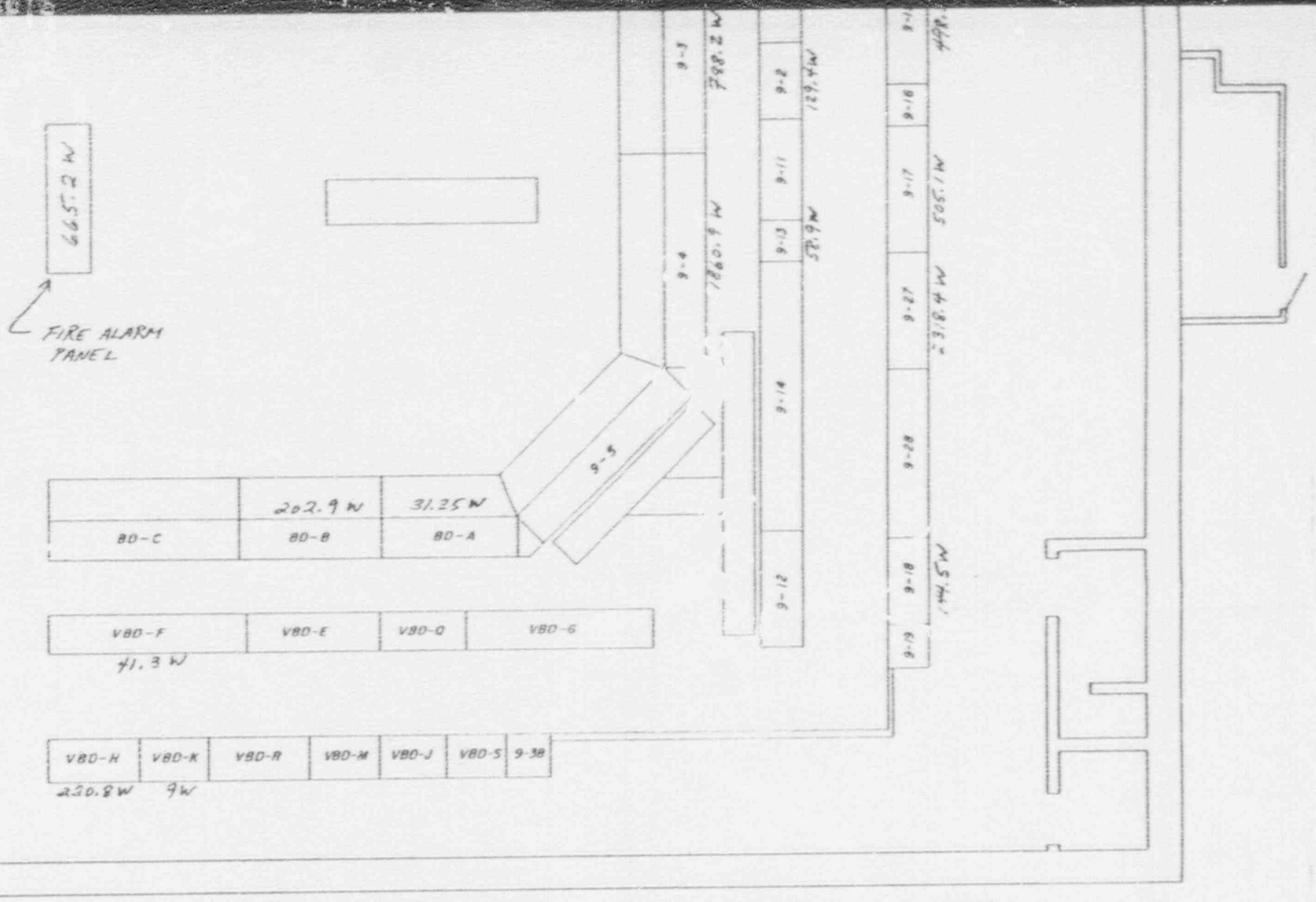
SCALE: 1½" = 1'-0"

CALC. NPP1-SB0-007

EA 6-1 SH. 58/68

FIGURE 4





NOTE: LOADS ARE INDICATED FOR THOSE PANELS WITH UNINTERRUPTIBLE POWER SUPPLIES. SEE ATTACHMENT V. ANNUNCIATOR LIGHTING WOULD BE ACTIVE ON ALL PANELS.

COMPUTER & CONTROL ROOMS
FLOOR PLAN
EL. 932'-6"

COOPER NUCLEAR STATI
APPENDIX "R"
CIRCUIT SEPARATION

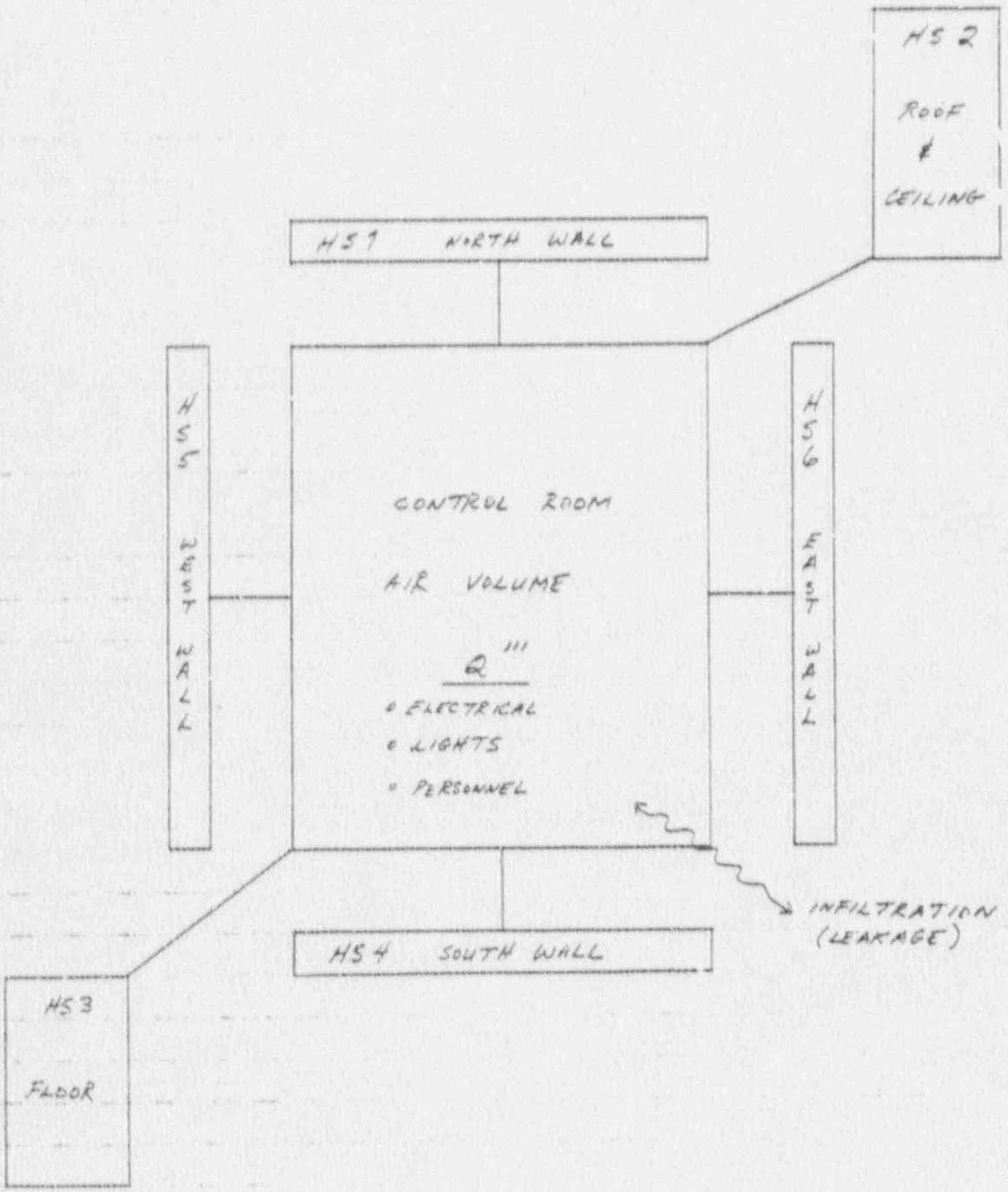


FIGURE 5

SCHEMATIC OF CNS CONTROL ROOM ANALYTICAL MODEL FOR CONTEMPT-LT/028 COMPUTER CODE

JOB NO. NP-110 DATE 12/6/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Holcomb

REVIEWER [illegible] APPROVED

CALCULATION NO. NPPI-SBO-007

$T = 90\,^{\circ}F = \text{CONST.}$

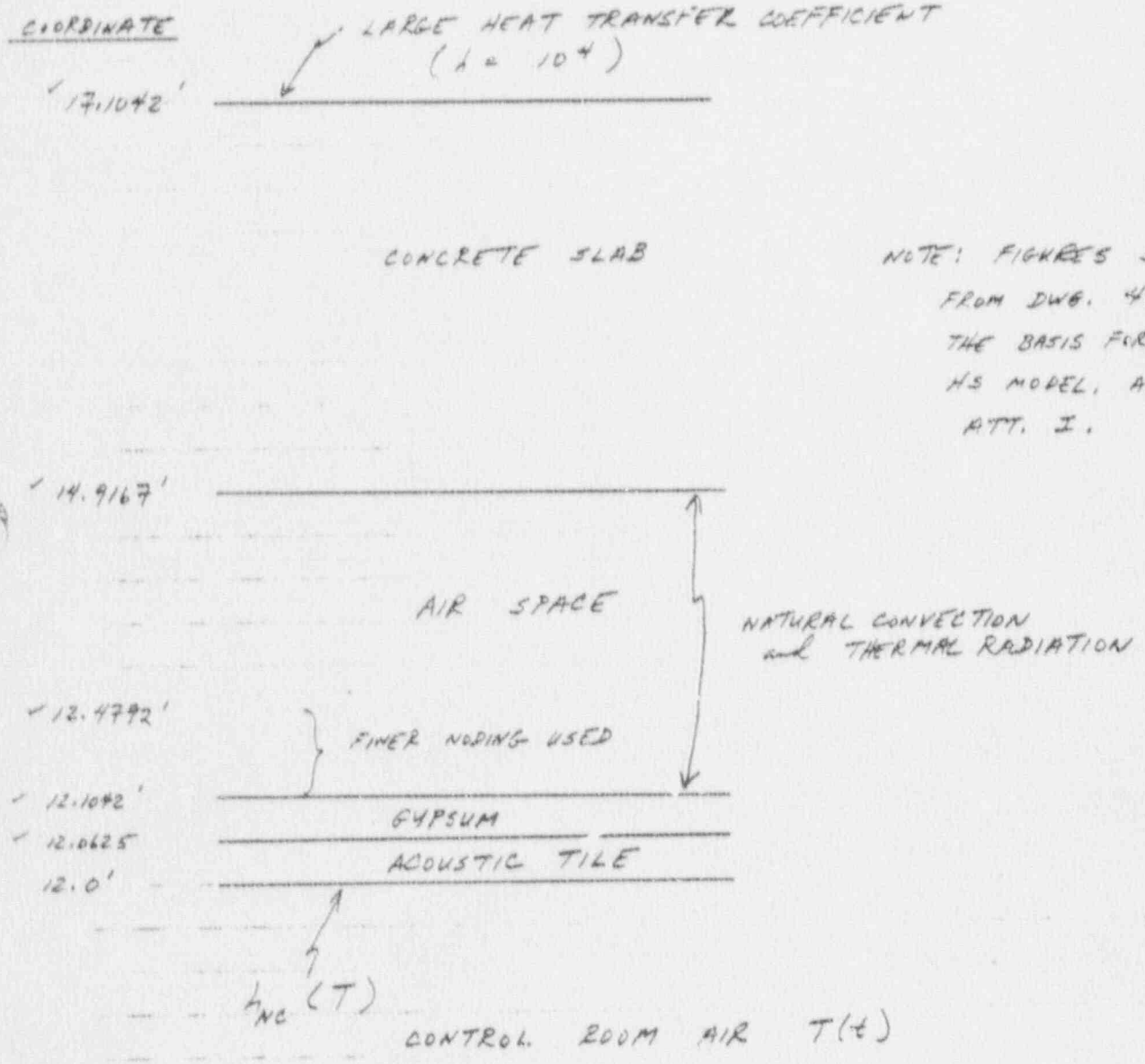


FIGURE 6

CNS CONTROL ROOM CEILING and ROOF HEAT STRUCTURE (HS) MODEL FOR CONTEMPT-LT/028 HS2

JOB NO NP-110 DATE 12/6/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Holcomb

REVIEWER [illegible] APPROVED

CALCULATION NO NPPI-SBO-007

NORTH WALL (RE: DWG. 4526 and FIG. 8)

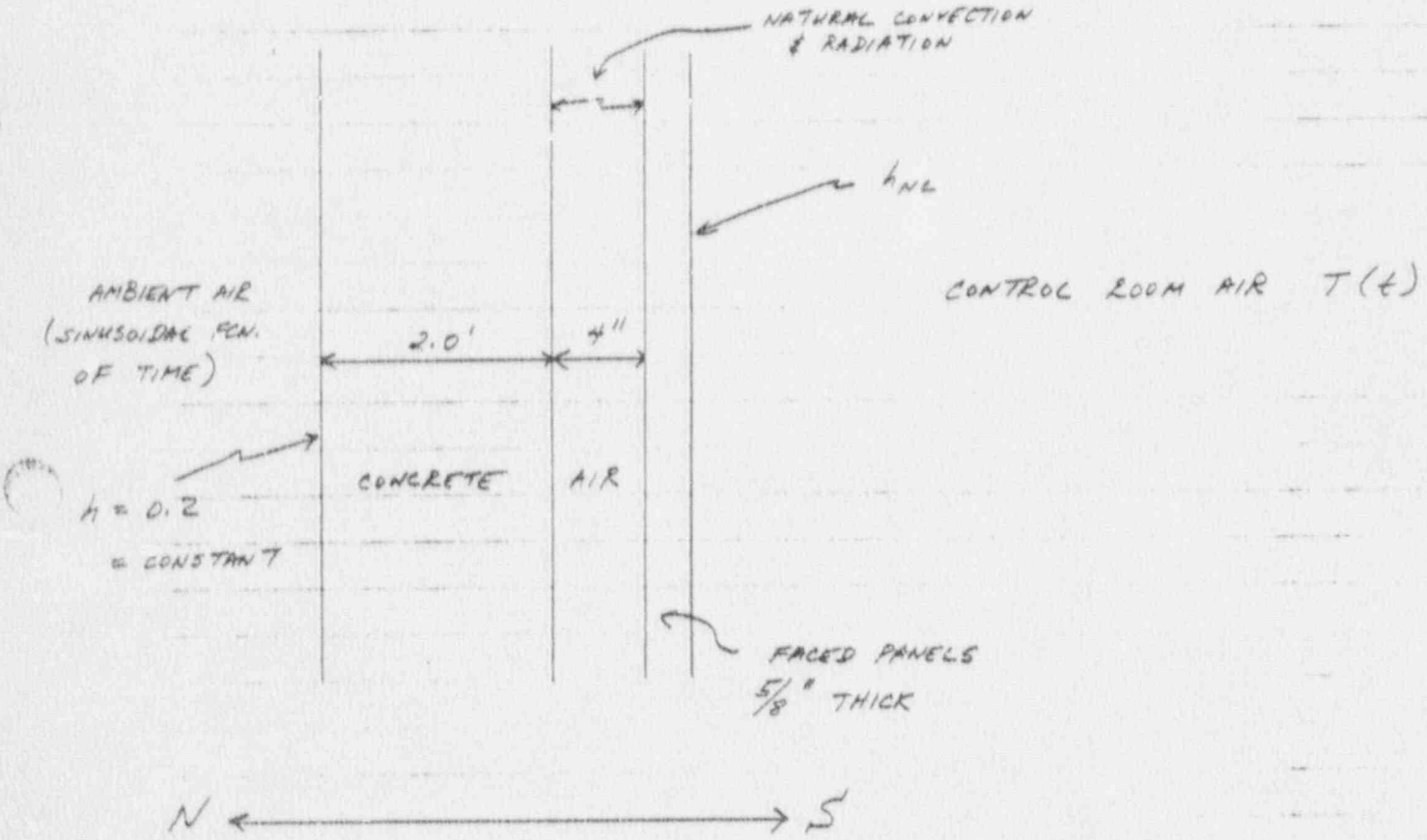


FIGURE 7

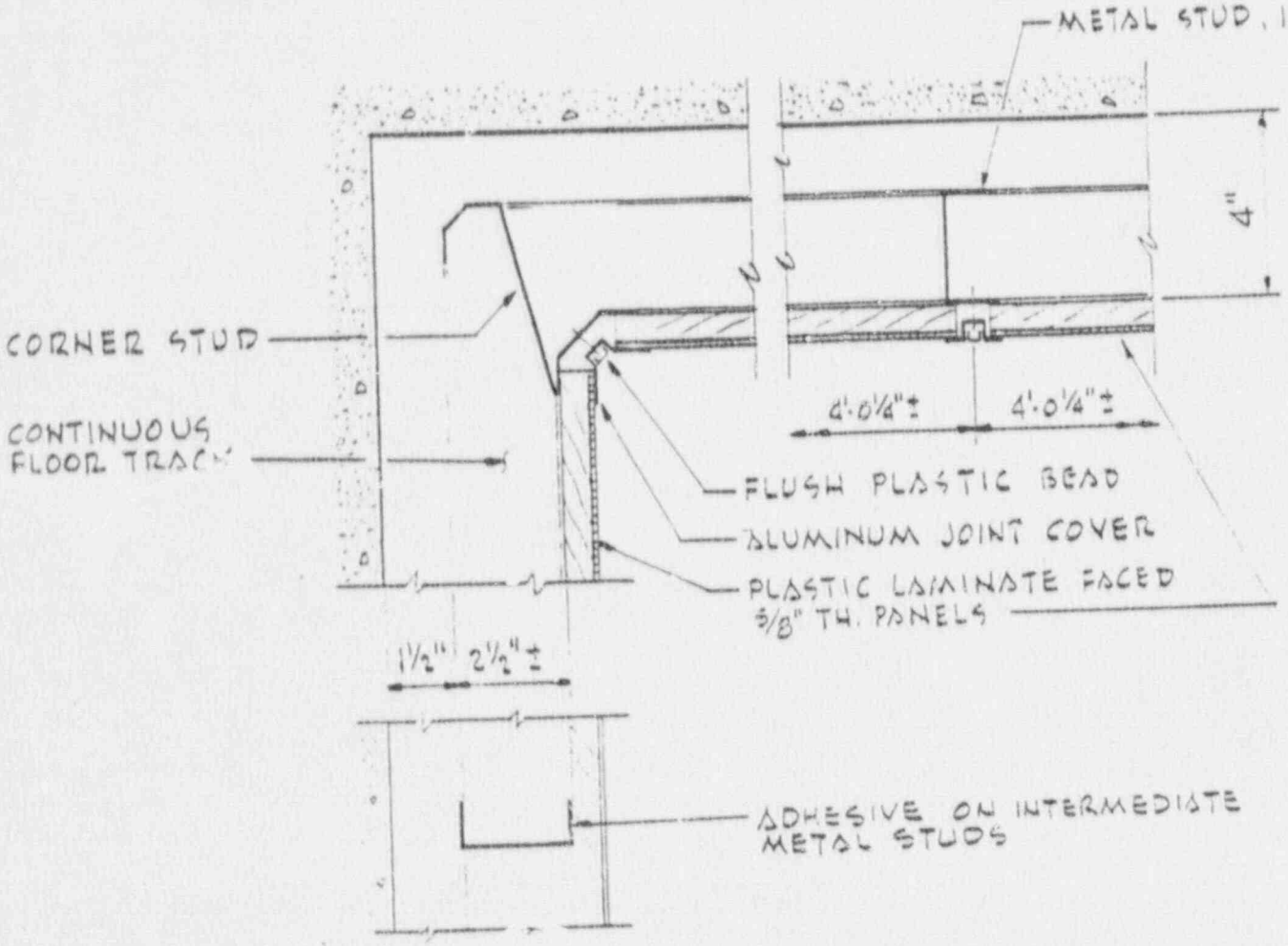
NORTH WALL HEAT STRUCTURE MODEL (HS1) FOR CONTEMPT-LT/028

FLOOR PLAN - CONTROL B

SCALE: 1/3" = 1'-0"

NPP1 - 5E6 - 007

62/68



DETAIL NO 10 (FROM B&R DWG. 4526)

SCALE: 3" = 1'-0"

	ELEC. ENG.	MECH. ENG.	CIVIL ENG.	PROJ. ARCH	REV. NO.	REVISION
BY	[illegible]	MMC	[illegible]	M. Sink	1	REVISED DIMENSIONS ON FLOOR PLAN, ELEVATIONS & DET. ADDED NOTE NO. 4
	11-17-70	11/17/70		11/7/70	2	ISSUED APPROVED FOR CONSTRUCTION FOR CONTRACT E-69
FTS	A. A. Villani, ER-4		11/10/69			

FIGURE 8

JOB NO NP-110 DATE 12/7/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Falcone

REVIEWER ACP APPROVED

CALCULATION NO NPP7-SB0-007

SOUTH WALL (RE: DWG. 4526)

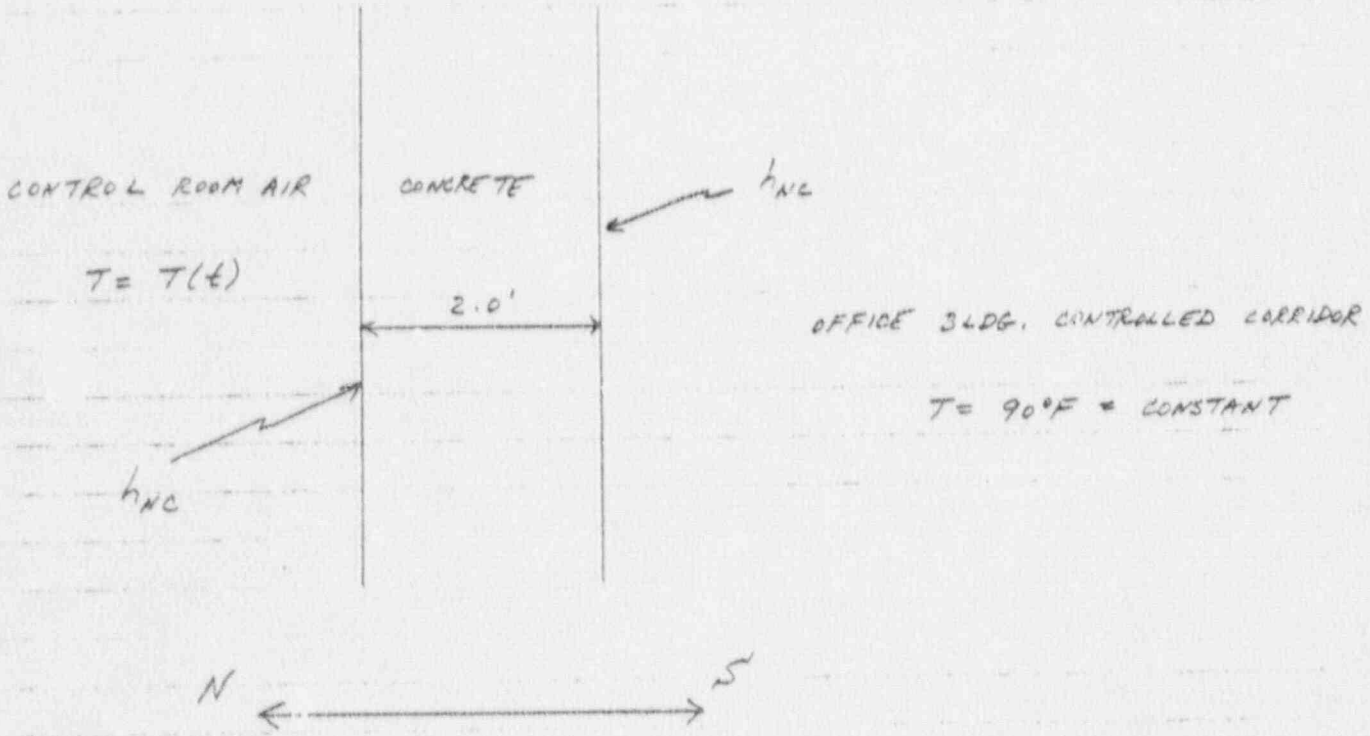


FIGURE 9

SOUTH WALL HEAT STRUCTURE MODEL (HS4)
FOR CONTEMPT-LT/028

EAST WALL (RE: Dwg. No. 4526 & Detail 10.)

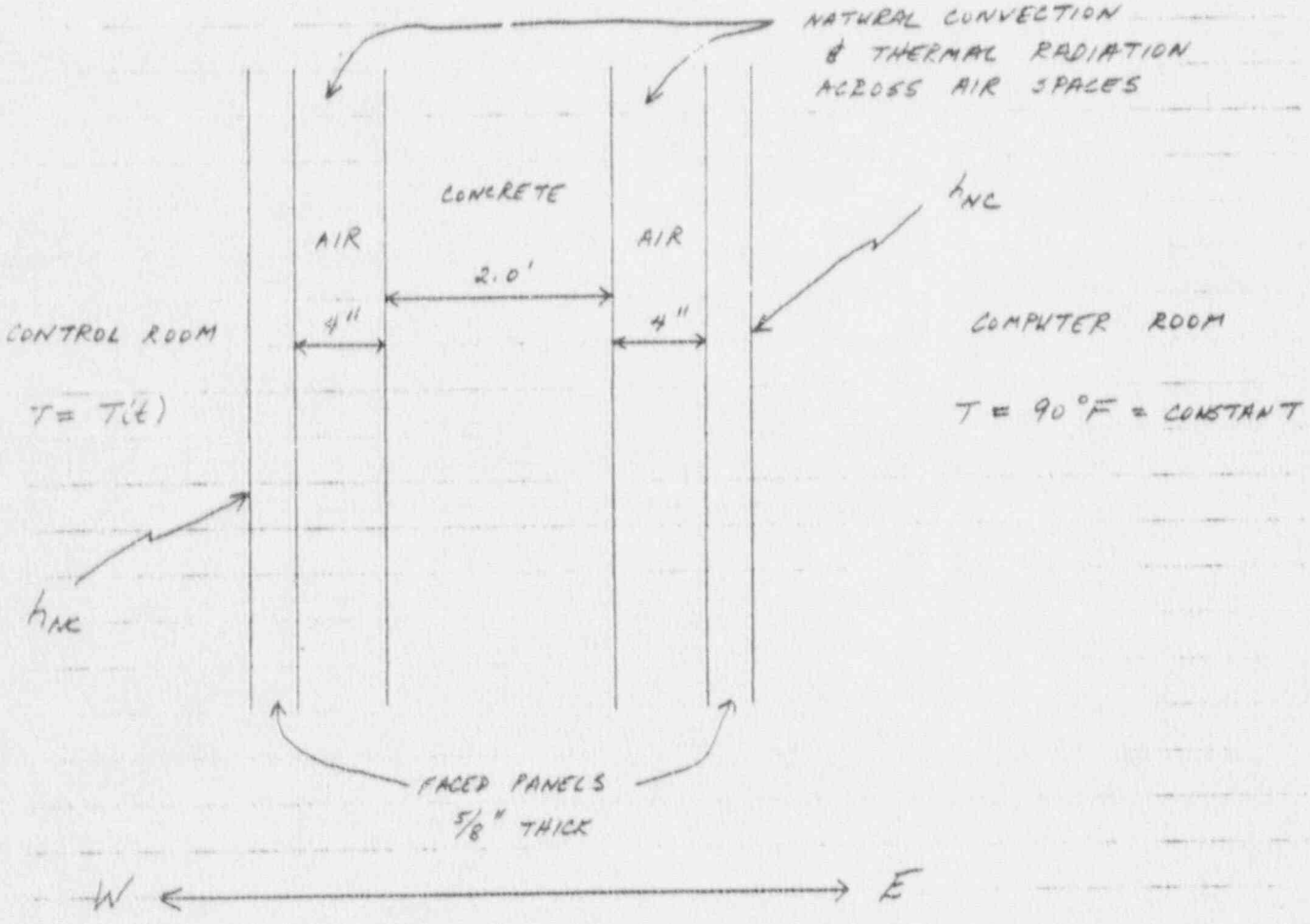


FIGURE 11

EAST WALL HEAT STRUCTURE MODEL (HS6)
FOR CONTEMPT - LT/028

JOB NO NP-110 DATE 12/7/89

PROJECT CNS STATION BLACKOUT

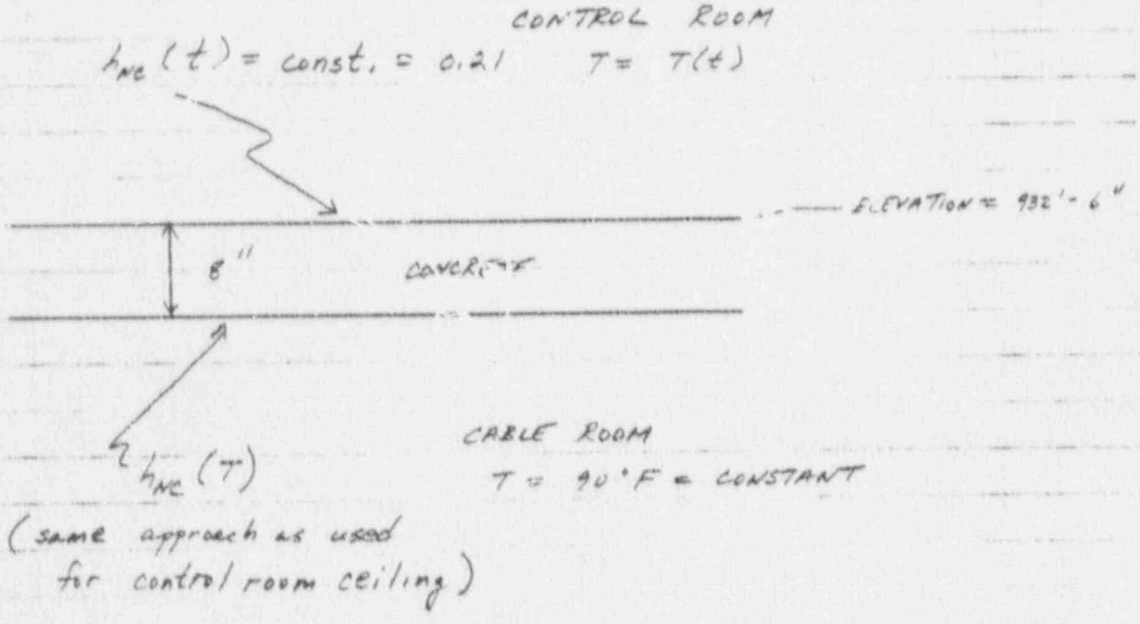
SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Bolcomb

REVIEWER [illegible] APPROVED

CALCULATION NO. NPP1 - SB0 - 007

FLOOR (RE: Dwg. No. 4175)



(same approach as used for control room ceiling)

FIGURE 12

FLOOR HEAT STRUCTURE MODEL (HS3)
FOR CONTEMPT-LT/028

CNS CONTROL ROOM HEATUP ANALYSIS

LEAKAGE FROM CNTRL. ROOM TO ADJ. AREAS

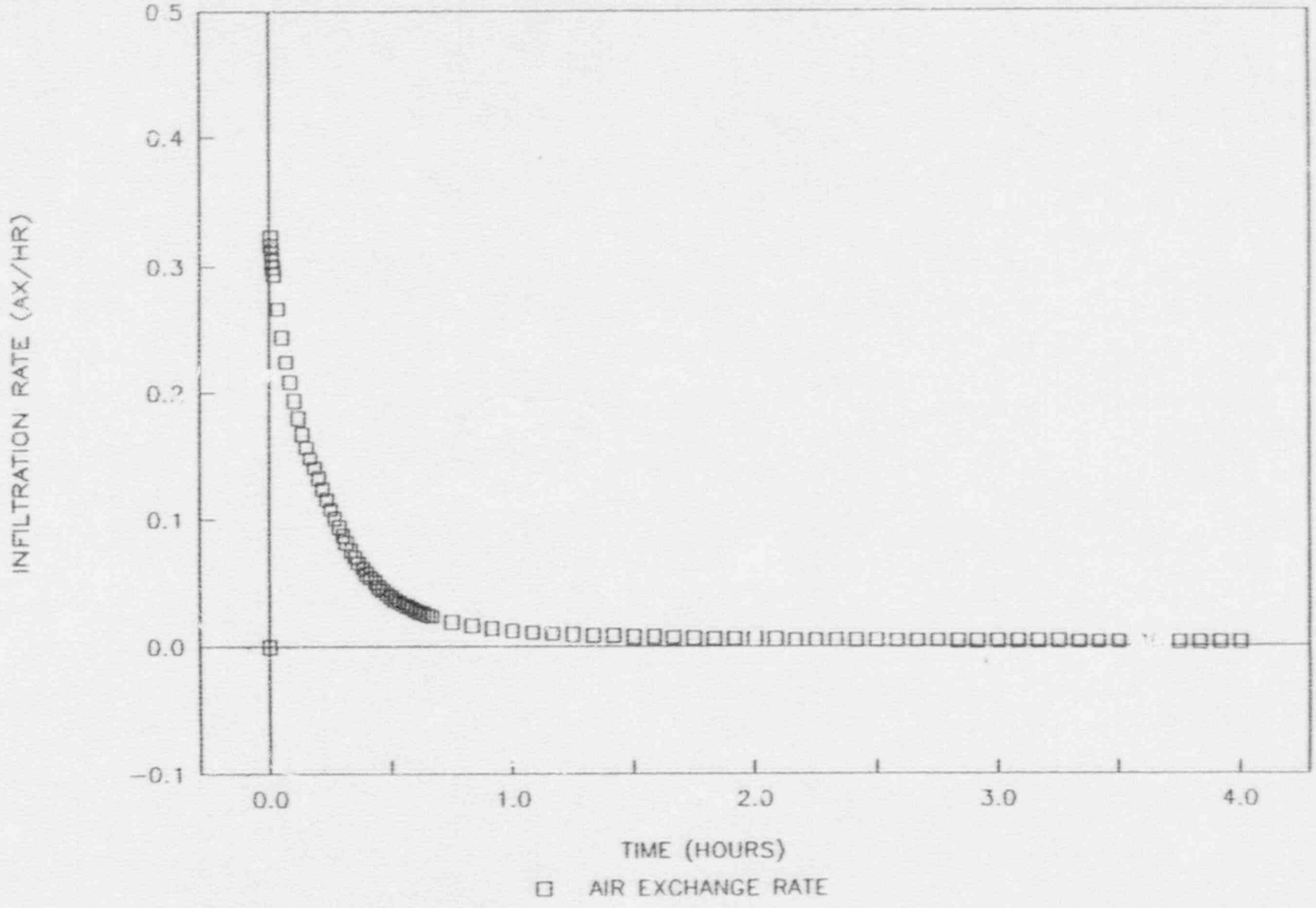


FIGURE 13

CNS CONTROL ROOM HEATUP

CALCULATION NPP1-SBO-007

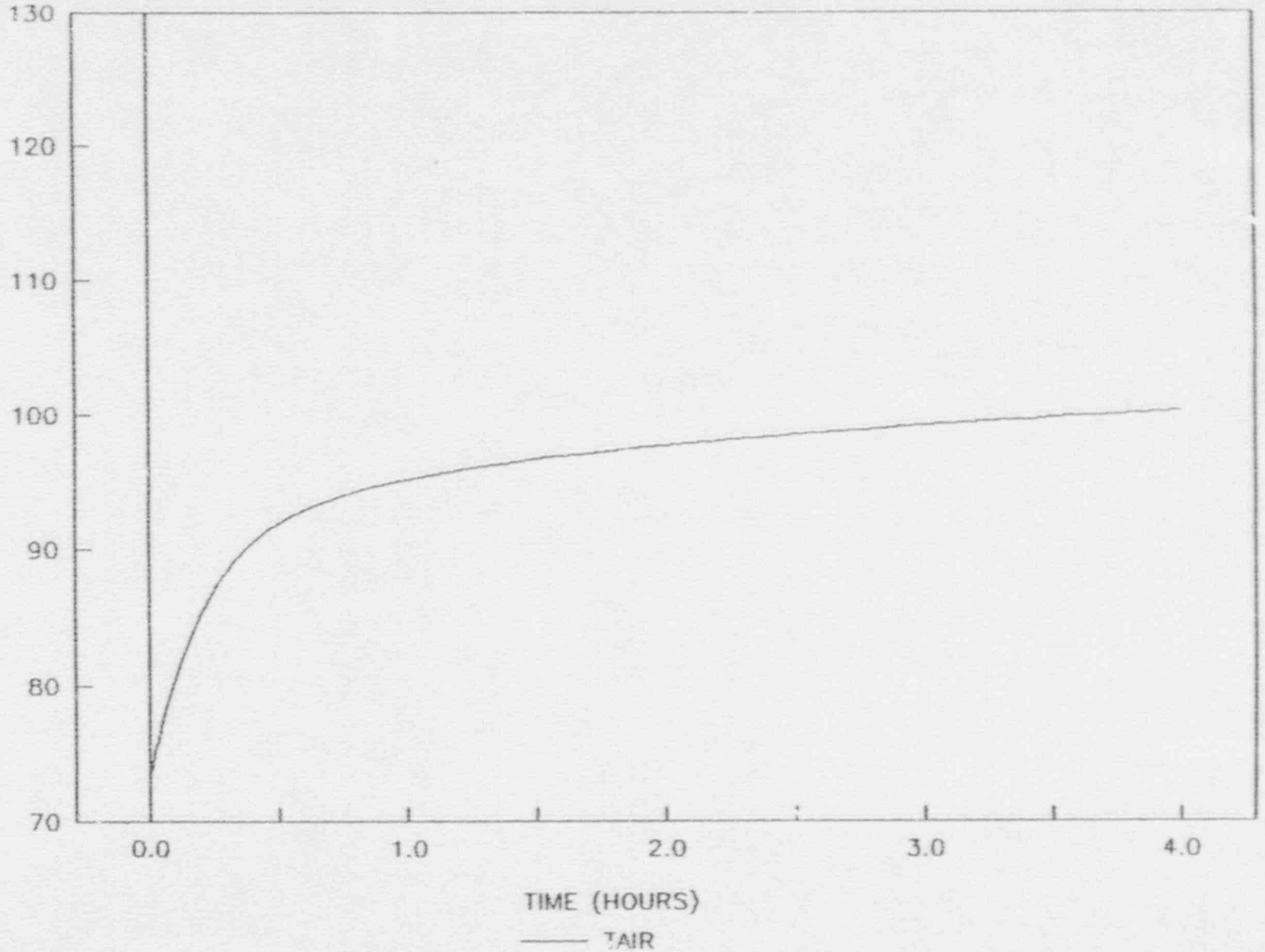


FIGURE 14

89/87 TLP Rev 2
NPP1-SBO-007

JOB NO. NP-110 DATE 11/30/89

PROJECT CNS STATION BLACKOUT (SBO)

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Kleamb

REVIEWER [illegible] APPROVED

CALCULATION NO. NPP1-SBO-007

ATTACHMENT 1

OF

NPP1-SBO-007

DEVELOPMENT OF HEATING-6

ONE DIMENSIONAL THERMAL MODEL

OF THE

COOPER NUCLEAR STATION

CONTROL ROOM CEILING AND CONCRETE ROOF

JOB NO. NP-110 DATE 11/30/89
PROJECT CNS STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E Wiemb
REVIEWER [illegible] APPROVED
CALCULATION NO. NPPI-SBO-007

I. PURPOSE

The purpose of this attachment is to develop a one-dimensional geometric representation of the control room ceiling and concrete roof structures for implementation into the HEATING-6 computer code, in order to determine the steady state temperature of the ceiling and roof structures. A constant control room air temperature, consistent with an air conditioned space, is assumed in addition to a conservative periodic exterior temperature and solar heat flux. The resultant temperatures will be used as initial structure temperatures in the SBO control room heat-up analysis in order to increase modeling accuracy and eliminate excess computer time.

II. METHODOLOGY

The HEATING-6 computer code is a multidimensional heat conduction code using the finite difference formulation (Reference 3). It can be used to solve steady-state and/or transient problems of one to three dimensions in various coordinate systems. HEATING-6 code input models can be basically categorized into 3 sections - geometric input, boundary conditions, and code options. Geometric input is concerned with the physical configuration, dimensions of the system and constituent materials. Boundary conditions are used to apply radiative and convective heat transfer and define temperature conditions, all of which can vary with time, temperature or position.

Code options are mainly related to input and output requirements. Geometric input is discussed in Section IV, boundary conditions in Section V, and code options in Section VI.

The HEATING-6 code output is included as Attachment II and includes a printout of the input deck. Input values listed here have been converted to units of BTUs, hours, feet and degrees Fahrenheit in the input deck.

III. ASSUMPTIONS

Referring to Fig. I-1, I-2a and I-2b, the following modelling approach and key assumptions were employed when developing the HEATING-6 thermal model:

A. The thermal model represents the following structures:
   1. Interior control room ceiling materials
   2. Concrete slab roof and insulation
   3. Air space between the control room ceiling and roof slab
   4. The luminous ceiling units, in the control room proper, are not modeled because they do not greatly impede vertical movement of air in the control room volume.
   5. The wire hangers and carrier channels which support the suspended control room ceiling will not be modeled for simplicity.

B. Inherent in the one-dimensional geometry for the HEATING-6 thermal model, it is assumed that there is no horizontal heat transfer in any of the materials or air spaces. Neglecting end effects is a reasonable assumption considering the size of the building roof area covering the control room (see Fig. I-1, extracted from Reference 11).

C. The control room is air conditioned and is assumed to have a normal operating, constant bulk air temperature of 23 degrees C (73.4 degrees F).

D. Convective heat transfer in the air space above the acoustic tile room ceiling to the concrete roof is not included, which is conservative. This is implemented to ensure that roof structure temperatures are conservative. (Natural convection can be reasonably expected to occur in this zone and is included in the CONTEMPT-LT/028 model of the air space).

E. Heat is transferred across the air space between the control room ceiling and the concrete slab roof by radiative exchange.

G. The exterior temperature is sinusoidal and based on ASHRAE 1% design temperature values for Omaha, Nebraska.

H. Solar heat flux is from NOAA's Monthly Summary Solar Radiation Data for Omaha, Nebraska on June 19, 1977. No credit is taken for shading of the Control Bldg. roof by adjacent structures. The Reactor Bldg., adjoining and immediately to the south, is 100 feet higher, for example.

I. The roof response was computed for a four-day duration prior to SBO occurrence in order to obtain a steady periodic solution.

IV. HEATING-6 THERMAL MODEL GEOMETRIC INPL.

Cross sectional drawings of the areas of interest are presented in Figures I-2a and 2b. These figures (extracted from Reference 11) list the interior structural dimensions and materials. Figure I-3 (extracted from Reference 12) details the concrete slab thickness. Details of the roof slab insulation and waterproofing are from Attachments IV and V.

A. MATERIAL DIMENSIONS

Acoustic Ceiling Tile

The thermal model represents a one-dimensional slice beginning at the bottom of the acoustic ceiling tile which is in contact

with the control room air volume. Because no dimensions are given for the tile thickness, a thickness of 3/4 inch will be assumed from scaling of the original drawing. This dimension is consistent with actual measurements of samples of acoustic tile.

Gypsum Board

Above and in direct contact with the tile is a 1/2 inch thick gypsum board. It will be assumed for simplicity that the tile and board are in perfect contact and that there is no paper covering on the gypsum board.

Dry Air

Between the gypsum board and the concrete roof slab is an air space of 2 feet 9 and 3/4 inches.

Concrete

As presented in Figure I-3a, the concrete roof slab has a minimum thickness of 2 feet and a maximum thickness of 2 feet 4 and 1/2 inches. An average thickness of 2 feet 2 and 1/4 inches is used in the model.

Firestone ISO 95 Roof Insulation

The Firestone ISO 95 roof insulation has a thickness of 2 and 5/8 inches per Attachment IV.

Asphalt Waterproofing

The insulation is covered by a waterproofing material of asphalt. The asphalt is assumed to be 3/8 inch thick. The concrete roof slab, insulation and waterproofing are assumed to be in perfect contact with each other.

The upper surface of the waterproofing is the upper boundary of

the model and is in contact with the atmospheric temperature and solar radiation.

B. MATERIAL THERMAL PROPERTIES

Acoustic Ceiling Tile

The tile is assumed to be mineral fiberboard, wet molded acoustical tile. Thermal physical properties are: (Reference 5, Table 3A p. 22.15 @ 75 degF)

Density = 23 lb/cu ft

Thermal Conductivity = 0.42 BTU-in/hr-sq ft-degF

Specific Heat = 0.14 BTU/lb-degF

Gypsum Board

Thermal properties are for gypsum board

Density = 51 lb/cu ft
(at 99 degF Reference 13, Table 3 p. 4-63)

Thermal Conductivity = 0.062 BTU/hr-sq ft-degF/ft
(at , degF Reference 13, Table 3 p. 4-63)

Mean Specific Heat = 0.259 BTU/lb-degF (Gypsum)
(between 32 and 212 degF Reference 13, Table 17 p. 4-9)

Dry Air

The thermal properties of dry air at one atmosphere are from Reference 6, Table A.7 p.565. Since the density and thermal conductivity of air vary with temperature to a greater degree than the other materials, values or temperatures from 60 to 180

degrees Fahrenheit are given.

Density (lbm/cu ft) =

0.07633 (60 degF)	0.06614 (140 degF)
0.07350 (80 degF)	0.06401 (160 degF)
0.07087 (100 degF)	0.06201 (180 degF)
0.06843 (120 degF)	

Thermal Conductivity (BTU/hr-ft-F) =

0.01466 (60 degF)	0.01664 (140 degF)
0.01516 (80 degF)	0.01712 (160 degF)
0.01566 (100 degF)	0.01759 (180 degF)
0.01615 (120 degF)	

Specific Heat Cp = 0.24 BTU/lb-F (60 to 180 degF)

Kinematic Viscosity (sq ft/hr) =

0.5685 (60 degF)	0.7316 (140 degF)
0.6078 (80 degF)	0.7747 (160 degF)
0.6482 (100 degF)	0.8187 (180 degF)
0.6895 (120 degF)	

Prandtl Number =

0.712 (60 degF)	0.700 (140 degF)
0.709 (80 degF)	0.698 (160 degF)
0.706 (100 degF)	0.696 (180 degF)
0.703 (120 degF)	

Concrete

Thermal properties are for sand and gravel concrete

Density = 142 lb/cu ft
(at 75 degF Reference 13, Table 3 p. 4-63)

Thermal Conductivity = 1.05 BTU/hr-sq ft-degF/ft
(at 75 degF Reference 13, Table 3 p. 4-63)

Mean Specific Heat = 0.156 BTU/lb-degF (Concrete)
(between 32 and 212 degF Reference 13, Table 17 p. 4-9)

Firestone ISO 95 Roof Insulation

Firestone ISO 95 consists of a polyisocyanate (urethane) foam matrix containing Freon R-11 gas (Attachment IV)
Thermal properties are:

Density = 1.9 lb/cu ft
(Attachment IV)

Thermal Conductivity = 0.131 BTU-in/hr-sq ft-degF
(Attachment IV)

Mean Specific Heat = 0.38 BTU/lb-degF
for Expanded Polyurethane (R-11 exp.) for aged stock
(Reference 5, Table 3A p. 22.14 @ 75 degF)

Asphalt Waterproofing

The waterproofing material is assumed to be 0.375 inch built-up roofing asphalt (Attachment IV). The thermal physical properties are (Reference 5, Table 3A p. 22.16 @ 75 degF)

Density = 70 lb/cu ft

Thermal Conductance (C) = 3.00 BTU/hr-sq ft-degF

Specific Heat = 0.35 BTU/lb-degF

V. HEATING-6 THERMAL MODEL BOUNDARY CONDITIONS

A. INITIAL CONDITIONS

The analysis is started just before sunrise on the first day (time = 4.56hrs) and temperatures for the various structures were initially assumed to range from 73.4 to 100 degrees F. These initial temperature estimates need only be the approximate temperatures that the structures would have in order to initialize the HEATING-6 run and to reduce the computational time required to reach a steady periodic solution.

B. BOUNDARY CONDITION #1

This boundary condition represents the atmospheric conditions to which the outer surface of the control building is exposed. It consists of a 24 hour periodic change in air temperature, varying solar radiation, and convective air currents. In the HEATING-6 thermal model, this boundary condition is applied to the top surface of the waterproofing as a surface to boundary condition.

1. AIR TEMPERATURE

Air temperature is based on data from "Table 1 - Climatic Conditions for the United States" of Chapter 23 of ASHRAE (Reference 5) and is discussed in more detail in the main body of the calculation, Section 3.1.

Values for the outside air temperature are entered into the HEATING-6 input deck as a function of time in Table 3 of the deck (Attachment II). A temperature value for each hour starting at midnight (time=0) and ending after 4 days was calculated using a sinusoidal equation with a maximum temperature of 94 degrees F and minimum temperature of 76 degrees F; the minimum is assumed to occur at time = 5 hrs, just after sunrise.

$$T = 85. + 9. \times \sin(PI/12. \times (t - 11.))$$

where: T = Temperature (degrees F)
t = Time (hours, based on 24-hr cycle)
PI = 3.14159

2. SOLAR RADIATION

Solar radiative heat flux data from NOAA's "Monthly Summary Solar Radiation Data" for Omaha, Nebraska (Reference 9, Attachment III) are entered into the HEATING-6 deck (Attachment II) as a function of time via the subroutine "BNFLUX". The digitization procedure results in a value approximately 10% conservative on the integrated daily heat flux. Added discussion for using NOAA data is also provided in Section 3.2 of the main body of this calculation. See that section regarding choices of roof absorptivity, emissivity and the treatment of heat losses to the sky.

3. CONVECTIVE HEAT TRANSFER

Heat transfer from the upper surface of the control building roof to the atmosphere by convection was estimated using Table 11 p. 22.26 of ASHRAE (Reference 5). For a flat horizontal surface of 4 sq. ft. or more facing upward and a 50 degree temperature differential with the air, the heat transfer coefficient (h) is equal to:

h = 2.03 BTU/hr-sq ft-degF

Although the temperature difference can be greater than 50 degrees for much of the time, a smaller, estimated value of 'h' will be used for conservatism:

h = 1.00 BTU/hr-sq ft-degF

and entered into the input deck as a forced convection heat transfer coefficient. Although input using the code's forced convection option, no credit is actually taken for the

cooling effect of winds on the roof. The value of 'h' used should result in an underestimate of convective heat losses from the surface, thus introducing conservatism into the calculated roof temperatures.

C. BOUNDARY CONDITION #2

This boundary condition represents the heat transferred between the top surface of the gypsum board and the bottom surface of the concrete roof slab by radiation. In the HEATING-6 thermal model, this boundary condition is applied as a surface-to-surface boundary condition. For conservatism, no convective heat transfer was assumed to occur. Again, this contributes to an overcalculation of the roof temperatures in the initialization procedure.

1. RADIATIVE HEAT TRANSFER

For two parallel infinite slabs, the shape factor (SF) for radiation from surface 1 to surface 2 is:

$$SF_{1-2} = \frac{1}{1/e_1 + 1/e_2 - 1}$$

where:

e_1 = emissivity of concrete
= 0.94 (Reference 8)

e_2 = emissivity of gypsum board
= 0.90 *

$SF_{1-2} = 0.85$

* This value was estimated since the details of the gypsum board covering is uncertain; it was assumed to be paper.

The radiative heat transfer coefficient h_R entered into HEATING-6 input deck is the product of the shape factor and the Stefan-Boltzman constant:

h_R = (0.85) (0.1714E-08 BTU/hr-sq ft-degR**4)

yielding:

h_R = 1.4588E-09 BTU/hr-sq ft-degR**4 .

D. BOUNDARY CONDITION #3

This boundary condition represents the interface of the bottom of the acoustic ceiling tile and the constant temperature control room air. This is modeled as a surface to boundary condition and is applied to the bottom surface of the acoustic tile. No radiative heat transfer was modeled. The boundary condition consists only of a constant 73.4 degree F boundary temperature and a constant, estimated heat transfer coefficient of 1.0 Btu/hr-ft**2-degf. Considering that natural convective correlations yield values of 'h' of approximately 0.5 for the large horizontal surfaces in the control room, a value of 1.0 in the presence of a forced air system appears reasonable.

VI. HEATING-6 THERMAL MODEL CODE OPTIONS

Code input and output options are described in detail in Reference 3. A few of the code options are presented here in order to clarify the analysis. The HEATING-6 code output deck is presented in Attachment II.

The calculated results were written to the output file at every timestep, per the third entry on the third card in the input deck, and per Section F10.5.5.3 of Reference 3.

TRANSIENT PARAMETERS - The problem was solved with the transient calculation option using the Crank-Nicolson implicit solution scheme per the "TRANSIENT PARAMETERS" card(s):

- initial time step = 0.5 sec.
- T. S. multiplier factor = 1.1
- minimum time step = 0.01 sec.

The above selections are explained on page F10.5.35 of Reference 3. The automatic time step features of the code have also been invoked. A maximum change of 1% is allowed in the temperature at any given node before time step size is decreased. The code default options have been used for convergence criteria.

PRINTOUT TIMES - hardcopy output was provided for selected intervals in order to facilitate comparisons of calculated temperatures to the individual nodes.

NODES MONITORED - the nodes monitored, indicated in Att. II, determine which areas of the thermal model are selected for temperature monitoring. Figure I-4 is a "MAP OF THE NODE NUMBERS", depicting all the nodes in the model along with their coordinates. The "NODES MONITORED" were limited to eleven to simplify data processing, but this parameter allowed for sufficient temperature monitoring.

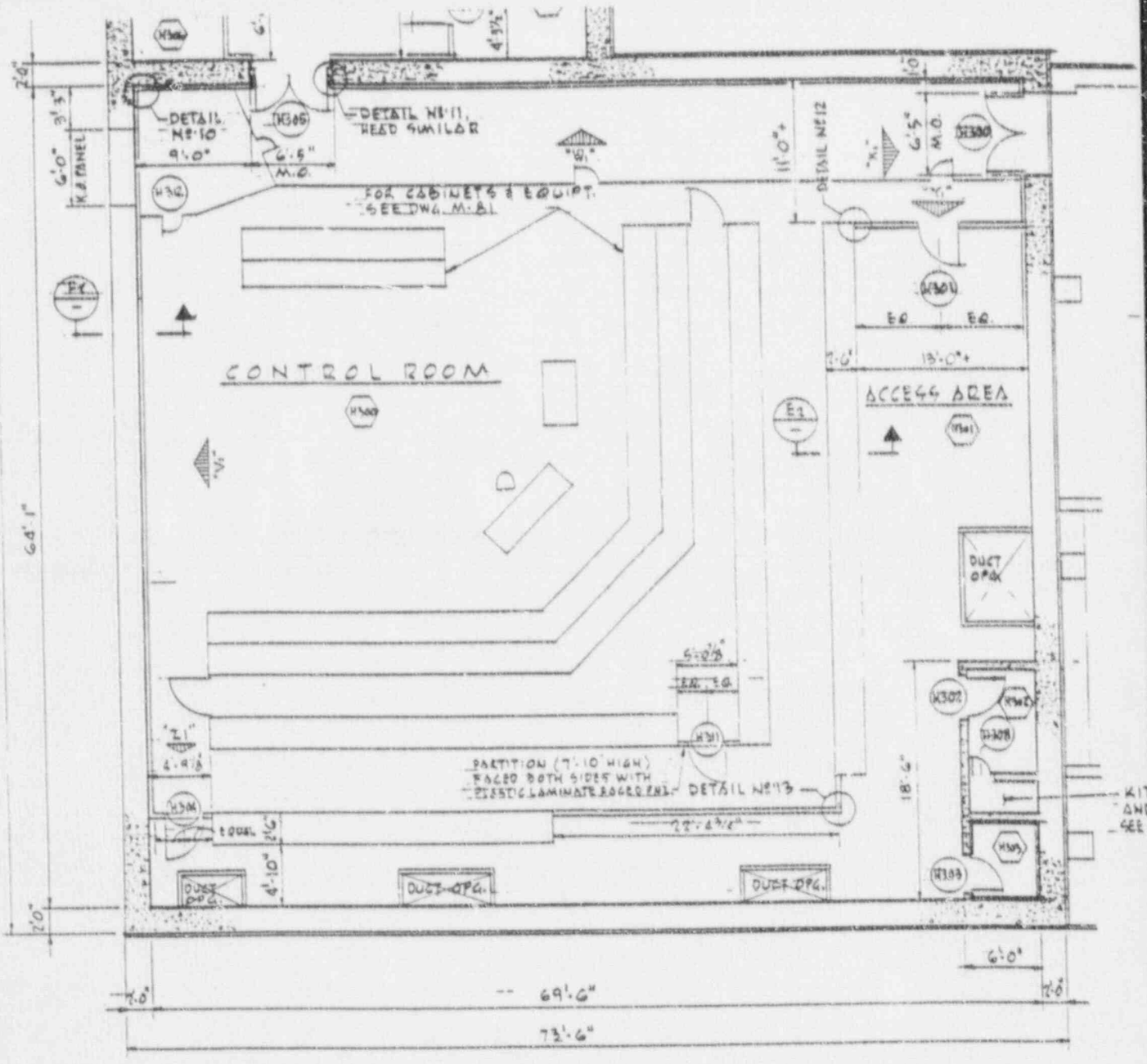
5.0 ANALYSIS RESULTS

Results of the 96 hour thermal response analysis are plotted in Figure I-5. It is apparent that the maximum temperatures for the ceiling and roof structures have been reached and that a periodic steady state has been achieved. The roof surface temperature is characterized by periodic heatup in response to the daily solar load, accompanied by cooldown at night as a result of radiative cooling to the sky. The black asphalt surface gets very hot, perhaps moreso than would be expected. This is due to conservatism in the model. Inner layers of the roof are heated substantially less due to the thermal mass of the

concrete and the protection afforded by the ISO-95 insulation. The results of this analysis provide the basis for the roof boundary conditions in the control room volume analysis using the CONTEMPT-LT/028 code.

Figure I-6 is a page from the HEATING-6 output deck which illustrates the node temperatures for Time = 84 hours (4th day at Noon). Figure I-7, plotted on an expanded scale, illustrates the roof response for the last 36 hours of the simulation. Steady state is indicated. A value of 90 degrees F is considered a bounding value for the surface temperature at the top of the concrete layer and one which accounts for variations in the solar insolation and ambient temperature.

I-15/23
NPP1-580-007
Ent Div



FLOOR PLAN - CONTROL B'LDG. EL. 932'-6"

FIGURE I-1

FROM DWG. 4526

I-16/23
NPPM-5B0-007
Ex 69

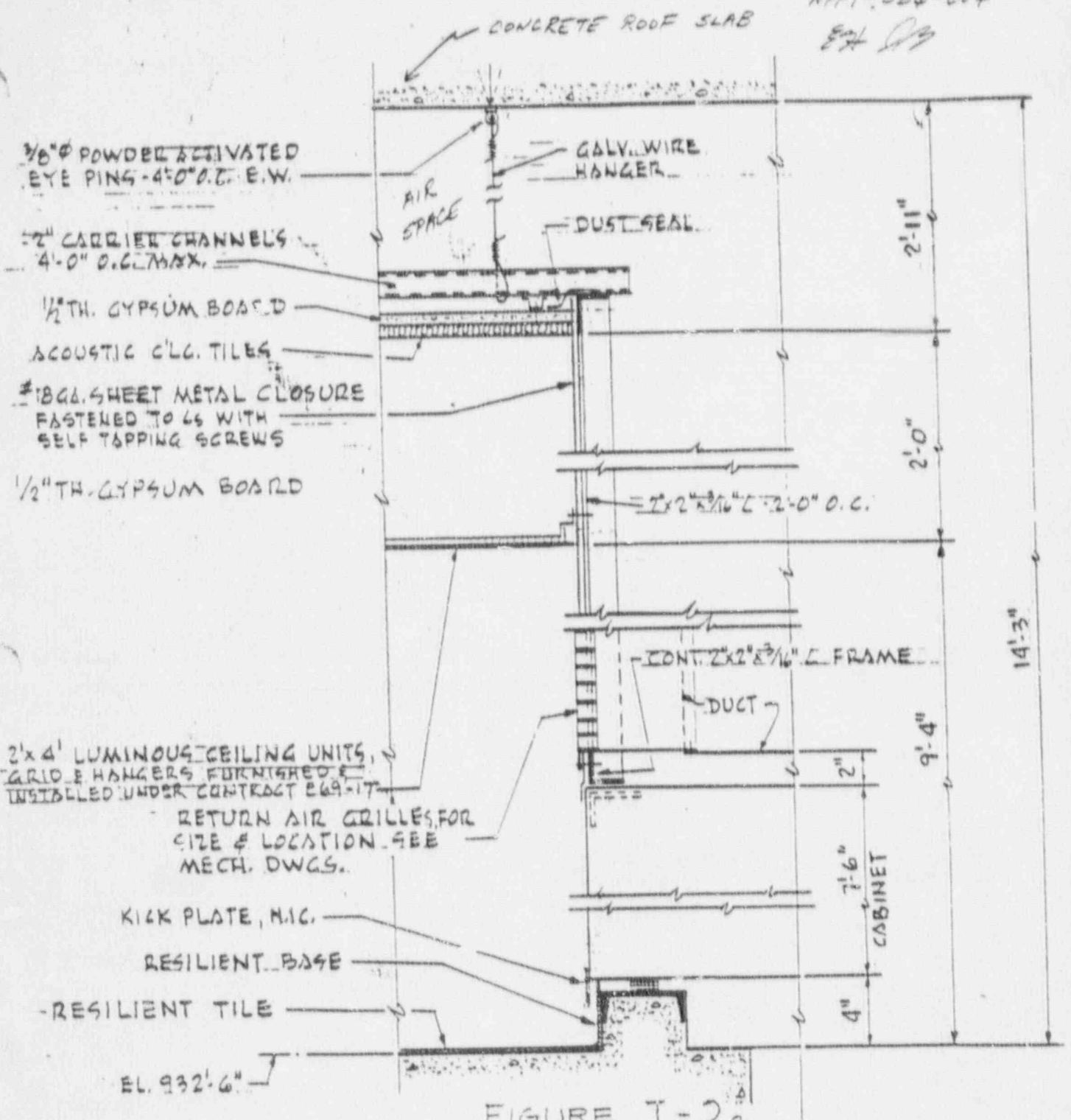


FIGURE I-2a

DWG. 4526

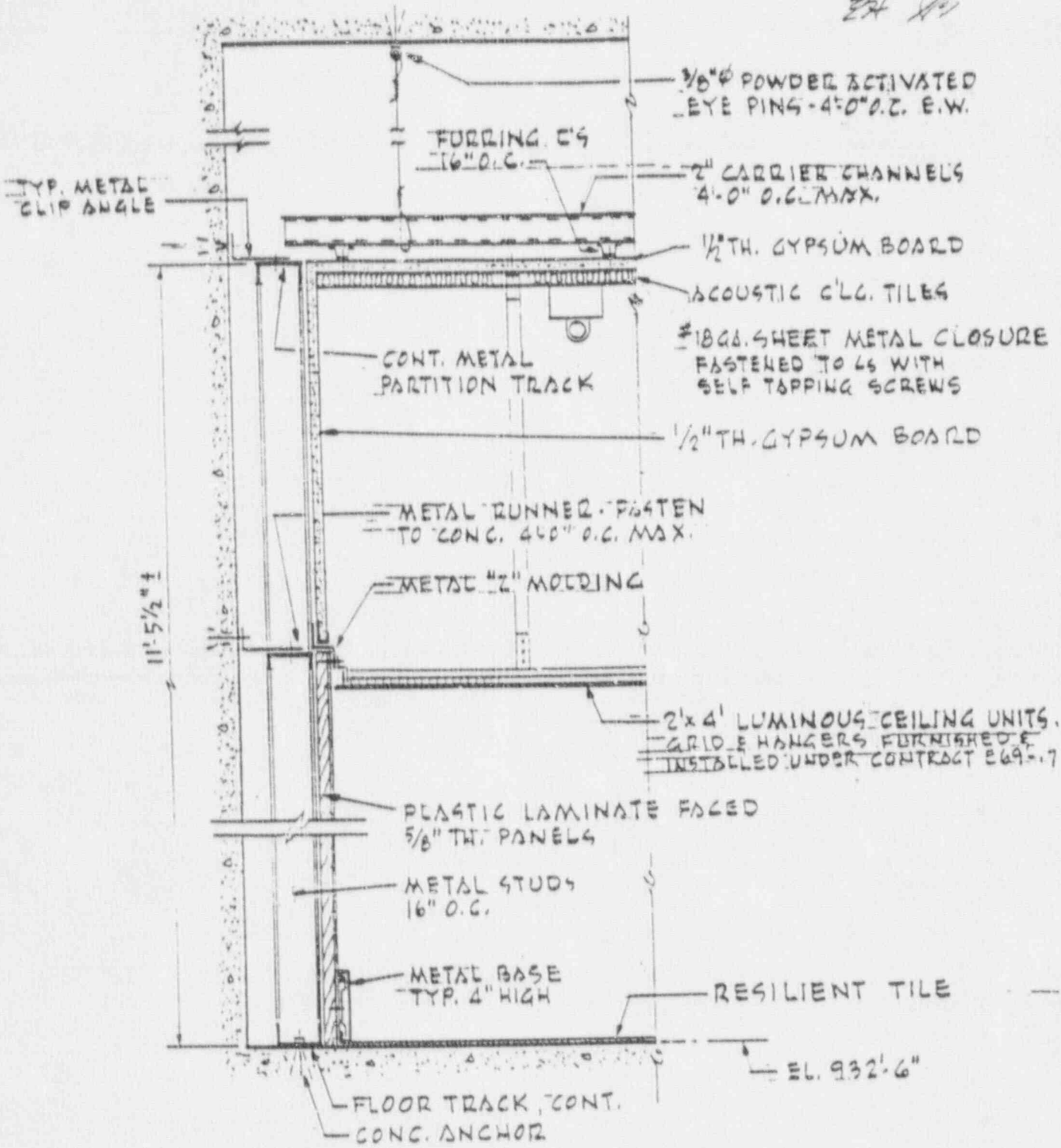
SECTION E2/1

SCALE: 1 1/2" = 1'-0"

I-17/23
NPPI-SBØ-007
Ext Ø5

ELEVATION "C2"

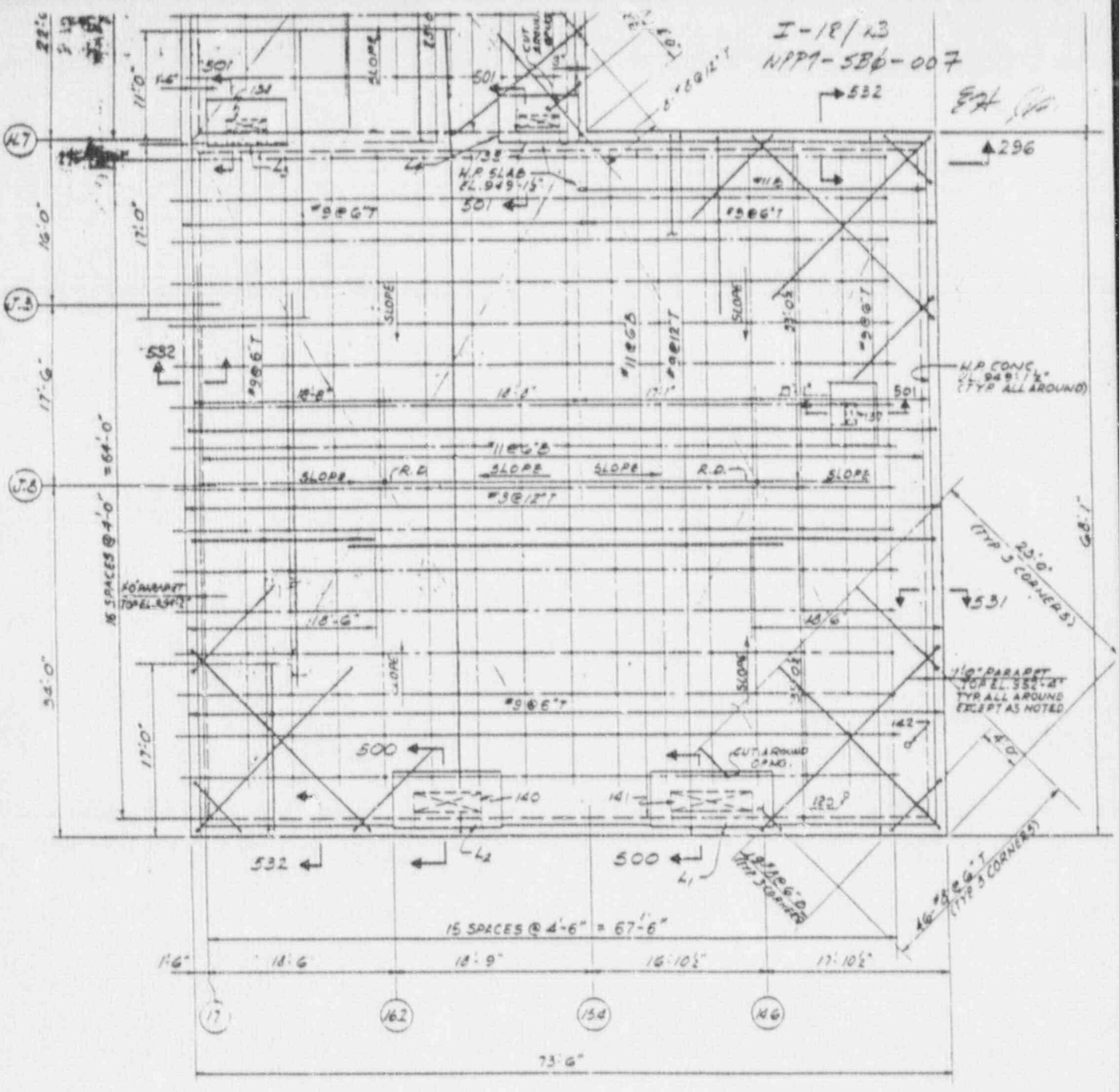
SCALE: 1/8" = 1'-0"



SECTION F2

SCALE: 1 1/2" = 1'-0"

FIGURE I-2b
DWG 4526



PLAN

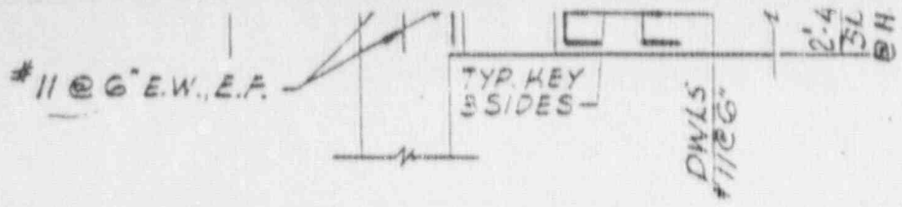
CONTROL BUILDING @ EL. 949'-1½"

ROOF SLAB REINFORCING

SCALE: ⅛" = 1'-0"

SLAB THICKNESS = 2'-0" MIN.
SLAB FINISH : UF @ TOP OF SLAB
EF @ BOTTOM OF SLAB

FIGURE I-3 FROM DWG 4176



I-19/23
NPPI-58Φ-007
EH Ø-2

SECTION 500-500

SCALE: 1/4" = 1'-0"

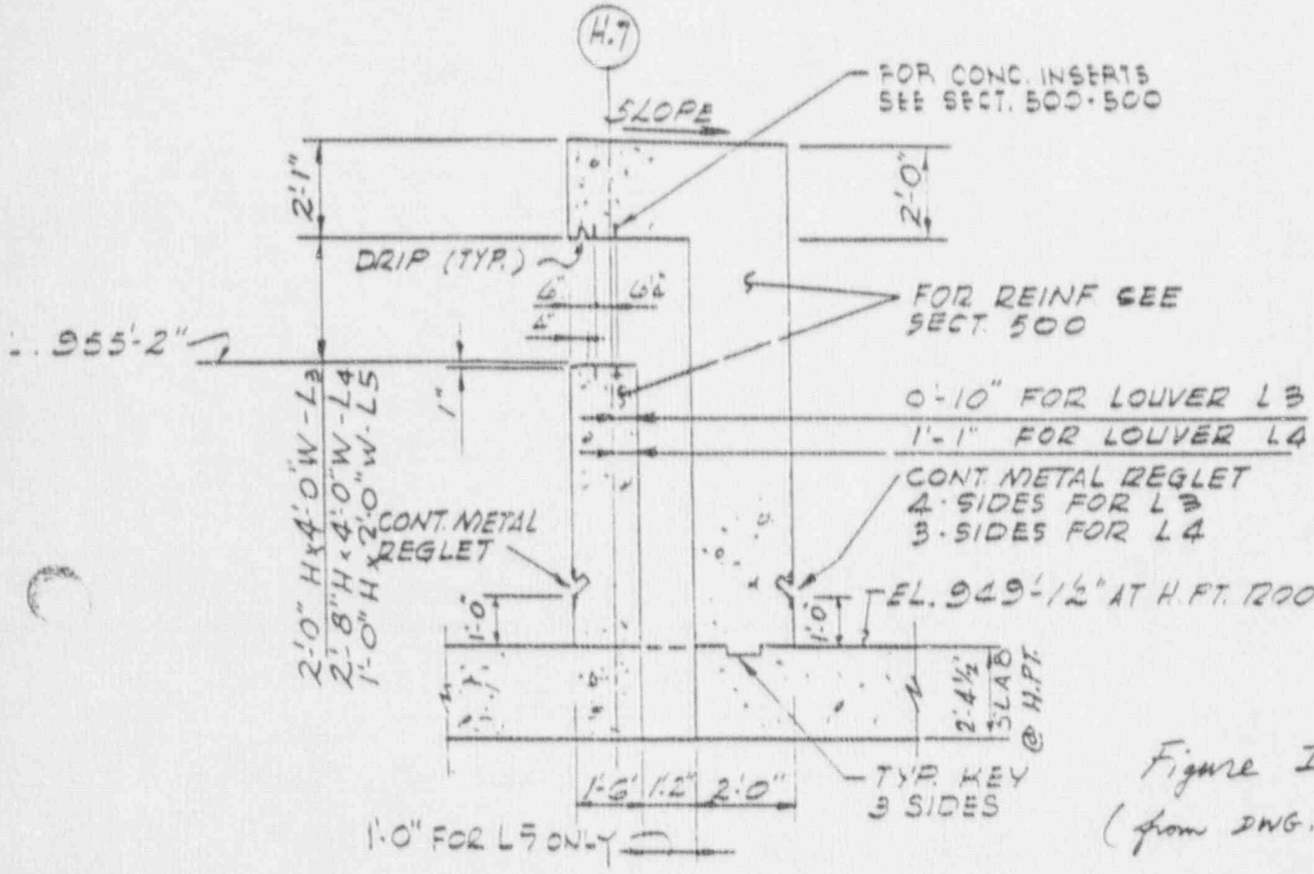


Figure I-3a
(from DWG. 4176)

SECTION 501-501

SCALE: 1/4" = 1'-0"

	C.M.	T.L.			14	ADDED HUNG LOAD TO PLAN.	
ON PLAN	RAB	WG			13	69-23	
	RAB	SA			12	DELETED DOVETAIL ANCHOR SLOT, REV'D SECT 246	

	BY	CHKD	APP	DATE	REV. NO	REVISION	
D LOUVERS ECTS 500 & DING SECT. ED NOTE FOR T 500.	EHD	RCW			3	ADDED REGLET RETURN IN NORTH WALL SECT 532	EH
					4	REVISED NOTES IN PLAN SECT 246 & 247, ADDED SLOT	EH
					5	REMOVED DOVETAIL ON PLAN, REVISED NOTES SECT 246 246 ADDED HUNG LOAD NOTE	

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

MAP OF THE NODE NUMBERS

IBM3033/ 0
20.57.54 11-16-89

GROSS GRID	FINE GRID	DISTANCE		
			1	CONTROL ROOM AIR SPACE
			1	BC #3
	1	0.0	1	
1	(2)	0.03	2	ACOUSTC CEILING TILE
	3	0.06	3	
2	(4)	0.08	4	GYPSUM BOARD
	5	0.10	5	
3	(6)	0.57	6	
	7	1.04	7	AIR SPACE BC #2
	8	1.51	8	
	9	1.98	9	
	10	2.45	10	
4	(11)	2.92	11	
	12	3.14	12	
5	(13)	3.35	13	
	14	3.57	14	
6	(15)	3.79	15	CONCRETE
	16	4.01	16	
7	(17)	4.23	17	ROOF SLAB
	18	4.45	18	
8	(19)	4.67	19	
	20	4.89	20	
9	(21)	5.10	21	
	22	5.18	22	ISO 95 INSULATION
	23	5.25	23	
10	(24)	5.32	24	WATERPOOFING ASPHALT
11	(25)	5.35	25	
NODE				OUTDOOR AIR
ND				ATMOSPHERE BC # 1

○ - NODE TEMPERATURE MONITORED AT EACH TIMESTEP

FIGURE I-4
FROM ATT. II

PCC

I-20/23
NPPI-SBD-007

CNS CONTROL ROOM ROOF TEMPERATURE

1-D CNST. C.R. TEMP 73F – ACT'L SOL Q

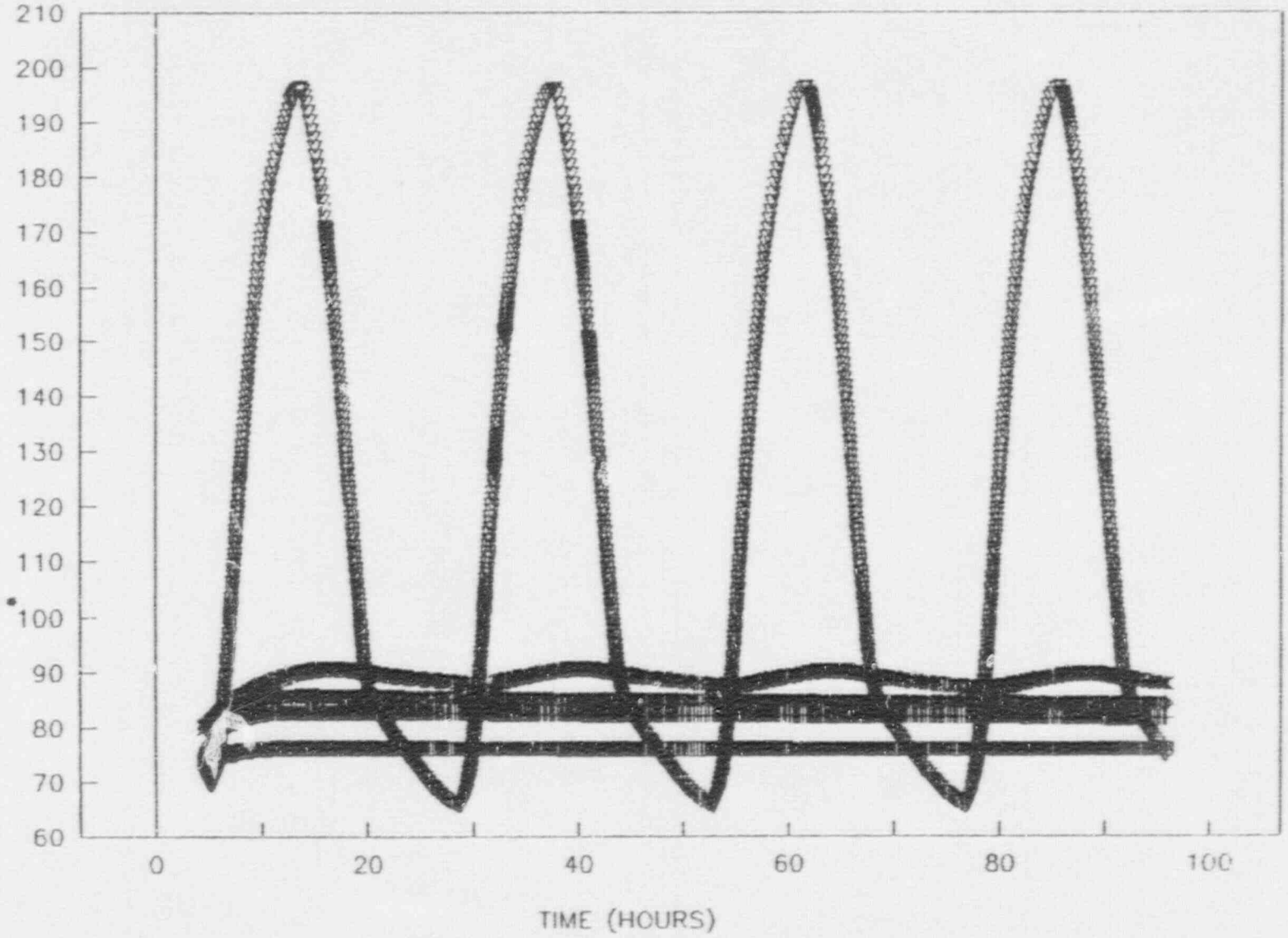


FIGURE I-5

I-21/23
N1001-5880-007

HEATING6 02/12/83
W8XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.29 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1031 TIME STEPS, TIME = 8.400000+01

GROSS GRID	FINE GRID	DISTANCE	0.0	
			1	
			1	
			1	CONTROL ROOM AIR
1	1	0.0	75180	
	2	0.03	77194	ACOUSTIC CEILING TILE
2	3	0.06	80108	
	4	0.08	80189	GYPSUM BOARD
3	5	0.10	81169	
	6	0.57	82113	
	7	1.04	82157	AIR SPACE
	8	1.51	82199	
	9	1.98	83141	
	10	2.45	83183	
4	11	2.92	84123	
	12	3.14	84171	
5	13	3.35	85116	
	14	3.57	85157	
6	15	3.79	85195	CONCRETE
	16	4.01	86129	
7	17	4.23	86162	ROOF SLAB
	18	4.45	86197	
8	19	4.67	87138	
	20	4.89	87196	
9	21	5.10	88179	
	22	5.18	120181	ISO 95 INSULATION
	23	5.25	153185	
10	24	5.32	188175	← ASPHALT WATERPROOFING
11	25	5.35	191151	
				ATMOSPHERE

NODE Nos ↑ TEMP.

EXAMPLE: 191.51 °F

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.658146040-01

ELAPSED CPU TIME IS 12.41 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.915050+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.580000+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

FIGURE I-6
FROM ATT. II

NPPM-550-00 7

I-22/23

CNS CONTROL ROOM ROOF TEMPERATURE

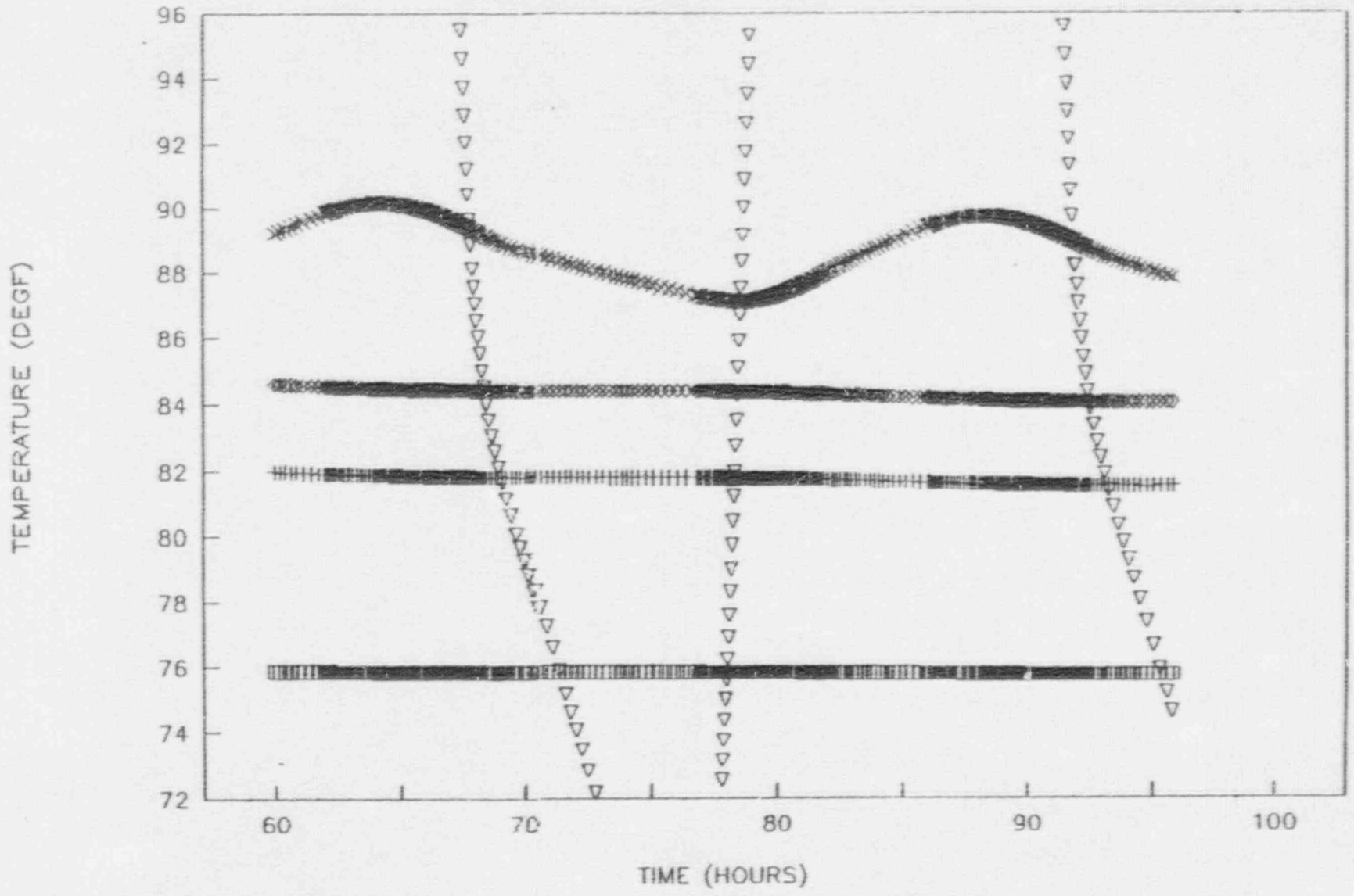


FIGURE I-7
ENLARGED SECTION OF FIGURE I-5

I-23/23
NUPP-STD-007

ENERCON SERVICES, INC.

SHEET ____ OF ____

JOB NO. NP-110 DATE 12/12/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Holcomb

REVIEWER [illegible] APPROVED ____

CALCULATION NO. NPPD-SBO-007

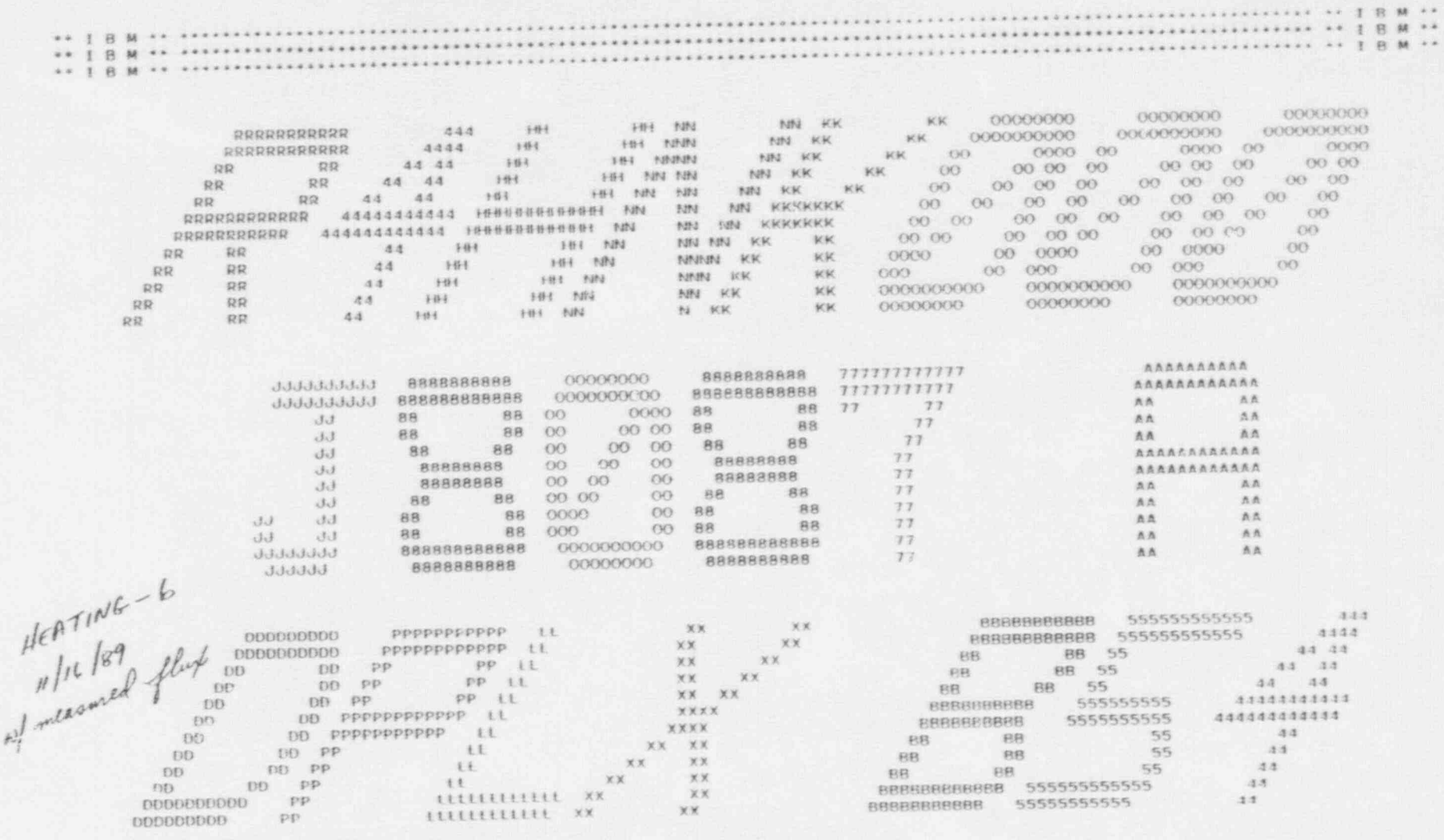
ATTACHMENT II

HEATING-6 CODE OUTPUT DECK

for the

ONE-DIMENSIONAL HEATING-6 THERMAL MODEL

HEATING - b
11/16/89
w/ measured flux



** I B M ** START JOB 8087 R4HNKOOO FX2046 AI2045 ROOM -854 15.58.53 - 89.321 - PRT3 - SYSOUT = A ** I B M **
** I B M ** START JOB 8087 R4HNKOOO FX2046 AI2045 ROOM -854 15.58.53 - 89.321 - PRT3 - SYSOUT = A ** I B M **
** I B M ** START JOB 8087 R4HNKOOO FX2046 AI2045 ROOM -854 15.58.53 - 89.321 - PRT3 - SYSOUT = A ** I B M **

********** JES2 NEWS BULLETIN **********

* ABEND-AID WAS UPGRADED TO RELEASE 5.4, WHICH INCLUDES MAJOR ENHANCEMENTS TO ABEND DIAGNOSTICS. MANUALS MAY BE ORDERED FROM *
* COMPUWARE. *
* QUESTIONS? CALL POWER COMPUTING IBM CUSTOMER SUPPORT AT 1-800-527-6003 *

```
1    //W9XNP110 JOB HE66YHNK,'ENERCON',CLASS=Z,TIME=10                    JOB 6723
     ***JOBPARM NOLOG                                                      ACF2
     *** $ACFJ219 ACF2 ACTIVE POWER1
                                                    BHNK0001  AI2045
     ***INFO.
     ***PASSWORD $ACFJ201 ACF2 CONTROL CARD SUCCESSFULLY SCANNED
     ***LOGONID $ACFJ201 ACF2 CONTROL CARD SUCCESSFULLY SCANNED
     ***JOBPARM LINES=90,CARDS=0
     ***
2    //COMPILE EXEC FORTXC,PARM=LIST                                      0001
3    XXFORTXC PROC  FXPGM=IFEAAB,FXREGN=512K,FXPDECK=NODECK,FXPOLST=NOLIST, *  0002
     XX             FXPOPT=0,FXTERM='SYSOUT=*',FXLNSPC='3200,(25,6)'       0003
     ***                                                                   0004
     ***            PARAMETER  DEFAULT-VALUE     USAGE                    0005
     ***                                                                   0006
     ***              FXPGM    IFEAAB           COMPILER NAME             0007
     ***              FXREGN   256K             FORT-STEP REGION          0008
     ***              FXPDECK  DECK             COMPILER DECK OPTION      0009
     ***              FXPOLST  NOLIST           COMPILER LIST OPTION      0010
     ***              FXPOPT   0                COMPILER OPTIMIZATION     0011
     ***              FXTERM   SYSOUT=*         FORT SYSTERM OPERAND      0012
     ***              FXLNSPC  3200,(25,6)      FORT SYSLIN SPACE         0013
     ***                                                                 * 0014
4    XXFORT   EXEC  PGM=&FXPGM,REGION=&FXREGN,COND=(4,LT),
     IEF653I SUBSTITUTION JCL - PGM=IFEAAB,REGION=512K,COND=(4,LT),        0015
     XX             PARM='&FXPDECK,&FXPOLST,OPT(&FXPOPT)'
     IEF653I SUBSTITUTION JCL - PARM='NODECK,NOLIST,OPT(0)'                0016
5    XXSTEPLIB DD DSN=SYS1.FORTHX,DISP=SHR                                 0017
6    XXSYSPRINT     DD SYSOUT=*,DCB=BLKSIZE=996                            0018
7    XXSYSTERM      DD &FXTERM
     IEF653I SUBSTITUTION JCL - SYSOUT=*                                   0019
8    XXSYSUT1       DD UNIT=SYSSQ,SPACE=(3465,(3,3)),DCB=BLKSIZE=3465      0020
9    XXSYSUT2       DD UNIT=SYSSQ,SPACE=(2048,(10,10))                     0021
10   XXSYSPUNCH     DD SYSOUT=B,DCB=BLKSIZE=3440                         * 0022
11   XXSYSLIN       DD DSN=&&LOADSET,DISP=(MOD,PASS),UNIT=SYSSQ,           0023
     XX             SPACE=(&FXLNSPC),DCB=BLKSIZE=3200
     IEF653I SUBSTITUTION JCL - SPACE=(3200,(25,6)),DCB=BLKSIZE=3200
12   //FORT.SYSIN DD *                                                   +00000001
13   // EXEC FORTXLG,PARM='MAP,LIST',GOREGN=900K                          00000002
14   XXFORTXLG PROC LKLNDD='DDNAME=SYSIN',GOPGM=MAIN,GOREGN=100K,          00000003
     XX             GOF5DD='DDNAME=SYSIN',GOF6DD='S/SOUT=*',               00000004
     XX             GOF7DD='SYSOUT=B'                                      00000005
     ***                                                                   00000006
     ***                                                                   00000007
     ***            PARAMETER  DEFAULT-VALUE     USAGE                    00000008
     ***              LKLNDD   DDNAME=SYSIN      LKED.SYSLIN OPERAND      00000009
     ***              GOPGM    MAIN              OBJECT PROGRAM NAME      00000010
     ***              GOREGN   100K              GO-STEP REGION           00000011
     ***              GOF5DD   DDNAME=SYSIN      GO.FT05F001 OPERAND      00000012
     ***              GOF6DD   SYSOUT=*          GO.FT06F001 OPERAND      00000013
     ***              GOF7DD   SYSOUT=B          GO.FT07F001 OPERAND      00000014
     ***                                                                   00000015
15   XXLKED   EXEC  PGM=IEWL,REGION=256K,COND=(4,LT),                     00000016
     XX             PARM='LET,LIST,MAP,XREF'
16   XXSYSPRINT     DD SYSOUT=*                                           00000017
17   //LKED.SYSLIB DD DSN=$CSD.QA.HEAT6.V0584.SCALE2.SUBLIB,DISP=SHR
     X/SYSLIB       DD DSN=SYS1.FORTLIB,DISP=SHR
18   //           DD DSN=SYS1.FORTLIB,DISP=SHR                           00000018
19   //           DD DSN=$CSD.QA.HEAT6.V0584.SCALE2.OAKRIDGE.LIB,DISP=SHR
20   XXSYSUT1       DD UNIT=SYSDA,SPACE=(1024,(200,20))                 +00000019
21   XXSYSLMOD      DD DSN=&&GOSET(&GOPGM),DISP=(,PASS),UNIT=SYSDA,
     IEF653I SUBSTITUTION JCL - DSN=&&GOSET(MAIN),DISP=(,PASS),UNIT=SYSDA, 00000020
     XX             SPACE=(TRK,(10,10,1))                                 00000021
22   XXSYSLIN       DD &LKLNDD
     IEF653I SUBSTITUTION JCL - DDNAME=SYSIN
     //GO.FT05F001 DD DSN=&&LOADSET,DISP=(OLD,PASS)
```

```
24      //HT6 DD DSN=$CSD.QA.HEAT6.V0584.NEWHEAT.HT60P,,DISP=SHR
25      //LKED.SYSIN DD *
26      XXGO     EXEC  PGM=*.LKED.SYSLMOD,REGION=&GOREGN,COND=(4,LT)            00000022
        IEF653I SUBSTITUTION JCL - PGM=*.LKED.SYSLMOD,REGION=900K,COND=(4,LT)
27      //GO.FT05F001 DD *
        X/FT05F001      DD &GOF5DD                                             00000023
        IEF653I SUBSTITUTION JCL - DDNAME=SYSIN
28      XXFT06F001      DD &GOF6DD                                             00000024
        IEF653I SUBSTITUTION JCL - SYSOUT=*
29      XXFT07F001      DD &GOF7DD                                             00000025
        IEF653I SUBSTITUTION JCL - SYSOUT=B
30      //GO.FT04F001 DD UNIT=SYSDA,SPACE=(TRK,(20,10)),
        //    DCB=(RECFM=VBS,LRECL=X,BLKSIZE=3156,BUFL=4088)
31      //GO.FT06F001 DD SYSOUT=*
```

PGC

```
IEF236I ALLOC. FOR W9XNP110 FORT COMPILE
IEF237I 28A  ALLOCATED TO STEPLIB
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I C54  ALLOCATED TO SYSUT1
IEF237I 893  ALLOCATED TO SYSUT2
IEF237I JES2 ALLOCATED TO SYSPUNCH
IEF237I 891  ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I W9XNP110 FORT COMPILE - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS1.FORTHX                                    KEPT
IEF285I   VOL SER NOS= S80006.
IEF285I   JES2.J0B06723.S0000104                         SYSOUT
IEF285I   JES2.J0B06723.S0000105                         SYSOUT
IEF285I   SYS89320.T205706.RA000.W9XNP110.R0000001       DELETED
IEF285I   VOL SER NOS= W80003.
IEF285I   SYS89320.T205706.RA000.W9XNP110.R0000002       DELETED
IEF285I   VOL SER NOS= WORK32.
IEF285I   JES2.J0B06723.S0000106                         SYSOUT
IEF285I   SYS89320.T205706.RA000.W9XNP110.LOADSET        PASSED
IEF285I   VOL SER NOS= WORK31.
IEF285I   JES2.J0B06723.S1000101                         SYSIN
IEF373I STEP /FORT     / START 89320.2057
IEF374I STEP /FORT     / STOP  89320.2057 CPU     0MIN 00.20SEC SRB     0MIN 00.02SEC VIRT   576K SYS   292K EXT       4K SYS     8852K
*********************************************************************************************************************************
*                                                                                                                               *
*                                                KOMAND DATA ACQUISITION SYSTEM                                                 *
*                                                                                                                               *
* STEP NAME      FORT        START TIME 20.57.06.16    VIRT SYS  USED     292K    PAGE INS              0  STEP TCB      00.00.00.20 *
* PGM NAME       IFEAAB      STOP  TIME 20.57.09.74    VIRT CORE USED     576K    PAGE OUTS             0  JOB  TCB      00.00.00.20 *
* DISPATCH PRTY 105          ELAP. TIME 00.00.03.58    SWAPS/PAGES      0/     0  SRB TIME    00.00.00.02  CONDITION CODE       0000 *
* PERF. GROUP          1     SRU                1.94   TRANS ACT TIME 00.00.01.43                        OCCUPANCY     00.00.00.00 *
*                                                                                                                               *
*********************************************************************************************************************************
*                                                                                                                               *
*                                                EXCP STATISTICS                                                                *
*                                                                                                                               *
* UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT *
*                                                                                                                               *
*  28A           50      C54             2     893             0     891             1                                          *
*                                                                                                                               *
* EXCP TOTAL          53       VIO PAGE INS           0       VIO PAGE OUTS          0       PAGES SWAPPED IN          0       *
*                                                                                                                               *
*********************************************************************************************************************************
IEF236I ALLOC. FOR W9XNP110 LKED
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 28B  ALLOCATED TO SYSLIB
IEF237I 28A  ALLOCATED TO
IEF237I 28B  ALLOCATED TO
IEF237I C42  ALLOCATED TO SYS00012
IEF237I 893  ALLOCATED TO SYSUT1
IEF237I C54  ALLOCATED TO SYSLMOD
IEF237I JES2 ALLOCATED TO SYSLIN
IEF237I 891  ALLOCATED TO H6COMP
IEF237I 28B  ALLOCATED TO HI6
IEF142I W9XNP110 LKED - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.J0B06723.S0000107                         SYSOUT
IEF285I   $CSD.QA.HEAT6.V0584.SCALE2.SUBLIB              KEPT
IEF285I   VOL SER NOS= L80CS1.
IEF285I   SYS1.FORTLIB                                   KEPT
IEF285I   VOL SER NOS= S80006.
IEF285I   $CSD.QA.HEAT6.V0584.SCALE2.OAKRIDGE.LIB        KEPT
IEF285I   VOL SER NOS= L80CS1.
IEF285I   SYSCTLG.V180CS3                                KEPT
```

```
IEF285I   VOL SER NOS= L80CS3.
IEF285I   SYS89320.T205706.RA000.W9XNP110.R0000003     DELETED
IEF285I   VOL SER NOS= WORK32.
IEF285I   SYS89320.T205706.RA000.W9XNP110.GOSET        PASSED
IEF285I   VOL SER NOS= W80003.
IEF285I   JES2.JOB06723.S1000102                       SYSIN
IEF285I   SYS89320.T205706.RA000.W9XNP110.LOADSET      PASSED
IEF285I   VOL SER NOS= WORK31.
IEF285I   $CSD.QA.HEAT6.V0584.NEWHEAT.HT60BJ           KEPT
IEF285I   VOL SER NOS= L80CS1.
IEF373I STEP /LKED    / START 89320.2057
IEF374I STEP /LKED    / STOP  89320.2057 CPU    0MIN 01.57SEC SRB    0MIN 00.46SEC VIRT   288K SYS   280K EXT       4K SYS    8868K
*********************************************************************************************************************************
*                                                                                                                               *
*                                                KOMAND DATA ACQUISITION SYSTEM                                                 *
*                                                                                                                               *
* STEP NAME     LKED        START TIME  0.57.09.89    VIRT SYS  USED    280K    PAGE INS             3  STEP TCB      00.00.01.57 *
* PGM NAME      IEWL        STOP  TIME 20.57.43.67    VIRT CORE USED    288K    PAGE OUTS            0  JOB  TCB      00.00.01.77 *
* DISPATCH PRTY 105         ELAP. TIME 00.00.33.78    SWAPS/PAGES     0/     0  SRB TIME    00.00.00.46  CONDITION CODE       0000 *
* PERF. GROUP           1   SRU                21.83  TRANS ACT TIME 00.00.31.49                       OCCUPANCY     00.00.00.00 *
*                                                                                                                               *
*********************************************************************************************************************************
*                                                                                                                               *
*                                                    EXCP STATISTICS                                                            *
*                                                                                                                               *
* UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT *
*                                                                                                                               *
*  288          153      [illegible]          246      288            0      C42            0      893          376      C54          386 *
*  891            2      288                  267                                                                               *
*                                                                                                                               *
* EXCP TOTAL      1,430      VIO PAGE INS          0      VIO PAGE OUTS         0      PAGES SWAPPED IN          0               *
*                                                                                                                               *
*********************************************************************************************************************************
IEF236I ALLOC. FOR W9XNP110 GO
IEF237I C54  ALLOCATED TO PGM=*.DD
IEF237I JES2 ALLOCATED TO FT05F001
IEF237I JES2 ALLOCATED TO FT06F001
IEF237I JES2 ALLOCATED TO FT07F001
IEF237I 893  ALLOCATED TO FT04F001
IEF237I JES2 ALLOCATED TO FT06F001
IEF142I W9XNP110 GO - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS89320.T205706.RA000.W9XNP110.GOSET        KEPT
IEF285I   VOL SER NOS= W80003.
IEF285I   JES2.JOB06723.S1000103                       SYSIN
IEF285I   JES2.JOB06723.S0000108                       SYSOUT
IEF285I   JES2.JOB06723.S0000109                       SYSOUT
IEF285I   SYS89320.T205706.RA000.W9XNP110.R0000004     DELETED
IEF285I   VOL SER NOS= WORK32.
IEF285I   JES2.JOB06723.S0000110                       SYSOUT
IEF373I STEP /GO      / START 89320.2057
IEF374I STEP /GO      / STOP  89320.2058 CPU    0MIN 14.85SEC SRB    0MIN 00.41SEC VIRT   896K SYS   280K EXT       4K SYS    8852K
*********************************************************************************************************************************
*                                                                                                                               *
*                                                KOMAND DATA ACQUISITION SYSTEM                                                 *
*                                                                                                                               *
* STEP NAME     GO          START TIME 20.57.43.84    VIRT SYS  USED    280K    PAGE INS             0  STEP TCB      00.00.14.85 *
* PGM NAME      PGM=*.DD    STOP  TIME 20.58.36.08    VIRT CORE USED    896K    PAGE OUTS            0  JOB  TCB      00.00.16.62 *
* DISPATCH PRTY 105         ELAP. TIME 00.00.52.24    SWAPS/PAGES     0/     0  SRB TIME    00.00.00.41  CONDITION CODE       0000 *
* PERF. GROUP           1   SRU               122.37  TRANS ACT TIME 00.00.51.25                       OCCUPANCY     00.00.00.00 *
*                                                                                                                               *
*********************************************************************************************************************************
*                                                                                                                               *
*                                                    EXCP STATISTICS                                                            *
*                                                                                                                               *
* UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT     UNIT   EXCP COUNT *
*                                                                                                                               *
*  C54           58      893          434                                                                                       *
*                                                                                                                               *
```

PCC

```
* EXCP TOTAL        492       VIO PAGE INS          0       VIO PAGE OUTS          0       PAGES SWAPPED IN          0
*
*********************************************************************************************************************
IEF237I 891  ALLOCATED TO SYS00001
IEF285I    SYS89320.T205836.RA000.W9XNP110.R0000001      KEPT
IEF285I    VOL SER NOS= WORK31.
IEF285I    SYS89320.T205706.RA000.W9XNP110.LOADSET       DELETED
IEF285I    VOL SER NOS= WORK31.
IEF237I C54  ALLOCATED TO SYS00003
IEF285I    SYS89320.T205836.RA000.W9XNP110.R0000003      KEPT
IEF285I    VOL SER NOS= W80003.
IEF285I    SYS89320.T205706.RA000.W9XNP110.GDSET         DELETED
IEF285I    VOL SER NOS= W80003.
IEF375I  JOB /W9XNP110/ START 89320.2057
IEF376I  JOB /W9XNP110/ STOP  89320.2058 CPU     0MIN 16.62SEC SRB     0MIN 00.89SEC
*********************************************************************************************************************
*                                                                                                                   *
*                                          KOMAND DATA ACQUISITION SYSTEM                                           *
*                                                                                                                   *
*  JOB LOG NUMBER - W9XNP110 89320.20.57.00.95          TCB TIME   00.00.16.62          SRB TIME          00.00.00.89  *
*                                                                                                                   *
*  PROGRAMMER  ENERCON                                  INIT DATE  11/16/89  89.320     INITIATION TIME   20.57.06.16  *
*                                                                                                                   *
*  ACCTG DATA  HE66YHNK                                 TERM DATE  11/16/89  89.320     TERMINATION TIME  20.58.36.63  *
*                                                                                                                   *
*  OS-VS2 REL  03.8                                     PGN/SERVICE     1/    146.14    ELAPSED TIME      00.01.30.47  *
*                                                                                                                   *
*  SYSTEM ID   PCC4                                     CLASS             Z             COMPLETION STATUS        C0000  *
*                                                                                                                   *
*********************************************************************************************************************
*                                                                                                                   *
*                                          TOTAL MAINFRAME UNITS                                                    *
*                                                                                                                   *
*                                      SYSTEM RESOURCE UNITS (SRU)                  146.14                          *
*                                                                                                                   *
*                                      APPLICATION RESOURCE UNITS (ARU)               00                            *
*********************************************************************************************************************
```

```
LEVEL 2.3 (FX07)                        OS/360  FORTRAN H EXTENDED          DATE 89.32 /20.57.08       PAGE    1
REQUESTED OPTIONS: LIST
OPTIONS IN EFFECT: NAME(MAIN) OPTIMIZE(2) LINECOUNT(60) SIZE(MAX) AUTODBL(NONE)
                   SOURCE EBCDIC LIST NODECK OBJECT NOMAP NOFORMAT GOSTMT NOXREF ALC NOANSF TERM IBM FLAG(I)

                C ********
                C ********
                C ********
                C ********
   ISN 0002           SUBROUTINE BNFLUX (RVALUE,R,TH,Z,TIM,TSN,VALUE,NUMBER,N)
                C ***************************************************************
                C
                C                  E. E. HOLCOMB   10/25/89
                C
                C ***************************************************************
                C
                C  **** SUBROUTINE TO CALCULATE NET HEAT LOAD
                C       ON CNS CONTROL ROOM ROOF
                C  ****
                C
   ISN 0003             REAL*8 RVALUE,R,TH,Z,TIM,TSN,VALUE
   ISN 0004             COMMON /IOUNIT/ IBIN,IECHO,IERROR,IMATLB,IN,IO,
                       Z               IPLOT,IPLOTO,IRECLG,ITPIN,ITPOUT
                C
   ISN 0005             DIMENSION TIME(20),QS(20)
   ISN 0006             DATA TIME/0., 4.56E0, 4.78, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5, 11.5,
                       Z    12.5, 13.5, 14.5, 15.5, 16.5, 17.5, 18.5, 19.22, 19.44E0, 24./
   ISN 0007             DATA QS/0., 0., 3.87, 18.67, 72.91, 135.96, 195.57, 241.89,
                       Z        268.22, 284.69, 299.57, 298.95, 263.11, 219.70, 160.70,
                       Z        99.24, 43.15, 10.74, 0., 0./
                C
   ISN 0008             DATA EPS,SIGMA,ALPHA/0.90, 0.1714E-08, 0.94/
   ISN 0009             DATA C1,C2,C3,C4/11.E0,12.E0,85.E0,9.E0/
                C
                C       1) HEATING-6 INPUT TIME UNITS MUST BE HOURS ***
                C       2) 'QS' IS MEASURED SOLAR LOAD AT OMAHA, NEBRASKA
                C          NEAR SUMMER SOLSTICE JUNE 19, 1977, EDITED DATA
                C       3) AMBIENT TEMPERATURE IS ASSUMED TO FOLLOW A SINUSOID,
                C          BASED ON 1% DESIGN VALUES FOR OMAHA, NEB.
                C
   ISN 0010             NPTS = 20
   ISN 0011             FLUXIN = 0.
   ISN 0012             PI = 4.*ATAN(1.0E0)
   ISN 0013             ITMP = NPTS - 1
                C
   ISN 0014             DTIME = TIM/24.
   ISN 0015             REFTIM = (DTIME - INT(DTIME))*24.
   ISN 0016             ARG1 = PI*(TIM-C1)/C2
                C
   ISN 0017              TAMB = C3 + C4*SIN(ARG1)
   ISN 0018              TAMBR = TAMB + 459.69
   ISN 0019              TAMBK = TAMBR/1.8
   ISN 0020              TSKYK = 0.0552 * TAMBK**1.5
   ISN 0021              TSKYR = 1.8*TSKYK
   ISN 0022              TSNR = TSN + 459.69
                C
   ISN 0023             DO 10 I=1,ITMP
   ISN 0024             IF (REFTIM .GE. TIME(I+1)) GO TO 10
   ISN 0026                 RAT = (REFTIM-TIME(I))/(TIME(I+1)-TIME(I))
   ISN 0027                 FLUXIN = ALPHA*(QS(I) + RAT*(QS(I+1)-QS(I)))
```

PCC

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ISN 0028            GO TO 100
ISN 0029         10 CONTINUE
                 C
ISN 0030        100 QOUT = EPS * SIGMA * (TSNR**4 - TSKYR**4)
                 C
ISN 0031            QNET = FLUXIN - QOUT
                 C
ISN 0032            RVALUE = QNET
ISN 0033            RETURN
ISN 0034            END

000000  47 F0 F 00C        BNFLUX  BC      15,12(0,15)
000004  07                         DC      XL1'07'
000005  C2D5C6D3E4E740             DC      CL7'BNFLUX '
00000C  90 EC D 00C                SIM     14,12,12(13)
000010  18 4D                     LR      4,13
000012  98 CD F 020                LM      12,13,32(15)
000016  50 40 D 004                ST      4,4(0,13)
00001A  50 D0 4 008                ST      13,8(0,4)
00001E  07 FC                      BCR     15,12

TEMPORARY FOR FIX/FLOAT
000088  00000000                   DC      XL4'00000000'
00008C  00000000                   DC      XL4'00000000'
000090  4E000000                   DC      XL4'4E000000'
000094  00000000                   DC      XL4'00000000'

CONSTANTS
000098  4F080000                   DC      XL4'4F080000'
00009C  00000000                   DC      XL4'00000000'
0000A0  4E000000                   DC      XL4'4E000000'
0000A4  80000000                   DC      XL4'80000000'
0000A8  42180000                   DC      XL4'42180000'
0000AC  00000000                   DC      XL4'00000000'
0000B0  431CBB0A                   DC      XL4'431CBB0A'
0000B4  00000000                   DC      XL4'00000000'
0000B8  00000000                   DC      XL4'00000000'
0000BC  00000001                   DC      XL4'00000001'
0000C0  00000004                   DC      XL4'00000004'
0000C4  00000014                   DC      XL4'00000014'
0000C8  3FE21965                   DC      XL4'3FE21965'
0000CC  41100000                   DC      XL4'41100000'
0000D0  41180000                   DC      XL4'41180000'
0000D4  411CCCCD                   DC      XL4'411CCCCD'
0000D8  41400000                   DC      XL4'41400000'
0000DC  42180000                   DC      XL4'42180000'
0000E0  431CBB0A                   DC      XL4'431CBB0A'
0000E4  00000000                   DC      XL4'00000000'
0000E8  00000000                   DC      XL4'00000000'
ADCONS FOR VARIABLES AND CONSTANTS
ADCONS FOR COMMON
000238  00000000                   DC      XL4'00000000'
ADCONS FOR EXTERNAL REFERENCES
00023C  00000000                   DC      XL4'00000000'    SIN
000240  00000000                   DC      XL4'00000000'    ATAN
000244  00000000                   DC      XL4'00000000'    FRXPR#
DATA CONSTANTS
0000F4  41B00000                   DC      XL4'41B00000'    C1
0000F8  41C00000                   DC      XL4'41C00000'    C2
0000FC  42550000                   DC      XL4'42550000'    C3
```

```
000100 41900000                    DC    XL4'41900000'                C4
000108 40E66666                    DC    XL4'40E66666'                EPS
00012C 40F0A3D7                    DC    XL4'40F0A3D7'                ALPHA
000134 3975C902                    DC    XL4'3975C902'                SIGMA
000190 00000000                    DC    XL4'00000000'                QS
000194 00000000                    DC    XL4'00000000'                QS
000198 413DEB85                    DC    XL4'413DEB85'                QS
00019C 4212AB85                    DC    XL4'4212AB85'                QS
0001A0 4248E8F6                    DC    XL4'4248E8F6'                QS
0001A4 4287F5C3                    DC    XL4'4287F5C3'                QS
0001A8 42C391EC                    DC    XL4'42C391EC'                QS
0001AC 42F1E3D7                    DC    XL4'42F1E3D7'                QS
0001B0 4310C385                    DC    XL4'4310C385'                QS
0001B4 4311CB0A                    DC    XL4'4311CB0A'                QS
0001B8 4312B91F                    DC    XL4'4312B91F'                QS
0001BC 4312AF33                    DC    XL4'4312AF33'                QS
0001C0 431071C3                    DC    XL4'431071C3'                QS
0001C4 42DBB333                    DC    XL4'42DBB333'                QS
0001C8 42A0B333                    DC    XL4'42A0B333'                QS
0001CC 42633D71                    DC    XL4'42633D71'                QS
0001D0 422B2666                    DC    XL4'422B2666'                QS
0001D4 41ABD70A                    DC    XL4'41ABD70A'                QS
0001D8 00000000                    DC    XL4'00000000'                QS
0001DC 00000000                    DC    XL4'00000000'                QS
0001E0 00000000                    DC    XL4'00000000'                TIME
0001E4 4148F5C3                    DC    XL4'4148F5C3'                TIME
0001E8 414C7AE1                    DC    XL4'414C7AE1'                TIME
0001EC 41580000                    DC    XL4'41580000'                TIME
0001F0 41680000                    DC    XL4'41680000'                TIME
0001F4 41780000                    DC    XL4'41780000'                TIME
0001F8 41880000                    DC    XL4'41880000'                TIME
0001FC 41980000                    DC    XL4'41980000'                TIME
000200 41A80000                    DC    XL4'41A80000'                TIME
000204 41B80000                    DC    XL4'41B80000'                TIME
000208 41C80000                    DC    XL4'41C80000'                TIME
00020C 41D80000                    DC    XL4'41D80000'                TIME
000210 41E80000                    DC    XL4'41E80000'                TIME
000214 41F80000                    DC    XL4'41F80000'                TIME
000218 42108000                    DC    XL4'42108000'                TIME
00021C 42118000                    DC    XL4'42118000'                TIME
000220 42128000                    DC    XL4'42128000'                TIME
000224 42133852                    DC    XL4'42133852'                TIME
000228 421370A4                    DC    XL4'421370A4'                TIME
00022C 42180000                    DC    XL4'42180000'                TIME
000250 58 A0 D 094          100001 L     10, 148( 0,13)               1
000254 58 70 D 098                 L      7, 152( 0,13)               4
000258 58 60 D 224                 L      6, 548( 0,13)               19
00025C 78 00 D 090                 LE     0, 144( 0,13)               0
000260 70 00 D 124                 STE    0, 292( 0,13)               FLUXIN
000264 58 F0 D 218                 L     15, 536( 0,13)               ATAN
000268 41 10 D 04C                 LA     1,  76( 0,13)
00026C 05 EF                       BALR  14,15
00026E 47 00 0 00C                 BC     0,  12( 0, 0)
000272 78 20 D 0B0                 LE     2, 176( 0,13)               41400000
000276 3C 20                       MER    2, 0
000278 68 40 D 148                 LD     4, 328( 0,13)               TIM
00027C 6D 40 D 0B0                 DD     4, 128( 0,13)               4218000000000000
000280 28 00                       SDR    0, 0
000282 38 04                       LER    0, 4
```

PCC

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000284  6A 00 D 070          AD    0, 112( 0,13)          4F080000000000000
000288  60 00 D 060          STD   0,  96( 0,13)
00028C  58 20 D 064          L     2, 100( 0,13)
000290  18 02                LR    0, 2
000292  57 00 D 07C          X     0, 124( 0,13)          4E000000800000000
000296  50 00 D 06C          ST    0, 108( 0,13)
00029A  68 60 D 068          LD    6, 104( 0,13)
00029E  6B 60 D 078          SD    6, 120( 0,13)          4E000000800000000
0002A2  3B 46                SER   4, 6
0002A4  7C 40 D 0B4          ME    4, 180( 0,13)          421B0000
0002A8  70 40 D 12C          STE   4, 300( 0,13)          REFTIM
0002AC  2B 44                SDR   4, 4
0002AE  78 40 D 0CC          LE    4, 204( 0,13)          C1
0002B2  23 44                LCDR  4, 4
0002B4  6A 40 D 148          AD    4, 328( 0,13)          TIM
0002B8  2B 00                SDR   0, 0
0002BA  38 02                LER   0, 2
0002BC  28 20                LDR   2, 0
0002BE  2C 24                MDR   2, 4
0002C0  2B 44                SDR   4, 4
0002C2  78 40 D 0D0          LE    4, 208( 0,13)          C2
0002C6  2D 24                DDR   2, 4
0002C8  70 20 D 0E8          STE   2, 232( 0,13)          ARG1
0002CC  58 F0 D 214          L     15, 532( 0,13)         SIN
0002D0  41 10 D 050          LA    1,  80( 0,13)
0002D4  05 EF                BALR  14,15
0002D6  47 00 0 011          BC    0,  17( 0, 0)
0002DA  78 20 D 0D8          LE    2, 216( 0,13)          C4
0002DE  3C 20                MER   2, 0
0002E0  7A 20 D 0D4          AE    2, 212( 0,13)          C3
0002E4  7A 20 D 0B8          AE    2, 184( 0,13)          431CBB0A
0002E8  7D 20 D 0AC          DE    2, 172( 0,13)          411CCCCD
0002EC  70 20 D 110          STE   2, 272( 0,13)          TAMBK
0002F0  58 F0 D 21C          L     15, 540( 0,13)         FRXPR#
0002F4  41 10 D 054          LA    1,  84( 0,13)
0002F8  05 EF                BALR  14,15
0002FA  47 00 0 014          BC    0,  20( 0, 0)
0002FE  78 20 D 0A0          LE    2, 160( 0,13)          3FE21965
000302  3C 20                MER   2, 0
000304  7C 20 D 0AC          ME    2, 172( 0,13)          411CCCCD
000308  70 20 D 11C          STE   2, 284( 0,13)          TSKYR
00030C  68 00 D 150          LD    0, 336( 0,13)          TSN
000310  6A 00 D 088          AD    0, 136( 0,13)          431CBB0A00000000
000314  70 00 D 100          STE   0, 256( 0,13)          TSNR
000318  18 2A                LR    2,10
00031A  50 A0 D 0C4          ST    10, 196( 0,13)         I
00031E  18 37                LR    3, 7
000320  18 83                LR    8, 3
000322  18 92                LR    9, 2
000324  18 B6                LR    11, 6
000326  78 60 D 12C          LE    6, 300( 0,13)          REFTIM
00032A  79 68 D 1B8  100002  CE    6, 440( 8,13)          TIME
00032E  47 A0 D 342          BC    10, 834( 0,13)         10
000332  50 90 D 0C4          ST    9, 196( 0,13)          I
000336  58 20 D 0C4  100003  L     2, 196( 0,13)          I
00033A  89 20 0 002          SLL   2,  2
00033E  78 22 D 184          LE    2, 436( 2,13)          TIME
000342  78 40 D 12C          LE    4, 300( 0,13)          REFTIM
000346  3B 42                SER   4, 2
```

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000348 33 22                    LCER   2, 2
00034A 7A 22 D 1B8              AE     2, 440( 2,13)                TIME
00034E 3D 42                    DER    4, 2
000350 78 22 D 164              LE     2, 356( 2,13)                QS
000354 78 62 D 168              LE     6, 360( 2,13)                QS
000358 3B 62                    SER    6, 2
00035A 3C 46                    MER    4, 6
00035C 3A 24                    AER    2, 4
00035E 7C 20 D 104              ME     2, 260( 0,13)                ALPHA
000362 70 20 D 124              STE    2, 292( 0,13)                FLUXIN
000366 47 F0 D 34C              BC    15, 844( 0,13)                100
00036A 1A 87                10  AR     8, 7
00036C 87 9A D 302              BXLE   9,10, 770(13)                100002
000370 50 90 D 0C4              ST     9, 196( 0,13)                1
000374 78 20 D 0E0          100 LE     2, 224( 0,13)                EPS
000378 7C 20 D 10C              ME     2, 268( 0,13)                SIGMA
00037C 78 40 D 100              LE     4, 256( 0,13)                TSNR
000380 3C 44                    MER    4, 4
000382 3C 44                    MER    4, 4
000384 78 60 D 11C              LE     6, 284( 0,13)                TSKYR
000388 3C 66                    MER    6, 6
00038A 3C 66                    MER    6, 6
00038C 3B 46                    SER    4, 6
00038E 3C 24                    MER    2, 4
000390 33 22                    LCER   2, 2
000392 7A 20 D 124              AE     2, 292( 0,13)                FLUXIN
000396 2B 00                    SDR    0, 0
000398 38 02                    LER    0, 2
00039A 60 00 D 160              STD    0, 352( 0,13)                RVALUE
00039E 1B FF                    SR    15,15
0003A0 58 E0 D 000              L     14,   0( 0,13)
0003A4 07 FE                    BCR   15,14
ADDRESS OF EPILOGUE
0003A6 58 A0 D 004              L     10,   4( 0,13)
0003AA 58 E0 A 00C              L     14,  12( 0,10)
0003AE 58 B0 A 018              L     11,  24( 0,10)
0003B2 58 10 B 000              L      1,   0( 0,11)
0003B6 68 20 D 160              LD     2, 352( 0,13)                RVALUE
0003BA 60 20 1 000              STD    2,   0( 0, 1)
0003BE 1B DA                    LR    13,10
0003C0 92 FF A 00C              MVI     12(10),255
0003C4 98 2C A 01C              LM     2,12,  28(10)
0003C8 07 FE                    BCR   15,14
ADDRESS OF PROLOGUE
0003CA 98 78 1 000              LM     7,11,   0( 1)
0003CE 68 20 7 000              LD     2,   0( 0, 7)
0003D2 60 20 D 160              STD    2, 352( 0,13)                RVALUE
0003D6 68 20 8 000              LD     2,   0( 0, 8)
0003DA 60 20 D 130              STD    2, 304( 0,13)                R
0003DE 68 20 9 000              LD     2,   0( 0, 9)
0003E2 60 20 D 140              STD    2, 320( 0,13)                TH
0003E6 68 20 A 000              LD     2,   0( 0,10)
0003EA 60 20 D 138              STD    2, 312( 0,13)                Z
0003EE 68 20 B 000              LD     2,   0( 0,11)
0003F2 60 20 D 148              STD    2, 328( 0,13)                TIM
0003F6 98 7A 1 014              LM     7,10,  20( 1)
0003FA 68 20 7 000              LD     2,   0( 0, 7)
0003FE 60 20 D 150              STD    2, 336( 0,13)                TSN
000402 68 20 8 000              LD     2,   0( 0, 8)
```

```
                                                                                    VALUE
000406  60 20 D 158                         STD     2,344(0,13)
00040A  58 20 9 000                         L       2,0(0,9)                        NUMBER
00040E  50 20 D 028                         ST      2,296(0,13)
000412  58 20 A 000                         L       2,0(0,10)                       N
000416  50 20 D 0C8                         ST      2,200(0,13)
00041A  47 F0 D 228                         BC      15,552(0,13)
ADCON FOR PROLOGUE
000020  000003CA                            DC      XL4'0C9003CA'
ADCON FOR SAVE AREA
000024  00000028                            DC      XL4'00000028'
ADCON FOR EPILOGUE
000028  000003AF                            DC      XL4'000003A6'
ADCONS FOR PARAMETER LISTS
000074  800000CC                            DC      XL4'800000CC'                   41100000
000078  80000110                            DC      XL4'80000110'                   ARG1
00007C  00000138                            DC      XL4'00000138'                   TAMRK
000080  80000000                            DC      XL4'80000000'                   41180000
TEMPORARIES AND GENERATED CONSTANTS
000248  00000000                            DC      XL4'00000000'
00024C  00000013                            DC      XL4'00000013'
*OPTIONS IN EFFECT*NAME(MAIN) OPTIMIZE(2) LINECOUNT(60) SIZE(MAX) AUTODBL(NONE)
*OPTIONS IN EFFECT*SOURCE EBCDIC LIST NODECK OBJECT NOMAP NOFORMAT GOSTMT NOXREF ALC NOANSF TERM IBM FLAG(I)
*STATISTICS*      SOURCE STATEMENTS =      33, PROGRAM SIZE =     1054, SUBPROGRAM NAME =BNFLUX
*STATISTICS*  NO  DIAGNOSTICS GENERATED

****** END OF COMPILATION ******                                   68K BYTES OF CORE NOT USED
```

```
FORTRAN H EXTENDED COMPILER ENTERED
*STATISTICS*     SOURCE STATEMENTS =      33, PROGRAM SIZE =     1054, SUBPROGRAM NAME =BNFLUX
*STATISTICS*  NO  DIAGNOSTICS GENERATED
****** END OF COMPILATION ******                                  68K BYTES OF CORE NOT USED
```

PCC

```
MVS/XA DFP VER 2 LINKAGE EDITOR                    20.57.11  THU  NOV 16, 1989
JOB W9XNP110   STEP LKED
 INVOCATION PARAMETERS - MAP,LIST
 ACTUAL SIZE=(176128,86016)
 OUTPUT DATA SET SYS89320.T205706.RA000.W9XNP110.G0SET IS ON VOLUME WB0003
IEW0000         ENTRY MAIN
IEW0000         INCLUDE H6COMP
IEW0000         INCLUDE HT6
IEW0000         ALIAS Q#$010
```

MODULE MAP

CONTROL SECTION			ENTRY							
NAME	ORIGIN	LENGTH	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
BNFLUX	00	41E								
ADJUST	420	56C								
ANALFN	990	102C	TABLFN	18FC						
BDCOND	19C0	10F0	BDCOCM	28BC						
BESK	2AB0	934								
BIO	33E8	F8								
BI1	34E0	13A								
BK0	3620	2A2								
BK1	38C8	2A2								
ARYLNG	3B70	58								
FLGTYP	3BC8	2C								
TSTOUT	3BF8	4								
IOUNIT	3C00	2C								
MAPFMT	3C30	20								
DIVIDR	3C50	2								
TMPFMT	3C58	160								
WIDTH	3DB8	10								
BNDTMP	3DC8	24E								
BOUNDR	4018	111E								
BPOINT	5138	1280								
CALQLT	6388	4EEA								
CHKATF	B2A8	7D2								
CONDTN	8A30	24E								
CONVTN	BC00	24E								
CPHEAT	BF20	24E								
DAXPY	C170	4A2								
DCHAR	C618	4F4	CVERTI	C98C	CNVERT	C9F4				
DDOT	CB10	456								
DECRES	CF68	1E4								
DIFFER	D150	15CE								
DIRECT	E720	151E								
DNSITY	FC40	24E								
DPBFA	FE90	40A								
DPBSL	102A0	3DE								
DPTSL	10680	636								
ECHO	10CB8	678								
ERRBND	11330	A1C								

NAME	ORIGIN	LENGTH
ERROK	11D50	1124
ERRHGN	12E78	486
ERRINT	13300	34A
ERRMAT	13650	704
ERRMSG	13D58	6FA
ERRREG	14458	1800
FCHECK	15F58	19E2
FGRID	17940	9D0
FINCP	18310	10A
FINEV1	18420	1472
FINUSR	19E98	2DE
FMTMAP	1A178	1254
FUNCTN	1B3D0	5CA
GRIDS	1B9A0	446
HEATGN	1BDE8	24E
HEATN6	1C038	6EA6
HGENS	22EE0	872
H6	23758	236
IIREAD	23990	2DA
INCRES	23C70	22A
INFACE	23EA0	FAE
INITIL	24E50	7FA
INITTP	25650	24E
INPUT	258A0	3550
INUE	28DF0	388
IO	29178	292
O#$O1O	29410	1104
MAIN	2A518	1194
MATERL	2B6B0	F5A
MATLIB	2C610	12EA
NATCON	2D900	24E
NCONEX	2DB50	24E
NCTHRM	2DDA0	378
NEXTCD	2E118	B9C
OUTABL	2ECB8	698
OUTPUT	2F350	3800
PLOTIN	32B50	CA0
POINTS	337F0	293C
PREANA	36130	BEA
PREP	36A20	2BC2
PRETAB	392E8	DEA
PRORDR	3A0D8	2FA
PRTOUT	3A3D8	B6A

NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
FINEVL	19D54						
ITEMPS	2368C						
DECIAD	23BF4						
INPCM1	2815C	INPCM2	2882C				
PLOTOU	33780						
ANALYT	368E4						
PREPCM	39014						
TABLE	3A044						
NODEMN	3AE34	SPCPRT	3AEBC	SPECPL	3AEEC		

NAME	ORIGIN	LENGTH
PTPROP	3AF48	11BE
QH6	3C108	21A
RADITN	3C328	24E
READER	3C578	1716
REGION	3DC90	3F4
REGONS	3E088	868
REORDR	3E8F0	1D28
SETTYP	40618	324
SSBOCN	40940	CC4
SSNCJE	41608	98E
SURBC	41F98	17A2
TEMPR	43740	F3A
THRMPR	44680	6DAA
TMPOUT	4B430	15FA
TMSTEP	4CA30	DDA
TOEBCD	4D810	178
TPMNTR	4D988	360
TPRNGE	4DCE8	6AE
TRANO	4E398	4F86
TYPEBC	53320	1C6
UMONTR	534E8	158
WRITER	53640	58F8
IHOSATN2*	58F38	1E8
IHOLEXP *	59120	2AC
IHOLLOG *	593D0	224
DREAD *	595F8	CE8
IHOLSQRT*	5A2E0	168
IHOFDXPD*	5A448	188
IHOFRXPR*	5A600	198
IHOECOMH*	5A7A0	F18
FIOAP# *	5B6B8	6F4
IHOCOMH2*	5BDB0	A31
IREAD *	5C7E8	29C
IHOSSCN *	5CA88	208

NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
REORMT	3FEB4	REORPC	40040	REORHG	40080	REORIT	4015C
REORBC	4020C	REORAF	401E0	REORTF	4056C		
SURBCM	434AC						
SSPARM	44588	TRANS	445C8	TRANS2	44608		
THRCOM	4AD28	THRM1	4B3C8				
IMPCM	4C950						
UDTS	4D774						
TRANIM	532AC						
USRMON	53600						
IH$ATAN2	58F38	ATAN2	58F38	ATAN	58F4C	IH$ATAN	58F4C
DEXP	59120	IH$DEXP	59120				
IH$DLOGO	593D0	DLOG10	593D0	DLOG	593E8	IH$DLOG	593E8
DSQRT	5A2E0	IH$DSQRT	5A2E0				
FDXPD#	5A448						
FRXPR#	5A600						
IBCOM#	5A7CC	IBO81971	5A7CC	FDIOCS#	5A888	INTSWTCH	5B5E8
APO81971	5B82C						
SEQDASD	5C18E						

NAME	ORIGIN	LENGTH
AREAD *	5CC90	880
CORE *	5D510	144
IHOLATN2*	5D658	278
IHOLSCN *	5D8D0	290
IHOLTNCT*	5DB60	2F0
IHOLTANH*	5DE50	170
IHOETRCH*	5DFC0	2AE
ICLOCK *	5E270	FE
ICOMPARE*	5E370	48
SCANON *	5E3B8	54F
ALOCAT *	5E900	14A
CREAD *	5EA50	188
IHOFOPT *	5EBD8	30C
IHONAMEL*	5EEE8	C97
IDAY *	5FB80	108
INTOBCD *	5FC88	10E
JOBNUM *	5FD98	98
MODEL *	5FE30	50
TIME *	5FE80	74
IHOFCVTH*	5FEF8	A43
IHOEFNTH*	60940	808
ENFILE *	61148	112
IHOEFIOS*	61260	11FC
IHOFIOS2*	62460	7BE
IHOSEXP *	62C20	1B0
IHOSLOG *	62DD0	1D4
IHOERRM *	62FA8	62C
IHOUOPT *	635D8	3B8
YOREAD *	63990	1FC

NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
COS	5CA88	IH$$COS	5CA88	SIN	5CAAA	IH$$SIN	5CAAA
DATAN2	5D658	IH$DATA2	5D658	DATAN	5D670	IH$DATAN	5D670
DCOS	5D8D0	IH$DCOS	5D8D0	DSIN	5D8F4	IH$DSIN	5D8F4
DCOTAN	5DB60	IH$DCOTN	5DB60	CTAN	5DB82	IH$DTAN	5DB82
DDTAN	5DD3C						
DTANH	5DE50	IH$DTANH	5DE50				
IHDTRCH	5DFC0	ERRTRA	5DFC8				
ICLOCKF	5E270	ITICK	5E354				
ICOMP$	5E370						
SCANOF	5E614	ALLOWC	5E654	RESETC	5E694	RSTPTR	5E6D4
GETPTR	5E734	SETBIN	5E794	RESETB	5E7D4	IONUMS	5E814
RCRDLN	5C898						
ERRSET	5EBD8	ERRSAV	5EDD0	ERRSTR	5EDF6		
FRDNL#	5EEE8	FWRNL#	5F5E4				
INTOBC	5FC88	INTBCD	5FC9C	INTBCDL	5FC9C		
ADCON#	5FEF8	FCVAOUTP	5FFA2	FCVLOUTP	60032	FCVZOUTP	6018E
FCVIOUTP	60568	FCVEOUTP	6065A	FCVCOUTP	6065A	INTGSWCH	60BBC
ARITH#	60940	ADJSWTCH	60EDC				
FIOCS#	61260	FIOCSBEP	61266				
IH$$EXP	62C20	EXP	62C20				
LOG10	62DD0	ALOG10	62DD0	IH$ALOGO	62DD0	IH$ALOG	62DE8
LOG	62DE8	ALOG	62DE8				
ERRMON	62FA8	IHOERRE	62FC0				

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NAME	ORIGIN	LENGTH
UNIT *	63B90	54
QRDBUF *	63BE8	27C
IHOFCONI*	63E68	2FD
IHOFCONO*	64168	4CA
IHOUATBL*	64638	638
YOPACK *	64C70	102
IHOFTEN *	64D78	198
TSPAR	64F10	30
INPTMX	64F40	18
IOFLAG	64F58	2C
ABSDEG	64F88	24
PRBTYP	64FB0	1C
SURBCD	64FD0	250
VARDIM	65220	14
GRDLIN	65238	38
CPU	65270	C
ITERTN	65280	C
JOBNAM	65290	4C
MATRLS	652E0	76
MONTOR	65358	10
PRINTS	65368	2C
SSTATE	65398	1C
TRANST	653B8	20
TMPVAR	653D8	1C
FINVHC	653F8	40
PARMID	65438	34
STATUS	65470	8
MONREG	65478	88
MONMAT	65500	48
MONINT	65548	20
MONHGN	65568	38
MONBDC	655A0	CC
MONGRD	65670	78
MONSTR	656E8	38
MONRPT	65720	4C
MONIPT	65770	74
MONITR	657E8	8
PMRMAP	657F0	4
BINARY	657F8	4
TPARM	65800	30
GFACTS	65830	70
TMPMAP	658A0	14
CLYDE	65888	4
INITMP	658C0	58

NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
FQCONI#	63E68						
FQCONO#	64168						
FTEN#	64D78						

ENTRY ADDRESS 2A518

TOTAL LENGTH 65918

```
** MAIN      DID NOT PREVIOUSLY EXIST BUT WAS ADDED AND HAS AMODE 24
** Q#$010    IS AN ALIAS AND HAS AMODE 24
** LOAD MODULE HAS RMODE 24
** AUTHORIZATION CODE IS         0.
```

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DEFINITION OF INPUT/OUTPUT UNITS

NAME	NO	UNIT NUMBER DEFINITION
IBIN	95	BINARY INPUT DATA SET (OPTIONAL)
IECHO	5	INITIAL INPUT DATA SET
IERROR	0	ERROR MESSAGE DATA SET (OPTIONAL)
IMATLB	0	MATERIAL PROPERTIES LIBRARY DATA SET (OPTIONAL)
IN	4	STANDARD INPUT DATA SET
IO	6	STANDARD OUTPUT DATA SET
IPLOT	0	PLOT DATA SET (OPTIONAL)
IPLOTO	0	OLD PLOT DATA SET FOR RESTART CASES (OPTIONAL)
IRECLG	80	RECORD LENGTH IN SINGLE WORDS FOR BINARY DATA SET ON UNIT IBIN (MAXIMUM OF 80)
ITPIN	0	INITIAL TEMPERATURE DATA SET (OPTIONAL)
ITPOUT	0	FINAL TEMPERATURE DATA SET (OPTIONAL)

```
PRINT INPUT CARD IMAGES W/CARD COLUMNS INDICATED EVERY 10TH CARD--

CARD
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    1    COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL
    2    *                    --- HEATING-6 DECK FOR IBM ----
    3    *                  ---- CONTROL ROOM HEAT-UP ANALYSIS ----
    4    *                       ---- NOVEMBER 16, 1989 ----
    5    *                     ---- MEASURED SOLAR DATA ----
    6    *  TLIMIT      GEOM      PROB     TINIT    TFINAL      DT    LEVY OP     UNITS
    7    * CONTINU   MAPFLAG
    8         1177         9        -1      4.55        96       0          0         0
    8    @       0         1
    9    *   JPLOT PLOTFREQ  NODEMON    JTPIN   JTPOUT  MAPFLAG  OUTTIME  STATUS
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
   10    *  OUTOPT
   11            0         0         1         0         0         0         0         0
   11    @      10
   12    *                                ---- REGION CARDS ---
   13    *  REGION    MAT'L        X1        X2        Y1        Y2        Z1        Z2
   14    *   TINIT  HEATGEN      BCX1      BCX2      BCY1      BCY2      BCZ1      BCZ2
   15    REGIONS
   16             1         1       0.0    0.0625
   17             1         0         3         0
   18             2         2    0.0625    0.1042
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
   19             1         0         0         0
   20             3         3    0.1042    2.9167
   21             1         0         2         2
   22             4         4    2.9167    3.3542
   23             2         0         0         0
   24             5         4    3.3542    3.7917
   25             3         0         0         0
   26             6         1    3.7917    4.2292
   27             4         0         0         0
   28             7         4    4.2292    4.6667
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
   29             3         0         0         0
   30             8         4    4.5667    5.1042
   31             2         0         0         0
   32             9         5    5.1042    5.3229
   33             1         0         0         0
   34            10         6    5.3229    5.3542
   35             1         0         0         1
   36    *  T, P  UNITS -  k (Btu/hr-ft-F)   rho (lb/cu ft)  Cp (Btu/lb-F)
   37    *  MATNUM      TYPE          k          RHO       Cp          FUNCTIONS
   38    *                                                          k      rho      Cp
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
   39    MATERIALS
   40             1  ACOUTILE    0.035         23.       0.14
   41             2  GYPSUM      0.062         51.       0.259
   42             3  DRYAIR          0          0.       0.24        -1       -2
   43             4  CONCRETE     1.05        142.       0.156
   44             5  IS095       0.011         1.9       0.38
   45             6  WATERPRF    0.0938✓       70.       0.35
   46    INITIAL TEMPERATURES
   47          1   73.4
   48          2   80.0
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
   49          3   90.0
   50          4  100.0
   51    *HEAT GENERATIONS
   52    *                          ---- BOUNDARY CONDITIONS ----
   53    * BDY NO.  BDYTYPE  PO-TEMP      F(t)      F(x)      F(y)      F(z)
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    54    *      HFC      HRAD       HNC     NCEXP       Q'' t/T FLAG  FINFLAG
    55    BOUNDARY CONDITIONS
    56              1         1       1.0        -3
    57            1.0         0         0         0         0         1
    58              0         0         0         0         1
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    59              2         3         0         0
    60              0 1.459E-9          0         0       0.0         0
    61              3         1       1.0        -4
    62            1.0         0         0         0       0.0         0
    63    * XY-COORD. GRID BLOCKS & MESH SPACING
    64    XGRID
    65      0.0  0.0625  0.1042  2.9167  3.3542  3.7917  4.2292  4.6667
    65 *  5.1042  5.3229  5.3542
    66      2     2     6     2     2     2     2     2     3     1
    67    ANALYTICAL FUNCTIONS
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    68          1
    69    TABULAR FUNCTIONS
    70    * THERMAL CONDUCTIVITY FOR DRY AIR k
    71    * Btu/hr-ft-F
    72    * MATERIAL NUMBER 3
    73    * TEMPERATURE (DEGF)  k
    74              1       7
    75             60.   0.01466
    75 *           80.   0.01516
    75 *          100.   0.01566
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    75 *          120.   0.01615
    75 *          140.   0.01664
    75 *          160.   0.01712
    75 *          180.   0.01759
    76    * DENSITY FOR DRY AIR rho
    77    * lbm/cu ft
    78    * MATERIAL NUMBER 3
    79    * TEMPERATURE (DEGF)  rho
    80              2       7
    81             60.   0.07633
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    81 *           80.   0.07350
    81 *          100.   0.07087
    81 *          120.   0.06843
    81 *          140.   0.06614
    81 *          160.   0.06401
    81 *          180.   0.06201
    82    * OUTSIDE PERIODIC TEMPERATURE
    83    * BC 1
    84    * FOUR DAY DURATION
    85    *  TIME (hrs)  TEMP (DEGF)
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    86            3      97
    87            0    82.67
    87 *          1    80.50
    87 *          2    78.64
    87 *          3    77.21
    87 *          4    76.31
    87 *          5    76.00
    87 *          6    76.31
    87 *          7    77.21
    87 *          8    78.64
NO./COL.  1.....10.....20.....30.....40.....50.....60.....70.....80
    87 *          9    80.50
    87 *         10    82.67
    87 *         11    85.00
    87 *         12    87.33
    87 *         13    89.50
```

```
    87    *    14    91.36
    87    *    15    92.79
    87    *    16    93.69
    87    *    17    94.00
    87    *    18    93.69
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    19    92.79
    87    *    20    91.36
    87    *    21    89.50
    87    *    22    87.33
    87    *    23    85.00
    87    *    24    82.67
    87    *    25    80.50
    87    *    26    78.64
    87    *    27    77.21
    87    *    28    76.31
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    29    76.00
    87    *    30    76.31
    87    *    31    77.21
    87    *    32    78.64
    87    *    33    80.50
    87    *    34    82.67
    87    *    35    85.00
    87    *    36    87.33
    87    *    37    89.50
    87    *    38    91.36
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    39    92.79
    87    *    40    93.69
    87    *    41    94.00
    87    *    *2    93.69
    87    *    *3    92.79
    87    *    44    91.36
    87    *    45    89.50
    87    *    46    87.33
    87    *    47    85.00
    87    *    48    82.67
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    49    80.50
    87    *    50    78.64
    87    *    51    77.21
    87    *    52    76.31
    87    *    53    76.00
    87    *    54    76.31
    87    *    55    77.21
    87    *    56    78.64
    87    *    57    80.50
    87    *    58    82.67
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    59    85.00
    87    *    60    87.33
    87    *    61    89.50
    87    *    62    91.36
    87    *    63    92.79
    87    *    64    93.69
    87    *    65    94.00
    87    *    66    93.69
    87    *    67    92.79
    87    *    68    91.36
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87    *    69    89.50
    87    *    70    87.33
    87    *    71    85.00
    87    *    72    82.67
    87    *    73    80.50
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    87     *     74     78.64
    87     *     75     77.21
    87     *     76     76.31
    87     *     77     76.00
    87     *     78     76.31
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87     *     79     77.21
    87     *     80     78.64
    87     *     81     80.50
    87     *     82     82.67
    87     *     83     85.00
    87     *     84     87.33
    87     *     85     89.50
    87     *     86     91.36
    87     *     87     92.79
    87     *     88     93.69
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    87     *     89     94.00
    87     *     90     93.69
    87     *     91     92.79
    87     *     92     91.36
    87     *     93     89.50
    87     *     94     87.33
    87     *     95     85.00
    87     *     96     82.67
    88     * CONTROL ROOM CONSTANT TEMPERATURE
    89     * BC 3
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    90     *  TIME (hrs) TEMERATURE (F)
    91          4      2
    92          0.   73.4   1000.   73.4
    93     PRINTOUT TIMES
    94       0.  1.  2.  3.  4.  4.55
    94     * 5.  6.  7.  8.  9.  10.  11.  12.  13.  14.  15.  16.  17.
    94     * 18.  19.  20.  21.  22.  23.  24.  25.  26.  27.  28.  29.  30.  31.  32.  33.
    94     * 34.  35.  36.  37.  38.  39.  40.  41.  42.  43.  44.  45.  46.  47.  48.  49.
    94     * 50.  52.  54.  56.  58.  60.  62.  64.  66.  68.  70.  72.  74.  76.  78.  80.
    94     * 82.  84.  86.  88.  90.  92.  94.  96.
NO./COL. 1.....10.....20.....30.....40.....50.....60.....70.....80
    95     NODES MONITORED
    96       1  3  5  11  13  15  17  19  21  24  25
    97     TRANSIENT PARAMETERS
    98
    99     0.5      1.1      0      0      0      1.0      0.01
   100     %
```

```
LIMIT (DIMENSIONS FOR THE D-ARRAY) IS     118272 WHICH USES  463K BYTES OF CORE
(LIMIT IS COMPUTED BY ALOCAT AND IS A FUNCTION OF THE COMPUTER CORE REQUEST.)
THE VARIABLY DIMENSIONED ARRAYS REQUIRE      13045 SINGLE WORDS OR   51K BYTES OF CORE
THUS, THE CORE REQUIREMENTS MAY BE REDUCED BY  410K BYTES
```

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CODE: HEATING6 02/12/83     DATE: 11-16-89      TIME: 20.57.50          JOBNAM  W9XNP110          COMPUTER  IBM3033/   0

HEATING6, A MULTI-DIMENSIONAL HEAT CONDUCTION CODE WITH TEMPERATURE DEPENDENT THERMAL PROPERTIES, NON-LINEAR AND
SURFACE-TO-SURFACE BOUNDARY CONDITIONS, FINNED SURFACE ANALYSIS TECHNIQUES, AND CHANGE-OF-PHASE CAPABILITIES.
STEADY STATE MODELS MAY BE SOLVED BY EITHER OVERRELAXATION WITH EXTRAPOLATION OR BY DIRECT SOLUTION TECHNIQUES (DPTSL OR T/DBFA AND
DPBSL FROM LINPACK).  THE DIRECT SOLUTION TECHNIQUES ARE LIMITED TO ONE AND TWO DIMENSIONAL PROBLEMS.
TRANSIENT MODELS MAY BE SOLVED BY IMPLICIT TECHNIQUES (CRANK-NICOLSON OR BACKWARDS EULER), BY LEVI'S EXPLICIT PROCEDURE, OR THE
CLASSICAL EXPLICIT PROCEDURE.  THE TIME STEP SIZE FOR THE IMPLICIT TRANSIENT CALCULATIONS MAY BE A FUNCTION OF THE MAXIMUM
TEMPERATURE CHANGE.  THE IMPLICIT TECHNIQUE MAY NOT BE USED FOR PROBLEMS INVOLVING CHANGE OF PHASE CALCULATIONS.
EACH ARRAY WHOSE LENGTH IS A FUNCTION OF THE INPUT DATA IS VARIABLY DIMENSIONED EXCEPT FOR THE NUMBER OF MATERIALS
THAT CAN CHANGE PHASE (EQUAL TO 5) AND THE NUMBER OF PARAMETERS IN AN ANALYTICAL FUNCTION (EQUAL TO 11).
HEATING6 USES THE SCALE FREE FORM READING ROUTINES TO PROCESS ITS STANDARD INPUT DATA.

HEATING6 WAS WRITTEN BY
     D.C. ELROD
     G.E. GILES
     W.D. TURNER
     COMPUTER SCIENCES DIVISION
     UNION CARBIDE CORPORATION, NUCLEAR DIVISION
     BUILDING K-1007, MAIL STOP NO. 53
     POST OFFICE BOX P
     OAK RIDGE, TENNESSEE 37830

     PHONE - 615-574-8677
             FTS 624-8577

THIS RUN WITH HEATING6 CAN HANDLE A MAXIMUM OF THE FOLLOWING PARAMETERS:
(CONTROLLED BY THE USER THROUGH NAMELIST /OPTION/ IN THE INPUT DATA OR THROUGH A BLOCK DATA SUBPROGRAM)

  MAXPTS =    50, LATTICE POINTS
  MAXREG =    [illegible]IONS
  MAXMAT =     6, MATERIALS
  MAXCP  =     5, MATERIALS WITH PHASE CHANGE CAPABILITIES (FIXED)
  MAXINT =     5, INITIAL TEMPERATURE FUNCTIONS
  MAXHGN =     5, HEAT GENERATION FUNCTIONS
  MAXBDC =     5, BOUNDARY CONDITION FUNCTIONS
  MAXPBT =     1, POSITION DEPENDENT BOUNDARY TEMPERATURES
  MAXRFG =    50, FINE GRID LINES, RADIAL (OR X)
  MAXTFG =    50, FINE GRID LINES, THETA (OR Y)
  MAXZFG =    50, FINE GRID LINES, AXIAL (OR Z)
  MAXFGL =    50, FINE GRID LINES ALONG ANY AXIS (CALCULATED)
  MAXGGL =    11, GROSS GRID LINES ALONG ANY AXIS (MAY HAVE BEEN REDUCED)
  MAXANA =     5, ANALYTICAL FUNCTIONS
  MAXPAR =    11, PARAMETERS PER ANALYTICAL FUNCTION (FIXED)
  MAXTBL =     5, TABULAR FUNCTIONS
  MAXPRS =   100, PAIRS PER TABULAR FUNCTION
  MAXPRT =   111, STANDARD PRINTOUT TIMES
  MAXNSN =    11, NODES FOR SPECIAL MONITORING OF TEMPERATURES
  MAXSPC =    10, SPECIFIED PLANE PRINTOUT TIMES
  MAXSPL =    20, PLANES PRINTED FOR THREE DIMENSIONAL MODELS
  MAXSUR =    50, SURFACE-TO-SURFACE CONNECTORS
  MWIDTH =     7, BAND WIDTH FOR STEADY STATE DIRECT SOLUTION TECHNIQUE
  NDIMEN =     3, DIMENSIONS ALLOWED

ANALYSIS COMPONENTS ALLOWED BY BLOCKDATA,(T), NOT ALLOWED,(F):
              CLASSICAL EXPLICIT       (   CEP=T)
              DIRECT SOLUTION (SS)     (DIRECT=T)
              LEVI EXTRAPOLATION       (  LEVI=T)
              TRANSIENT IMPLICIT       (IMPFLG=T)
              HEAT GENERATION          (  HGEN=T)
              CHANGE OF PHASE          (MELTFG=F)
              FINNED BOUNDARIES        (   FIN=F)
              POSITION DEPENDENT
              BOUNDARY TEMPERATURES    (IBOUND=F)
```

```
INPUT RETURN

JOB DESCRIPTION -- COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL
***** COMMENT ***** *                    ---- HEATING 6 DECK FOR IBM ----
***** COMMENT ***** *                ---- CONTROL ROOM HEAT-UP ANALYSIS ----
***** COMMENT ***** *                      ---- NOVEMBER 16, 1989 ----
***** COMMENT ***** *                   ---- MEASURED SOLAR DATA ----
***** COMMENT ***** *  TLIMIT    GEOM     PROB    TINIT   TFINAL    DT   LEVY OP    UNITS
***** COMMENT ***** * CONTINUE MAPFLAG
***** COMMENT ***** *   JPLOT PLOTFREQ  NODEMON    JTPIN   JTPOUT  MAPFLAG  OUTTIME  STATUS
***** COMMENT ***** *  OUTOPT
THE PROBLEM WILL BE TERMINATED AFTER                          1177 SECONDS
GEOMETRY TYPE NUMBER                                             9 (OR X   )
PROBLEM TYPE NUMBER                                             -1
INITIAL TIME                                                     4.55000000+00
FINAL TIME                                                       9.60000000+01
TIME INCREMENT                                                   0.0
IF RADIATION IS INVOLVED, TEMPERATURE UNITS ARE ASSUMED TO BE IN DEGREES FAHRENHEIT
THIS IS A NEW PROBLEM.
TEMPERATURES OF SELECTED NODES WILL BE MONITORED EVERY        1 ITERATIONS OR TIME STEPS.
THE FOLLOWING INFORMATION WILL BE PRINTED ON UNIT     6 DURING THE CALCULATIONS:
     THE CAPACITANCE, POWER, AND EFFECTIVE CONDUCTANCES ASSOCIATED WITH EACH
     NODE AT THE INITIAL TIME LEVEL.

DEFINITION OF INPUT/OUTPUT UNITS FOR CASE NUMBER     1

NAME     NO   UNIT NUMBER DEFINITION
IBIN     95   BINARY INPUT DATA SET (OPTIONAL)
IECHO     5   INITIAL INPUT DATA SET
IERROR    0   ERROR MESSAGE DATA SET (OPTIONAL)
IMATLB    0   MATERIAL PROPERTIES LIBRARY DATA SET (OPTIONAL)
IN        4   STANDARD INPUT DATA SET
IO        6   STANDARD OUTPUT DATA SET
IPLOT     0   PLOT DATA SET (OPTIONAL)
IPLOTO    0   OLD PLOT DATA SET FOR RESTART CASES (OPTIONAL)
IRECLG   80   RECORD LENGTH IN SINGLE WORDS FOR BINARY DATA SET ON UNIT IBIN (MAXIMUM OF 80)
ITPIN     0   INITIAL TEMPERATURE DATA SET (OPTIONAL)
ITPOUT    0   FINAL TEMPERATURE DATA SET (OPTIONAL)
***** COMMENT ***** *                              ---- REGION CARDS ----
***** COMMENT ***** *  REGION     MAT'L       X1        X2        Y1        Y2        Z1        Z2
***** COMMENT ***** *   TINIT  HEATGEN      BCX1      BCX2      BCY1      BCY2      BCZ1      BCZ2
***** COMMENT ***** *  T, P  UNITS -  k (Btu/hr-ft-F)   rho (lb/cu ft)  Cp (Btu/lb-F)
***** COMMENT ***** *  MATNUM     TYPE          k         RHO        Cp              FUNCTIONS
***** COMMENT ***** *                                                                k      rho      Cp
***** COMMENT ***** *HEAT GENERATIONS
***** COMMENT ***** *                          ---- BOUNDARY CONDITIONS ----
***** COMMENT ***** *  BDY NO.  BDYTYPE  PO-TEMP      F(t)      F(x)      F(Y)      F(Z)
***** COMMENT ***** *      HFC      HRAD       HNC     NCEXP       Q''  t/T FLAG  FINFLAG
***** COMMENT ***** * XY-COORD. GRID BLOCKS & MESH SPACING
***** COMMENT ***** * THERMAL CONDUCTIVITY FOR DRY AIR k
***** COMMENT ***** * Btu/hr-ft-F
***** COMMENT ***** * MATERIAL NUMBER 3
***** COMMENT ***** * TEMPERATURE (DEGF)  k
***** COMMENT ***** * DENSITY FOR DRY AIR rho
***** COMMENT ***** * lbm/cu ft
***** COMMENT ***** * MATERIAL NUMBER 3
***** COMMENT ***** * TEMPERATURE (DEGF)  rho
***** COMMENT ***** * OUTSIDE PERIODIC TEMPERATURE
***** COMMENT ***** * BC 1
***** COMMENT ***** * FOUR DAY DURATION
***** COMMENT ***** *  TIME (hrs)  TEMP (DEGF)
***** COMMENT ***** * CONTROL ROOM CONSTANT TEMPERATURE
***** COMMENT ***** * BC 3
***** COMMENT ***** *  TIME (hrs) TEMERATURE (F)
```

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NUMBER OF PARAMETERS SPECIFIED BY THE INPUT DATA

NUMBER OF REGIONS	10
NUMBER OF MATERIALS	6
NUMBER OF INITIAL TEMPERATURE FUNCTIONS	4
NUMBER OF HEAT GENERATION FUNCTIONS	0
NUMBER OF DIFFERENT KINDS OF BOUNDARIES	3
NUMBER OF POINTS IN GROSS X OR R LATTICE	11
NUMBER OF POINTS IN GROSS Y OR THETA LATTICE	1
NUMBER OF POINTS IN GROSS Z LATTICE	1
NUMBER OF ANALYTIC FUNCTIONS	1
NUMBER OF TABULAR FUNCTIONS	4
NUMBER OF TRANSIENT PRINTOUT TIMES	75
NUMBER OF NODES FOR MONITORING OF TEMPERATURES	11

SUMMARY OF REGION DATA

NUMBERS AND FCN NUMBER				********** DIMENSIONS **********						-------- BOUNDARY NUMBERS --------					
R.G. NO.	MATL NO.	INIT TEMP	HEAT GEN.	LEFT-X-Ln INNER-R	RIGHT-X-OR OUTER-R	LOWER-Y-OR LEFT-THETA	UPPER-Y-OR RIGHT-THETA	REAR-Z	FRONT-Z	LF-X IN-R	RT-X OT-R	LO-Y LF-O	UP-Y RT-O	RR-Z	FT-Z
1	1	1	0	0.0	0.0625	0.0	0.0	0.0	0.0	3	0	0	0	0	0
2	2	1	0	0.0625	0.1042	0.0	0.0	0.0	0.0	0	0	0	0	0	0
3	3	1	0	0.1042	2.9167	0.0	0.0	0.0	0.0	2	2	0	0	0	0
4	4	2	0	2.9167	3.3542	0.0	0.0	0.0	0.0	0	0	0	0	0	0
5	4	3	0	3.3542	3.7917	0.0	0.0	0.0	0.0	0	0	0	0	0	0
6	4	4	0	3.7917	4.2292	0.0	0.0	0.0	0.0	0	0	0	0	0	0
7	4	3	0	4.2292	4.6667	0.0	0.0	0.0	0.0	0	0	0	0	0	0
8	4	2	0	4.6667	5.1042	0.0	0.0	0.0	0.0	0	0	0	0	0	0
9	5	1	0	5.1042	5.3229	0.0	0.0	0.0	0.0	0	0	0	0	0	0
10	6	1	0	5.3229	5.3542	0.0	0.0	0.0	0.0	0	1	0	0	0	0

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********** SUMMARY OF MATERIAL DATA **********

MATERIAL NUMBER	MATERIAL NAME	THERMAL PARAMETERS -- TEMPERATURE-DEPENDENT FUNCTION NUMBERS -- CONDUCTIVITY	DENSITY	SPECIFIC HEAT
1	ACOUTILE	3.500000D-02 0	2.300000D+01 0	1.400000D-01 0
2	GYPSUM	6.200000D-02 0	5.600000D+01 0	2.590000D-01 0
3	DRYAIR	0.0 -1	0.0 -2	2.403000D-01 0
4	CONCRETE	1.050000D+00 0	1.420000D+02 0	1.560000D-01 0
5	I5095	1.100000D-02 0	1.900000D+00 0	3.600000D-01 0
6	WATERPRF	9.380000D-02 0	7.000000D+01 0	3.500000D-01 0

********** SUMMARY OF INITIAL TEMPERATURE DATA **********

NUMBER	INITIAL TEMPERATURE	POSITION-DEPENDENT FUNCTION NUMBERS X OR R	Y OR TH	Z
1	7.340000D+01	0	0	0
2	8.000000D+01	0	0	0
3	9.000000D+01	0	0	0
4	1.000000D+02	0	0	0

**********SUMMARY OF BOUNDARY DATA**********

GENERAL			TEMPERATURE INFORMATION					HEAT TRANSFER COEFFICIENTS RELATED FUNCTION NUMBERS				
NO.	TYPE	FCT FLAG	T	X	Y	Z	ASSOC. FCTS	FORCED CONV.	RADIATION	NATURAL CONV	EXPONENT	FLUX
1	1	1	1.000000+00					1.000000+00	0.0	0.0	0.0	0.0
			-3	0	0	0	TIME	0	0	0	0	1
							TEMP	0	0	0	0	0
2	3	0	0.0					0.0	1.459000-09	0.0	0.0	0.0
			0	0	0	0						
3	1	0	1.000000+00					1.000000+00	0.0	0.0	0.0	0.0
			-4	0	0	0						

GROSS LATTICES AND NUMBERS OF INCREMENTS

R OR X							
0.0	0.062500	0.104200	2.916700	3.354200	3.791700	4.229200	4.666700
5.104200	5.322900	5.354200					
2	2	6	2	2	2	2	2
3	1						

LISTING OF ANALYTIC FUNCTIONS

F(V)= A(1) + A(2)*V + A(3)*V**2 + A(4)*COS(A(5)*V) + A(6)*EXP(A(7)*V) + A(8)*SIN(A(9)*V) + A(10)*LOG(A(11)*V)

NO.	A(1)	A(2)	A(3)	A(4)	A(5)	A(6)	A(7)	A(8)	A(9)	A(10)	A(11)

ANALYTIC FUNCTION NO. 1 IS USER SUPPLIED

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LISTING OF TABULAR FUNCTIONS

TABLE NUMBER 1 NUMBER OF PAIRS - 7

ARGUMENT	VALUE
6.000000000+01	1.466000000-02
8.000000000+01	1.516000000-02
1.000000000+02	1.566000000-02
1.200000000+02	1.615000000-02
1.400000000+02	1.664000000-02
1.600000000+02	1.712000000-02
1.800000000+02	1.759000000-02

TABLE NUMBER 2 NUMBER OF PAIRS - 7

ARGUMENT	VALUE
6.000000000+01	7.633000000-02
8.000000000+01	7.350000000-02
1.000000000+02	7.087000000-02
1.200000000+02	6.843000000-02
1.400000000+02	6.614000000-02
1.600000000+02	6.401000000-02
1.800000000+02	6.201000000-02

TABLE NUMBER 3 NUMBER OF PAIRS - 97

ARGUMENT	VALUE
0.0	8.267000000+01
1.000000000+00	8.050000000+01
2.000000000+00	7.864000000+01
3.000000000+00	7.721000000+01
4.000000000+00	7.631000000+01
5.000000000+00	7.600000000+01
6.000000000+00	7.631000000+01
7.000000000+00	7.721000000+01
8.000000000+00	7.864000000+01
9.000000000+00	8.050000000+01
1.000000000+01	8.267000000+01
1.100000000+01	8.500000000+01
1.200000000+01	8.733000000+01
1.300000000+01	8.950000000+01
1.400000000+01	9.136000000+01
1.500000000+01	9.279000000+01
1.600000000+01	9.369000000+01
1.700000000+01	9.400000000+01
1.800000000+01	9.369000000+01
1.900000000+01	9.279000000+01
2.000000000+01	9.136000000+01
2.100000000+01	8.950000000+01
2.200000000+01	8.733000000+01
2.300000000+01	8.500000000+01
2.400000000+01	8.267000000+01
2.500000000+01	8.050000000+01
2.600000000+01	7.864000000+01
2.700000000+01	7.721000000+01
2.800000000+01	7.631000000+01
2.900000000+01	7.600000000+01
3.000000000+01	7.631000000+01
3.100000000+01	7.721000000+01
3.200000000+01	7.864000000+01
3.300000000+01	8.050000000+01
3.400000000+01	8.267000000+01
3.500000000+01	8.500000000+01
3.600000000+01	8.733000000+01

3.700000000+01	8.950000000+01
3.800000000+01	9.136000000+01
3.900000000+01	9.275000000+01
4.000000000+01	9.369000000+01
4.100000000+01	9.400000000+01
4.200000000+01	9.369000000+01
4.300000000+01	9.279000000+01
4.400000000+01	9.136000000+01
4.500000000+01	8.950000000+01
4.600000000+01	8.733000000+01
4.700000000+01	8.500000000+01
4.800000000+01	8.267000000+01
4.900000000+01	8.050000000+01
5.000000000+01	7.864000000+01
5.100000000+01	7.721000000+01
5.200000000+01	7.631000000+01
5.300000000+01	7.600000000+01
5.400000000+01	7.631000000+01
5.500000000+01	7.721000000+01
5.600000000+01	7.864000000+01
5.700000000+01	8.050000000+01
5.800000000+01	8.267000000+01
5.900000000+01	8.500000000+01
6.000000000+01	8.733000000+01
6.100000000+01	8.950000000+01
6.200000000+01	9.136000000+01
6.300000000+01	9.279000000+01
6.400000000+01	9.369000000+01
6.500000000+01	9.400000000+01
6.600000000+01	9.369000000+01
6.700000000+01	9.279000000+01
6.800000000+01	9.136000000+01
6.900000000+01	8.950000000+01
7.000000000+01	8.733000000+01
7.100000000+01	8.500000000+01
7.200000000+01	8.267000000+01
7.300000000+01	8.050000000+01
7.400000000+01	7.864000000+01
7.500000000+01	7.721000000+01
7.600000000+01	7.631000000+01
7.700000000+01	7.600000000+01
7.800000000+01	7.631000000+01
7.900000000+01	7.721000000+01
8.000000000+01	7.864000000+01
8.100000000+01	8.050000000+01
8.200000000+01	8.267000000+01
8.300000000+01	8.500000000+01
8.400000000+01	8.733000000+01
8.500000000+01	8.950000000+01
8.600000000+01	9.136000000+01
8.700000000+01	9.279000000+01
8.800000000+01	9.369000000+01
8.900000000+01	9.400000000+01
9.000000000+01	9.369000000+01
9.100000000+01	9.279000000+01
9.200000000+01	9.136000000+01
9.300000000+01	8.950000000+01
9.400000000+01	8.733000000+01
9.500000000+01	8.500000000+01
9.600000000+01	8.267000000+01

TABLE NUMBER 4 NUMBER OF PAIRS = 2

ARGUMENT	VALUE
0.0	7.340000000+01
1.000000000+03	7.340000000+01

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TABLE OF OUTPUT TIMES

OUTPUT NO	OUTPUT TIME	OUTPUT NO	OUTPUT TIME	OUTPUT NO	OUTPUT TIME	OUTPUT NO	OUTPUT TIME
1	0.0	26	2.400000D+01	51	4.900000D+01		
2	1.000000D+00	27	2.500000D+01	52	5.000000D+01		
3	2.000000D+00	28	2.600000D+01	53	5.200000D+01		
4	3.000000D+00	29	2.700000D+01	54	5.400000D+01		
5	4.000000D+00	30	2.800000D+01	55	5.600000D+01		
6	4.550000D+00	31	2.900000D+01	56	5.800000D+01		
7	5.000000D+00	32	3.000000D+01	57	6.000000D+01		
8	6.000000D+00	33	3.100000D+01	58	6.200000D+01		
9	7.000000D+00	34	3.200000D+01	59	6.400000D+01		
10	8.000000D+00	35	3.300000D+01	60	6.600000D+01		
11	9.000000D+00	36	3.400000D+01	61	6.800000D+01		
12	1.000000D+01	37	3.500000D+01	62	7.000000D+01		
13	1.100000D+01	38	3.600000D+01	63	7.200000D+01		
14	1.200000D+01	39	3.700000D+01	64	7.400000D+01		
15	1.300000D+01	40	3.800000D+01	65	7.600000D+01		
16	1.400000D+01	41	3.900000D+01	66	7.800000D+01		
17	1.500000D+01	42	4.000000D+01	67	8.000000D+01		
18	1.600000D+01	43	4.100000D+01	68	8.200000D+01		
19	1.700000D+01	44	4.200000D+01	69	8.400000D+01		
20	1.800000D+01	45	4.300000D+01	70	8.600000D+01		
21	1.900000D+01	46	4.400000D+01	71	8.800000D+01		
22	2.000000D+01	47	4.500000D+01	72	9.000000D+01		
23	2.100000D+01	48	4.600000D+01	73	9.200000D+01		
24	2.200000D+01	49	4.700000D+01	74	9.400000D+01		
25	2.300000D+01	50	4.800000D+01	75	9.600000D+01		

SPECIAL MONITORING OF SELECTED NODAL TEMPERATURES OPTION

TEMPERATURES OF THE FOLLOWING NODES WILL BE MONITORED EVERY 1 ITERATIONS OR TIME STEPS.

NUMBER	NODE
1	1
2	3
3	5
4	11
5	13
6	15
7	17
8	19
9	21
10	24
11	25

FINE LATTICE LINES GENERATED BY HEATING6

X OR R FINE LATTICE LINES

1	0.0	2	0.031250	3	0.062500	4	0.083350	5	0.104200
6	0.572950	7	1.041700	8	1.510450	9	1.979200	10	2.447950
11	2.916700	12	3.135450	13	3.354200	14	3.572950	15	3.791700
16	4.010450	17	4.229200	18	4.447950	19	4.666700	20	4.885450
21	5.104200	22	5.177100	23	5.250000	24	5.322900	25	5.354200

THIS PROBLEM INVOLVES TEMPERATURE-DEPENDENT PROPERTIES.

SINCE THIS PROBLEM INVOLVES RADIATION, 459.69 WILL BE ADDED TO
THE TEMPERATURES FOR THE RELATED HEAT FLOW CALCULATIONS TO CONVERT THEM TO ABSOLUTE TEMPERATURES.

THIS PROBLEM CONTAINS 25 NODES.

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SURFACE-TO-SURFACE CONNECTIONS

NUMBER	NODE	TO	NODE
1	5		11

TIME = 4.55000000D+00
NO. OF ITERATIONS OR TIME STEPS = 0

TABLE GIVING TEMPERATURE DEPENDENCE FOR HEAT CAPACITANCE (H), EFFECTIVE CONDUCTANCE (K), POWER (Q),
AND THERMAL PROPERTIES (ANY OF THE ABOVE) (P). TEMPERATURE, HEAT CAPACITANCE, AND POWER AT EACH NODE
TOTAL POWER IS SUM OF PRODUCT OF POWER AND TIME FUNCTION FOR HEAT GENERATION FUNCTION NUMBER (INTERNAL) TMF

N	HKQP	TEMPERATURE	HEAT CAP.	TMF	POWER	TMF	POWER	TMF	POWER	TMF	POWER	TMF	POWER
1	FFFF	7.34000D+01	5.03125D-02										
2	FFFF	7.34000D+01	1.00625D-01										
3	FFFF	7.34000D+01	1.88016D-01										
4	FFFF	7.34000D+01	2.75408D-01										
5	TTFT	7.34000D+01	1.41891D-01										
6	TTFT	7.34000D+01	8.37381D-03										
7	TTFT	7.34000D+01	8.37381D-03										
8	TTFT	7.34000D+01	8.37381D-03										
9	TTFT	7.34000D+01	8.37381D-03										
10	TTFT	7.34000D+01	8.37381D-03										
11	TTFT	7.99866D+01	2.42701D+00										
12	FFFF	8.00000D+01	4.84575D+00										
13	FFFF	8.50000D+01	4.84575D+00										
14	FFFF	9.00000D+01	4.84575D+00										
15	FFFF	9.50000D+01	4.84575D+00										
16	FFFF	1.00000D+02	4.84575D+00										
17	FFFF	9.50000D+01	4.84575D+00										
18	FFFF	9.00000D+01	4.84575D+00										
19	FFFF	8.50000D+01	4.84575D+00										
20	FFFF	8.00000D+01	4.84575D+00										
21	FFFF	7.99291D+01	2.44319D+00										
22	FFFF	7.34000D+01	5.26338D-02										
23	FFFF	7.34000D+01	5.26338D-02										
24	FFFF	7.34000D+01	4.09742D-01										
25	FTFT	7.34000D+01	3.83425D-01										

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TIME = 4.55000000D+00
NO. OF ITERATIONS OR TIME STEPS = 0

TABLE GIVING THE NEIGHBOR AND RELATED EFFECTIVE CONDUCTANCE OF EACH CONNECTOR FOR EVERY NODE.
FOR BOUNDARY CONNECTORS THE NEIGHBOR NODE CONSISTS OF THE NEGATIVE OF THE BOUNDARY CONDITION NUMBER (INTERNAL),
OR FOR POSITION DEPENDENT BOUNDARY TEMPERATURES THE NEIGHBOR NODE CONSISTS OF THE NEGATIVE OF THE BOUNDARY NODE NUMBER.
A NEGATIVE EFFECTIVE CONDUCTANCE MEANS THE NODAL TEMPERATURE WILL BE SET TO THE BOUNDARY TEMPERATURE.

N	NODE	CONDUCTANCE	NODE	CONDUCTANCE	NODE	CONDUCTANCE	NODE	CONDUCTANCE	NODE	CONDUCTANCE	NODE	CONDUCTANCE	NODE	CONDUCTANCE
1	2	1.12000D+00	-3	1.00000D+00										
2	1	1.12000D+00	3	1.12000D+00										
3	2	1.12000D+00	4	2.97362D+00										
4	3	2.97362D+00	5	2.97362D+00										
5	4	2.97362D+00	6	3.19893D-02	11	9.00658D-01								
6	5	3.19893D-02	7	3.19893D-02										
7	6	3.19893D-02	8	3.19893D-02										
8	7	3.19893D-02	9	3.19893D-02										
9	8	3.19893D-02	10	3.19893D-02										
10	9	3.19893D-02	11	3.21650D-02										
11	10	3.21650D-02	12	4.80000D+00	5	9.00658D-01								
12	11	4.80000D+00	13	4.80000D+00										
13	12	4.80000D+00	14	4.80000D+00										
14	13	4.80000D+00	15	4.80000D+00										
15	14	4.80000D+00	16	4.80000D+00										
16	15	4.80000D+00	17	4.80000D+00										
17	16	4.80000D+00	18	4.80000D+00										
18	17	4.80000D+00	19	4.80000D+00										
19	18	4.80000D+00	20	4.80000D+00										
20	19	4.80000D+00	21	4.80000D+00										
21	20	4.80000D+00	22	1.50892D-01										
22	21	1.50892D-01	23	1.50892D-01										
23	22	1.50892D-01	24	1.50892D-01										
24	23	1.50892D-01	25	2.99681D+00										
25	24	2.99681D+00	-1	1.00000D+00	0	-2.00507D+01								

STABILITY CRITERION FOR EACH NODE

1	2.37320-02	2	4.49220-02	3	4.59290-02	4	4.63080-02	5	3.63240-02	6	1.30880-01
7	1.30880-01	8	1.30880-01	9	1.30880-01	10	1.30530-01	11	4.23350-01	12	5.04770-01
13	5.04770-01	14	5.04770-01	15	5.04770-01	16	5.04770-01	17	5.04770-01	18	5.04770-01
19	5.04770-01	20	5.04770-01	21	4.94700-01	22	1.74410-01	23	1.74410-01	24	1.30170-01
25	9.59330-02										

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.54 11-16-89

MAP OF THE NODE NUMBERS

GROSS GRID 1
1

FINE GRID 1
DISTANCE 0.0

1	1	0.0	1I
	2	0.03	2I
2	3	0.06	3I
	4	0.08	4I
3	5	0.10	5I
	6	0.57	6I
	7	1.04	7I
	8	1.51	8I
	9	1.98	9I
	10	2.45	10I
4	11	2.92	11I
	12	3.14	12I
5	13	3.35	13I
	14	3.57	14I
6	15	3.79	15I
	16	4.01	16I
7	17	4.23	17I
	18	4.45	18I
8	19	4.67	19I
	20	4.89	20I
9	21	5.10	21I
	22	5.18	22I
	23	5.25	23I
10	24	5.32	24I
11	25	5.35	25I

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THE STABILITY CRITERION IS 2.3732311D-02 FOR POINT 1

THE INPUT TIME STEP SIZE IS 0.0
THUS, THE TIME STEP SIZE WILL BE SET EQUAL TO THE STABILITY CRITERION OR 2.3732311D-02

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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IJM3033/ 0
W8X:P110 20 57 54 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 0 TIME STEPS, TIME = 4.550000D+00

GROSS GRID	FINE GRID	DISTANCE	1 I 1 0.0
1	1	0.0	73140
	2	0.03	73140
2	3	0.06	73140
	4	0.08	73140
3	5	0.10	73140
	6	0.57	73140
	7	1.04	73140
	8	1.51	73140
	9	1.98	73140
	10	2.45	73140
4	11	2.92	79199
	12	3.14	80100
5	13	3.35	85100
	14	3.57	90100
6	15	3.79	95100
	16	4.01	100100
7	17	4.23	95100
	18	4.45	90100
8	19	4.67	85100
	20	4.89	80100
9	21	5.10	79193
	22	5.18	73140
	23	5.25	73140
10	24	5.32	73140
11	25	5.35	73140

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.139500
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.373231130-02

ELAPSED CPU TIME IS 0.0 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.00000D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 16

THE MINIMUM TEMPERATURE IS - 7.34000D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1 2 3 4 5
6 7 8 9 10
22 23 24 25

THE INITIAL TIME STEP = 5.0000000-01

AFTER EACH TIME STEP THE TIME STEP SIZE WILL BE MULTIPLIED BY A FACTOR
OF 1.1000000+00 SUBJECT TO ANY CONDITIONS WHICH MAY FOLLOW.

IF THE MAXIMUM TEMPERATURE CHANGE AT A NODE EXCEEDS 1.0000000+00 PER CENT OVER
A TIME STEP, THEN THE TIME STEP SIZE WILL BE DECREASED ACCORDINGLY.

THE MINIMUM TIME STEP ALLOWED IS 1.0000000-02

THE IMPLICIT PROCEDURE WILL BE USED TO CALCULATE THE TRANSIENT TEMPERATURE DISTRIBUTION
MAXIMUM NORMALIZED HEAT RESIDUAL CONVERGENCE CRITERION = 1.000000D-05
(CORRESPONDS TO EPSILON SUB 1, DEFAULT=1.0D-5)
NUMBER-OF-ITERATIONS BETWEEN TESTS FOR CONVERGENCE, LINEAR LOOP (DEFAULT = 1) = 1
AVERAGE L1 NORM OF RELATIVE TEMPERATURE DIFFERENCE CONVERGENCE CRITERION
FOR TEMPERATURE DEPENDENT PROPERTIES = 1.000000D-05
(CORRESPONDS TO EPSILON SUB 3, DEFAULT=1.0D-5)
THETA (0.5 FOR CRANK-NICOLSON, 1.0 FOR CLASSICAL IMPLICIT) = 5.000000D-01

THE SOR ACCELERATION PARAMETER (BETA) WILL BE OPTIMIZED EMPIRICALLY
BETA = 1.000000D+00
A BETA UPDATE WILL BE ATTEMPTED EVERY 1 TIME STEPS (DEFAULT=1).
NUMBER-OF-ITERATIONS TOLERANCE FOR BETA UPDATE CALCULATIONS, OUTER LOOP (DEFAULT=5) = 5
NUMBER-OF-ITERATIONS TOLERANCE FOR BETA UPDATE CALCULATIONS, INNER LOOP (DEFAULT=2) = 2
PER CENT CHANGE IN BETA UPDATE CALCULATIONS (DEFAULT=10) = 10

PCC

THE FOLLOWING TABLE IS PRINTED OUT FOR INFORMATION PURPOSES DURING THE IMPLICIT TRANSIENT CALCULATIONS. A LINE IS ALSO PRINTED AFTER THE VERY FIRST ITERATION FOR EACH TIME STEP. A LINE IS PRINTED EACH TIME THE INNER LOOP CONVERGES. THUS, ONE CAN DETERMINE HOW MUCH THE MAXIMUM NORMALIZED HEAT RESIDUAL DECREASES DURING THE ITERATIVE PROCESS. ENTRIES IN EACH COLUMN ARE DESCRIBED BELOW:

NO TIME	-- NUMBER OF TIME STEPS.
TIME	-- TIME AT WHICH TEMPERATURE DISTRIBUTION IS BEING CALCULATED.
NO ITER	-- NUMBER OF ITERATIONS REQUIRED FOR INNER (LINEAR) LOOP TO CONVERGE.
MAX HEAT RESIDUAL	-- THE MAXIMUM NORMALIZED HEAT RESIDUAL AFTER THE NUMBER OF ITERATIONS INDICATED IN THE PREVIOUS COLUMN (COMPARES TO EPSILON SUB 1).
BETA	-- CURRENT VALUE OF THE SOR ACCELERATION PARAMETER.
L1 NORM OF TEMP DIFF	-- THE L1 NORM OF THE TEMPERATURE DIFFERENCE OVER THE CURRENT ITERATION FOR INNER (LINEAR) LOOP. THIS COLUMN AND THE NEXT TWO ARE USED ONLY WHEN THE OPTIMUM ACCELERATION PARAMETER IS BEING ESTIMATED USING CARRE'S TECHNIQUE.
RHO(ITERATION)	-- SPECTRAL RADIUS FOR THE SOR ITERATION MATRIX.
RHO(JACOBI)	-- SQUARE OF SPECTRAL RADIUS FOR THE JACOBI ITERATION MATRIX.
NO ITER	-- NUMBER OF ITERATIONS COMPLETED FOR OUTER (NON-LINEAR) LOOP.
L1 NORM OF TEMP DIFF	-- THE AVERAGE L1 NORM OF THE RELATIVE TEMPERATURE DIFFERENCE OVER THE CURRENT ITERATION FOR OUTER (NON-LINEAR) LOOP. NON-ZERO FOR NON-LINEAR PROBLEMS ONLY. (COMPARES TO EPSILON SUB 3)
NODE	-- NODE NUMBER.
MAX TEMP CHANGE	-- MAXIMUM TEMPERATURE CHANGE AT A NODE OVER THE CURRENT TIME STEP. THIS CHANGE OCCURRED AT THE NODE SHOWN IN THE PREVIOUS COLUMN.
NODE	-- NODE NUMBER.
MAX PERCENT TEMP CHANGE	-- MAXIMUM PERCENTAGE OF RELATIVE CHANGE IN TEMPERATURE AT A NODE OVER THE CURRENT TIME STEP. THIS CHANGE OCCURRED AT THE NODE SHOWN IN THE PREVIOUS COLUMN.

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
1	5.000000D+00	0	9.30271D-02	1.000000D+00	0.0	0.0	0.0						
1	5.000000D+00	1	5.25885D-02	1.000000D+00	0.0	0.0	0.0						
1	5.000000D+00	19	6.48414D-06	1.000000D+00	0.0	0.0	0.0	1	2.11207D-02				
1	5.000000D+00	9	7.03219D-06	1.000000D+00	0.0	0.0	0.0	2	1.18450D-03				
1	5.000000D+00	6	6.42616D-06	1.000000D+00	0.0	0.0	0.0	3	2.16468D-04				
1	5.000000D+00	5	4.23433D-06	1.000000D+00	0.0	0.0	0.0	4	4.01016D-05				
1	5.000000D+00	3	8.85315D-06	1.000000D+00	0.0	0.0	0.0	5	6.85845D-06	25	4.78899D+00	25	6.52451D+00
1	4.61552D+00	1	4.30688D-03	1.000000D+00	0.0	0.0	0.0						
1	4.61552D+00	6	3.46678D-06	1.000000D+00	0.0	0.0	0.0	1	2.52296D-03				
1	4.61552D+00	3	1.46314D-06	1.000000D+00	0.0	0.0	0.0	2	5.50011D-05				
1	4.61552D+00	2	1.06987D-06	1.000000D+00	0.0	0.0	0.0	3	3.08998D-06	25	1.98919D+00	25	2.71006D+00
1	4.57297D+00	1	3.26247D-04	1.000000D+00	0.0	0.0	0.0						
1	4.57297D+00	3	4.52037D-06	1.000000D+00	0.0	0.0	0.0	1	4.07449D-04				
1	4.57297D+00	1	5.35334D-06	1.000000D+00	0.0	0.0	0.0	2	3.00310D-06	25	8.85003D-01	25	1.20573D+00
1	4.56810D+00	1	3.68970D-05	1.000000D+00	0.0	0.0	0.0						
1	4.56810D+00	2	4.21507D-06	1.000000D+00	0.0	0.0	0.0	1	5.23152D-05				
1	4.56810D+00	1	4.08016D-07	1.000000D+00	0.0	0.0	0.0	2	5.29757D-07	25	7.19868D-01	25	9.80747D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1	4.56810+00	1 7.34001D+01	3 7.34061D+01	5 7.40122D+01	11 7.99477D+01	13 8.50008D+01	
		15 9.49984D+01	17 9.49984D+01	19 8.50006D+01	21 7.99261D+01	24 7.33554D+01	
		25 7.26801D+01					
2	4.58619D+00	1 4.56941D-04	1.100000D+00 0.0	0.0	0.0		
2	4.58619D+00	4 2.41585D-06	1.100000D+00 0.0	0.0	0.0	1 3.91209D-04	
2	4.58619D+00	1 4.59263D-06	1.100000D+00 0.0	0.0	0.0	2 2.21588D-06	25 5.72147D-01 25 7.87212D-01
2	4.5862D+00	1 7.34005D+01	3 7.34305D+01	5 7.44032D+01	11 7.99149D+01	13 8.50030D+01	
		15 9.49939D+01	17 9.49939D+01	19 8.50030D+01	21 7.99265D+01	24 7.32370D+01	
		25 7.21080D+01					
3	4.60429D+00	1 1.92017D-04	1.055000D+00 0.0	0.0	0.0		
3	4.60429D+00	3 3.34356D-06	1.055000D+00 0.0	0.0	0.0	1 2.59781D-04	
3	4.60429D+00	1 2.17631D-06	1.055000D+00 0.0	0.0	0.0	2 1.69540D-06	25 4.61078D-01 25 6.39427D-01
3	4.6043D+00	1 7.34022D+01	3 7.34783D+01	5 7.46753D+01	11 7.98855D+01	13 8.50066D+01	
		15 9.49866D+01	17 9.49866D+01	19 8.50066D+01	21 7.99301D+01	24 7.30702D+01	
		25 7.16469D+01					
4	4.62239D+00	1 1.09565D-04	1.055000D+00 0.0	0.0	0.0		
4	4.62239D+00	3 1.75039D-06	1.055000D+00 0.0	0.0	0.0	1 1.80698D-04	
4	4.62239D+00	1 1.63462D-06	1.055000D+00 0.0	0.0	0.0	2 1.21339D-06	25 3.77655D-01 25 5.27106D-01
4	4.6224D+00	1 7.34062D+01	3 7.35452D+01	5 7.48800D+01	11 7.98676D+01	13 8.50115D+01	
		15 9.49767D+01	17 9.49767D+01	19 8.50115D+01	21 7.99366D+01	24 7.28732D+01	
		25 7.12693D+01					
5	4.64049D+00	1 7.88839D-05	1.055000D+00 0.0	0.0	0.0		
5	4.64049D+00	2 7.39424D-06	1.055000D+00 0.0	0.0	0.0	1 1.36568D-04	
5	4.64049D+00	1 1.01116D-06	1.055000D+00 0.0	0.0	0.0	2 1.92229D-06	25 3.14208D-01 25 4.40875D-01
5	4.6405D+00	1 7.34132D+01	3 7.36253D+01	5 7.50444D+01	11 7.98516D+01	13 8.50175D+01	
		15 9.49643D+01	17 9.49643D+01	19 8.50175D+01	21 7.99458D+01	24 7.26591D+01	
		25 7.09550D+01					
6	4.66039D+00	1 7.11052D-05	1.055000D+00 0.0	0.0	0.0		
6	4.66039D+00	2 6.88760D-06	1.055000D+00 0.0	0.0	0.0	1 1.22782D-04	
6	4.66039D+00	1 9.74101D-07	1.055000D+00 0.0	0.0	0.0	2 1.76100D-06	25 2.89142D-01 25 4.07501D-01
6	4.6604D+00	1 7.34251D+01	3 7.37228D+01	5 7.51961D+01	11 7.98388D+01	13 8.50254D+01	
		15 9.49482D+01	17 9.49482D+01	19 8.50255D+01	21 7.99587D+01	24 7.24148D+01	
		25 7.06659D+01					
7	4.68229D+00	1 6.63880D-05	1.055000D+00 0.0	0.0	0.0		
7	4.68229D+00	2 6.66886D-06	1.055000D+00 0.0	0.0	0.0	1 1.15960D-04	
7	4.68229D+00	1 1.00268D-06	1.055000D+00 0.0	0.0	0.0	2 1.69631D-06	24 2.69700D-01 25 3.76045D-01
7	4.6823D+00	1 7.34430D+01	3 7.38361D+01	5 7.53403D+01	11 7.98300D+01	13 8.50354D+01	
		15 9.49276D+01	17 9.49276D+01	19 8.50356D+01	21 7.99762D+01	24 7.21451D+01	
		25 7.04002D+01					
8	4.70638D+00	1 6.12589D-05	1.055000D+00 0.0	0.0	0.0		
8	4.70638D+00	2 6.43178D-06	1.055000D+00 0.0	0.0	0.0	1 1.17785D-04	

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 8 4.70638D+00    1 1.12613D-06 1.05500D+00 0.0          0.0          0.0          2 1.70467D-06   24 2.89663D-01   24 4.01500D-01
    8     4.7064D+00    1 7.34683D+01    3 7.39631D+01    5 7.54806D+01   11 7.98262D+01   13 8.50479D+01
                        15 9.49018D+01   17 9.49018D+01   19 8.50482D+01   21 7.99989D+01   24 7.18555D+01
                        25 7.01563D+01

 9 4.73287D+00    1 5.64191D-05 1.05500D+00 0.0          0.0          0.0                1 1.20386D-04
 9 4.73287D+00    2 6.23973D-06 1.05500D+00 0.0          0.0          0.0          2 1.71964D-06   24 3.03421D-01   24 4.22265D-01
 9 4.73287D+00    1 1.32325D-06 1.05500D+00 0.0          0.0          0.0          5 7.56201D+01   11 7.98281D+01   13 8.50632D+01
    9     4.7329D+00    1 7.35015D+01    3 7.41021D+01    19 8.50638D+01   21 8.00276D+01   24 7.15521D+01
                        15 9.48699D+01   17 9.48699D+01
                        25 6.99332D+01

10 4.     32D+00    1 5.24626D-05 1.05500D+00 0.0          0.0          0.0                1 1.26444D-04
10 4.     02D+00    2 6.14254D-06 1.05500D+00 0.0          0.0          0.0          2 1.75514D-06   24 3.10411D-01   24 4.33826D-01
10 4.36202D+00    1 1.56063D-06 1.05500D+00 0.0          0.0          0.0          5 7.57608D+01   11 7.98368D+01   13 8.50817D+01
   10     4.7620D+00    1 7.35428D+01    3 7.42515D+01    19 8.50828D+01   21 8.00633D+01   24 7.12416D+01
                        15 9.48312D+01   17 9.48312D+01
                        25 6.97304D+01

11 4.79408D+00    1 5.06008D-05 1.05500D+00 0.0          0.0          0.0                1 1.32494D-04
11 4.79408D+00    2 6.24591D-06 1.05500D+00 0.0          0.0          0.0          2 1.85182D-06   24 3.10183D-01   24 4.35396D-01
11 4.79408D+00    1 1.87800D-06 1.05500D+00 0.0          0.0          0.0          5 7.59045D+01   11 7.98535D+01   13 8.51038D+01
   11     4.7941D+00    1 7.35921D+01    3 7.43100D+01    19 8.51056D+01   21 8.01069D+01   24 7.09315D+01
                        15 9.47846D+01   17 9.47846D+01
                        25 6.95488D+01

12 4.82934D+00    1 6.39962D-05 1.05500D+00 0.0          0.0          0.0                1 1.41631D-04
12 4.82934D+00    2 7.79341D-06 1.05500D+00 0.0          0.0          0.0          2 2.22002D-06   24 3.01598D-01   24 4.25196D-01
12 4.82934D+00    1 2.70360D-06 1.05500D+00 0.0          0.0          0.0          5 7.60523D+01   11 7.98792D+01   13 8.51299D+01
   12     4.8293D+00    1 7.36486D+01    3 7.45765D+01    19 8.51326D+01   21 8.01593D+01   24 7.06299D+01
                        15 9.47292D+01   17 9.47292D+01
                        25 6.93965D+01

13 4.86814D+00    1 6.70362D-05 1.05500D+00 0.0          0.0          0.0                1 1.46924D-04
13 4.86814D+00    2 8.34620D-06 1.05500D+00 0.0          0.0          0.0          2 2.43288D-06   24 2.83549D-01   24 4.01457D-01
13 4.86814D+00    1 3.34228D-06 1.05500D+00 0.0          0.0          0.0          5 7.62052D+01   11 7.99151D+01   13 8.51604D+01
   13     4.8681D+00    1 7.37116D+01    3 7.47501D+01    19 8.51643D+01   21 8.02216D+01   24 7.03463D+01
                        15 9.46640D+01   17 9.46640D+01
                        25 6.92769D+01

14 4.91081D+00    1 7.36464D-05 1.05500D+00 0.0          0.0          0.0                1 1.52512D-04
14 4.91081D+00    2 9.15761D-06 1.05500D+00 0.0          0.0          0.0          2 2.70261D-06   24 2.55683D-01   24 3.63464D-01
14 4.91081D+00    1 4.16262D-06 1.05500D+00 0.0          0.0          0.0          5 7.63641D+01   11 7.99624D+01   13 8.51957D+01
   14     4.9108D+00    1 7.37796D+01    3 7.49301D+01    19 8.52011D+01   21 8.02948D+01   24 7.00906D+01
                        15 9.45880D+01   17 9.45881D+01
                        25 6.91943D+01

15 4.95540D+00    1 7.27101D-05 1.05500D+00 0.0          0.0          0.0                1 1.45389D-04
15 4.95540D+00    2 9.12431D-06 1.05500D+00 0.0          0.0          0.0          2 2.68424D-06   16 2.37611D-01   24 2.97211D-01
15 4.95540D+00    1 4.45043D-06 1.05500D+00 0.0          0.0          0.0          5 7.65215D+01   11 8.00190D+01   13 8.52340D+01
   15     4.9554D+00    1 7.38495D+01    3 7.51069D+01    19 8.52414D+01   21 8.03755D+01   24 6.98823D+01
                        15 9.45048D+01   17 9.45048D+01
                        25 6.91554D+01

16 5.00000D+00    1 6.42381D-05 1.05500D+00 0.0          0.0          0.0                1 1.28059D-04
16 5.00000D+00    2 8.22911D-06 1.05500D+00 0.0          0.0          0.0          2 2.34928D-06   16 2.24681D-01    9 2.35004D-01
16 5.00000D+00    1 3.99864D-06 1.05500D+00 0.0          0.0          0.0          5 7.66712D+01   11 8.00817D+01   13 8.52733D+01
   16     5.0000D+00    1 7.39169D+01    3 7.52731D+01    19 8.52829D+01   21 8.04595D+01   24 6.97294D+01
                        15 9.44184D+01   17 9.44185D+01
                        25 6.91594D+01
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ O
W9XNP110 20.57.54 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 16 TIME STEPS, TIME = 5.000000+00

GROSS GRID			1
	FINE GRID		1
		DISTANCE	0.0
1	1	0.0	73192
	2	0.03	74147
2	3	0.06	75127
	4	0.08	75180
3	5	0.10	76167
	6	0.57	75104
	7	1.04	74129
	8	1.51	74136
	9	1.98	75132
	10	2.45	77127
4	11	2.92	80108
	12	3.14	81149
5	13	3.35	85127
	14	3.57	89186
6	15	3.79	94142
	16	4.01	96189
7	17	4.23	94142
	18	4.45	89196
8	19	4.67	85128
	20	4.89	81156
9	21	5.10	80146
	22	5.18	76158
	23	5.25	73133
10	24	5.32	69173
11	25	5.35	69116

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 4.45958938D-02

ELAPSED CPU TIME IS 0.24 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.68924D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 16

THE MINIMUM TEMPERATURE IS - 6.91594D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	ND ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
17	5.04906D+00	1	8.37278D-05	1.05500D+00	0.0	0.0	0.0				
17	5.04906D+00	2	9.82390D-06	1.05500D+00	0.0	0.0	0.0	1 1	3.20700D-04		
17	5.04906D+00	1	5.29860D-06	1.05500D+00	0.0	0.0	0.0	2 2	7.31740D-06	16 2 3.38120D-01	9 2 4.62590D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
17	5.0491D+00	1 7.39861D+01	3 7.54449D+01	5 7.68284D+01	11 8.01562D+01	13 8.53174D+01
		15 9.43207D-01	17 9.43208D+01	19 8.53298D+01	21 8.05551D+01	24 6.96198D+01
		25 6.92108D+01				
18	5.10302D+00	1 9.97901D-05	1.05500D+00	0.0	0.0	0.0
18	5.10302D+00	3 3.10645D-06	1.05500D+00	0.0	0.0	0.0
18	5.10302D+00	1 7.44596D-06	1.05500D+00	0.0	0.0	0.0
					1 1	3.87820D-04
					2 1	7.15880D-06 16 2 4.28100D-01 9 2 5.83540D-01
18	5.1030D+00	1 7.40574D+01	3 7.56222D+01	5 7.69931D+01	11 8.02436D+01	13 8.53664D+01
		15 9.42109D+01	17 9.42111D+01	19 8.53822D+01	21 8.06629D+01	24 6.95639D+01
		25 6.93168D+01				
19	5.16237D+00	1 1.21026D-04	1.05500D+00	0.0	0.0	0.0
19	5.16237D+00	3 4.13753D-06	1.05500D+00	0.0	0.0	0.0
19	5.16237D+00	1 9.33509D-06	1.05500D+00	0.0	0.0	0.0
					1 1	4.51451D-04
					2 1	9.61750D-06 16 2 5.16780D-01 8 2 7.19500D-01
19	5.1624D+00	1 7.41304D+01	3 7.58044D+01	5 7.71656D+01	11 8.03416D+01	13 8.54204D+01
		15 9.40883D+01	17 9.40886D+01	19 8.54404D+01	21 8.07837D+01	24 6.95724D+01
		25 6.94860D+01				
20	5.22767D+00	1 1.45073D-04	1.05500D+00	0.0	0.0	0.0
20	5.22767D+00	3 5.53708D-06	1.05500D+00	0.0	0.0	0.0
20	5.22767D+00	2 8.81424D-07	1.05500D+00	0.0	0.0	0.0
					1 1	5.17210-04
					2 2	5.55460-06 16 2 6.60442D-01 25 3 4.76360-01
20	5.2277D+00	1 7.42050D+01	3 7.59912D+01	5 7.73460D+01	11 8.04600D+01	13 8.54795D+01
		15 9.39522D+01	17 9.39527D+01	19 8.55045D+01	21 8.09183D+01	24 6.96557D+01
		25 6.97276D+01				
21	5.29949D+00	1 1.70880D-04	1.05500D+00	0.0	0.0	0.0
21	5.29949D+00	3 7.26475D-06	1.05500D+00	0.0	0.0	0.0
21	5.29949D+00	2 1.16393D-06	1.05500D+00	0.0	0.0	0.0
					1 1	6.05260-04
					2 2	9.19950-06 25 3 2.36490-01 25 4 6.41630-01
21	5.2995D+00	1 7.42810D+01	3 7.61826D+01	5 7.75344D+01	11 8.05903D+01	13 8.55437D+01
		15 9.38024D+01	17 9.38031D+01	19 8.55746D+01	21 8.10674D+01	24 6.98730+01
		25 7.00512D+01				
22	5.37849D+00	1 2.01416D-04	1.05500D+00	0.0	0.0	0.0
22	5.37849D+00	3 9.38466D-06	1.05500D+00	0.0	0.0	0.0
22	5.37849D+00	2 1.55047D-06	1.05500D+00	0.0	0.0	0.0
					1 1	7.76469D-04
					2 3	4.08750-06 25 4 1.62530-01 25 5 9.42190-01
22	5.3785D+00	1 7.43581D+01	3 7.63782D+01	5 7.77307D+01	11 8.07358D+01	13 8.56127D+01
		15 9.36385D+01	17 9.36396D+01	19 8.56505D+01	21 8.12314D+01	24 7.00958D+01
		25 7.04675D+01				
23	5.46540D+00	1 2.33316D-04	1.05500D+00	0.0	0.0	0.0
23	5.46540D+00	4 3.16423D-06	1.05500D+00	0.0	0.0	0.0
23	5.46540D+00	2 2.00874D-06	1.05500D+00	0.0	0.0	0.0
					1 1	9.37430-04
					2 3	4.23580-06 25 5 1.98610-01 25 7 3.77320-01
23	5.4654D+00	1 7.44362D+01	3 7.65781D+01	5 7.79349D+01	11 8.08969D+01	13 8.56863D+01
		15 9.34604D+01	17 9.34619D+01	19 8.57321D+01	21 8.14107D+01	24 7.04764D+01
		25 7.09873D+01				
24	5.56099D+00	1 5.99233D-04	1.05500D+00	0.0	0.0	0.0
24	5.56099D+00	4 4.46356D-06	1.05500D+00	0.0	0.0	0.0
24	5.56099D+00	2 5.12077D-06	1.05500D+00	0.0	0.0	0.0
					1 2	5.95420-04
					2 7	4.50760-06 25 6 9.76880-01 25 9 8.28350-01
24	5.5610D+00	1 7.45153D+01	3 7.67821D+01	5 7.81471D+01	11 8.10735D+01	13 8.57641D+01
		15 9.32682D+01	17 9.32704D+01	19 8.58191D+01	21 8.16058D+01	24 7.09964D+01
		25 7.16850D+01				
25	5.65659D+00	1 2.45765D-03	1.05500D+00	0.0	0.0	0.0
25	5.65659D+00	4 4.06701D-06	1.05500D+00	0.0	0.0	0.0
25	5.65659D+00	3 2.12756D-06	1.05500D+00	0.0	0.0	0.0
25	5.65659D+00	2 1.49155D-06	1.05500D+00	0.0	0.0	0.0
25	5.61602D+00	1 2.63324D-05	1.05500D+00	0.0	0.0	0.0
					1 4	4.32210-05
					2 2	8.23070-05
					3 2	2.22010-06 25 1 1.83010+00 25 1 6.50290+00
25	5.61602D+00	2 1.67042D-06	1.05500D+00	0.0	0.0	0.0
25	5.61602D+00	1 1.09542D-06	1.05500D+00	0.0	0.0	0.0
					1 4	4.32210-05
					2 4	8.81338D-07 25 6 7.29170-01 25 9 3.87140-01
25	5.6160D+00	1 7.45659D+01	3 7.68931D+01	5 7.82638D+01	11 8.11749D+01	13 8.58072D+01
		15 9.31566D+01	17 9.31622D+01	19 8.58677D+01	21 8.17168D+01	24 7.13836D+01
		25 7.22[illegible]				

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 26 5.671105D+00     1 1.770770-04 1.055000+00 0.0          0.0          0.0
 26 5.671105D+00     3 1.676140-06 1.055000+00 0.0          0.0          0.0          1 1.573490-04
 26 5.671105D+00     2 1.057230-06 1.055000+00 0.0          0.0          0.0          2 3.004980-06   25 7.583490-01   25 1.048050+00
 26 5.665900D+00     1 4.227760-06 1.055000+00 0.0          0.0          0.0
 26 5.665900D+00     1 4.227760-06 1.055000+00 0.0          0.0          0.0          1 4.824400-06
 26 5.665900D+00     1 3.946820-07 1.055000+00 0.0          0.0          0.0          2 3.541360-07   25 6.877770-01   25 9.505200-01
    26      5.6659D+00     1 7.46062D+01     3 7.69903D+01     5 7.83665D+01    11 8.12651D+01    13 8.58454D+01
                           15 9.30626D+01    17 9.30657D+01    19 8.59108D+01    21 8.18163D+01    24 7.18268D+01
                           25 7.30457D+01
 27 5.715790D+00     1 1.013420-04 1.055000+00 0.0          0.0          0.0
 27 5.715790D+00     3 9.444720-07 1.055000+00 0.0          0.0          0.0          1 1.207100-04
 27 5.715790D+00     1 7.737580-06 1.055000+00 0.0          0.0          0.0          2 1.736690-06   25 7.476660-01   25 1.023560+00
 27 5.712200D+00     1 4.393830-06 1.055000+00 0.0          0.0          0.0
 27 5.712200D+00     1 4.393830-06 1.055000+00 0.0          0.0          0.0          1 3.676190-06
 27 5.712200D+00     1 3.727500-07 1.055000+00 0.0          0.0          0.0          2 3.105190-07   25 6.947560-01   25 9.511250-01
    27      5.7122D+00     1 7.46417D+01     3 7.70778D+01     5 7.84594D+01    11 8.13485D+01    13 8.58798D+01
                           15 9.29738D+01    17 9.29774D+01    19 8.59499D+01    21 8.19080D+01    24 7.23105D+01
                           25 7.37405D+01
 28 5.758500D+00     1 6.601370-05 1.055000+00 0.0          0.0          0.0
 28 5.758500D+00     2 8.573110-06 1.055000+00 0.0          0.0          0.0          1 9.809420-05
 28 5.758500D+00     1 4.572920-06 1.055000+00 0.0          0.0          0.0          2 1.707820-06   25 7.404160-01   25 1.004080+00
 28 5.756010D+00     1 3.162570-06 1.055000+00 0.0          0.0          0.0
 28 5.756010D+00     1 3.162570-06 1.055000+00 0.0          0.0          0.0          1 2.489270-06
 28 5.756010D+00     1 2.886110-07 1.055000+00 0.0          0.0          0.0          2 2.105350-07   25 7.012820-01   25 9.510130-01
    28      5.7560D+00     1 7.46739D+01     3 7.71582D+01     5 7.85452D+01    11 8.14267D+01    13 8.59117D+01
                           15 9.28910D+01    17 9.28950D+01    19 8.59862D+01    21 8.19939D+01    24 7.28267D+01
                           25 7.44418D+01
 29 5.799810D+00     1 4.701990-05 1.055000+00 0.0          0.0          0.0
 29 5.799810D+00     2 6.475910-06 1.055000+00 0.0          0.0          0.0          1 8.291670-05
 29 5.799810D+00     1 3.302730-06 1.055000+00 0.0          0.0          0.0          2 1.287920-06   25 7.379950-01   25 9.913730-01
    29      5.7998D+00     1 7.47045D+01     3 7.72363D+01     5 7.86292D+01    11 8.15041D+01    13 8.59427D+01
                           15 9.28093D+01    17 9.28138D+01    19 8.60217D+01    21 8.20789D+01    24 7.33947D+01
                           25 7.51798D+01
 30 5.843610D+00     1 4.419000-05 1.055000+00 0.0          0.0          0.0
 30 5.843610D+00     2 5.978620-06 1.055000+00 0.0          0.0          0.0          1 7.828440-05
 30 5.843610D+00     1 3.019370-06 1.055000+00 0.0          0.0          0.0          2 1.182340-06   25 7.719780-01   25 1.026840+00
 30 5.840330D+00     1 4.398740-06 1.055000+00 0.0          0.0          0.0
 30 5.840330D+00     1 4.398740-06 1.055000+00 0.0          0.0          0.0          1 3.075490-06
 30 5.840330D+00     1 4.953640-07 1.055000+00 0.0          0.0          0.0          2 2.855970-07   25 7.156160-01   25 9.518730-01
    30      5.8403D+00     1 7.47324D+01     3 7.73068D+01     5 7.87053D+01    11 8.15750D+01    13 8.59708D+01
                           15 9.27347D+01    17 9.27398D+01    19 8.60539D+01    21 8.21569D+01    24 7.39622D+01
                           25 7.58954D+01
 31 5.880860D+00     1 2.706140-05 1.055000+00 0.0          0.0          0.0
 31 5.880860D+00     2 4.089740-06 1.055000+00 0.0          0.0          0.0          1 6.334450-05
 31 5.880860D+00     1 1.913750-06 1.055000+00 0.0          0.0          0.0          2 8.095810-07   25 7.413260-01   25 9.767730-01
    31      5.8809D+00     1 7.47591D+01     3 7.73756D+01     5 7.87798D+01    11 8.16451D+01    13 8.59982D+01
                           15 9.26612D+01    17 9.26667D+01    19 8.60855D+01    21 8.22342D+01    24 7.45670D+01
                           25 7.66367D+01
 32 5.921380D+00     1 2.608680-05 1.055000+00 0.0          0.0          0.0
 32 5.921380D+00     2 3.835120-06 1.055000+00 0.0          0.0          0.0          1 5.993850-05
 32 5.921380D+00     1 1.790660-06 1.055000+00 0.0          0.0          0.0          2 7.683380-07   25 7.654210-01   25 9.987660-01
    32      5.9214D+00     1 7.47850D+01     3 7.74427D+01     5 7.88529D+01    11 8.17145D+01    13 8.60250D+01
                           15 9.25886D+01    17 9.25947D+01    19 8.61165D+01    21 8.23108D+01    24 7.52057D+01
                           25 7.74021D+01
 33 5.960690D+00     1 2.337630-05 1.055000+00 0.0          0.0          0.0
 33 5.960690D+00     2 3.413530-06 1.055000+00 0.0          0.0          0.0          1 5.456090-05
 33 5.960690D+00     1 1.559070-06 1.055000+00 0.0          0.0          0.0          2 6.950990-07   25 7.645030-01   25 9.877030-01
    33      5.9607D+00     1 7.48097D+01     3 7.75064D+01     5 7.89225D+01    11 8.17811D+01    13 8.60504D+01
                           15 9.25192D+01    17 9.25259D+01    19 8.61459D+01    21 8.23844D+01    24 7.58548D+01
                           25 7.81666D+01
 34 6.000000D+00     1 1.842460-05 1.055000+00 0.0          0.0          0.0
 34 6.000000D+00     2 2.831870-06 1.055000+00 0.0          0.0          0.0          1 5.023140-05
 34 6.000000D+00     1 1.322110-06 1.055000+00 0.0          0.0          0.0          2 5.932070-07   25 7.832900-01   25 1.002080+00
 34 5.997960+00      1 2.674980-06 1.055000+00 0.0          0.0          0.0
 34 5.997960+00      1 2.674980-06 1.055000+00 0.0          0.0          0.0          1 1.719830-06
 34 5.997960+00      1 2.821180-07 1.055000+00 0.0          0.0          0.0          2 1.587090-07   25 7.437070-01   25 9.514380-01
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PGC

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  34      5.99800D+00     1 7.48326D+01     3 7.75655D+01     5 7.89872D+01    11 8.18436D+01    13 8.60740D+01
                          15 9.24543D+01    17 9.24615D+01    19 8.61733D+01    21 8.24536D+01    24 7.64953D+01
                          25 7.89103D+01
  35 6.00796D+00     1 6.97001D-06 1.05500D+00 0.0       0.0       0.0                 1 1.17892D-05
  35 6.00796D+00     1 6.97001D-06 1.05500D+00 0.0       0.0       0.0                 2 5.96639D-07    25 2.08860D-01    25 2.64680D-01
  35 6.00796D+00     1 4.65255D-07 1.05500D+00 0.0       0.0       0.0
  35      6.00800D+00     1 7.48398D+01     3 7.75811D+01     5 7.90044D+01    11 8.18602D+01    13 8.60802D+01
                          15 9.24370D+01    17 9.24444D+01    19 8.61806D+01    21 8.24721D+01    24 7.66713D+01
                          25 7.91192D+01
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.57.55 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 35 TIME STEPS, TIME = 6.00796D+00

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	74184
	2	0.03	76116
2	3	0.06	77158
	4	0.08	78122
3	5	0.10	79100
	6	0.57	77189
	7	1.04	77136
	8	1.51	77150
	9	1.98	78134
	10	2.45	79183
4	11	2.92	81186
	12	3.14	83126
5	13	3.35	86108
	14	3.57	89153
6	15	3.79	92144
	16	4.01	93161
7	17	4.23	92144
	18	4.45	89156
8	19	4.67	86118
	20	4.89	83154
9	21	5.10	82147
	22	5.18	78159
	23	5.25	76114
10	24	5.32	76167
11	25	5.35	79112

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.317161
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000D-02

ELAPSED CPU TIME IS 0.50 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.36058D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 16

THE MINIMUM TEMPERATURE IS - 7.48398D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
36	6.01796D+00	1	1.18275D-06	1.05500D+00	0.0	0.0	0.0				
36	6.01796D+00	1	1.18275D-06	1.05500D+00	0.0	0.0	0.0	1	3.28420D-06		
36	6.01796D+00	1	4.21671D-08	1.05500D+00	0.0	0.0	0.0	2	1.46107D-07	25 2.09396D-01	25 2.64646D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
36	6.0180D+00	1 7.48467D+01	3 7.75967D+01	5 7.90215D+01	11 8.18768D+01	13 8.60864D+01
		15 9.24198D+01	17 9.24273D+01	19 8.61878D+01	21 8.24906D+01	24 7.68494D+01
		25 7.93286D+01				
37	6.02796D+00	1 1.09947D-06	1.05500D+00	0.0	0.0	0.0
37	6.02796D+00	1 1.09947D-06	1.05500D+00	0.0	0.0	1 3.17711D-06
37	6.02796D+00	1 3.99330D-08	1.05500D+00	0.0	0.0	2 1.32423D-07 25 2.09977D-01 25 2.64693D-01
37	6.0280D+00	1 7.48532D+01	3 7.76122D+01	5 7.90385D+01	11 8.18933D+01	13 8.60926D+01
		15 9.24026D+01	17 9.24103D+01	19 8.61950D+01	21 8.25090D+01	24 7.70293D+01
		25 7.95386D+01				
38	6.03796D+00	1 1.02039D-06	1.05500D+00	0.0	0.0	0.0
38	6.03796D+00	1 1.02039D-06	1.05500D+00	0.0	0.0	1 3.08609D-06
38	6.03796D+00	1 3.59317D-08	1.05500D+00	0.0	0.0	2 1.28931D-07 25 2.10573D-01 25 2.64743D-01
38	6.0380D+00	1 7.48596D+01	3 7.76276D+01	5 7.90554D+01	11 8.19098D+01	13 8.60987D+01
		15 9.23855D+01	17 9.23934D+01	19 8.62022D+01	21 8.25273D+01	24 7.72111D+01
		25 7.97491D+01				
39	6.04896D+00	1 1.15758D-06	1.05500D+00	0.0	0.0	0.0
39	6.04896D+00	1 1.15758D-06	1.05500D+00	0.0	0.0	1 3.40041D-06
39	6.04896D+00	1 4.24989D-08	1.05500D+00	0.0	0.0	2 1.33390D-07 25 2.32160D-01 25 2.91113D-01
39	6.0490D+00	1 7.48663D+01	3 7.76445D+01	5 7.90740D+01	11 8.19279D+01	13 8.61054D+01
		15 9.23668D+01	17 9.23748D+01	19 8.62100D+01	21 8.25475D+01	24 7.74130D+01
		25 7.99813D+01				
40	6.06106D+00	1 1.20200D-06	1.05500D+00	0.0	0.0	0.0
40	6.06106D+00	1 1.20200D-06	1.05500D+00	0.0	0.0	1 4.03436D-06
40	6.06106D+00	1 4.49792D-08	1.05500D+00	0.0	0.0	2 1.54882D-07 25 2.56112D-01 25 3.20215D-01
40	6.0611D+00	1 7.48736D+01	3 7.76630D+01	5 7.90943D+01	11 8.19477D+01	13 8.61127D+01
		15 9.23462D+01	17 9.23545D+01	19 8.62185D+01	21 8.25696D+01	24 7.76374D+01
		25 8.02374D+01				
41	6.07437D+00	1 1.25477D-06	1.05500D+00	0.0	0.0	0.0
41	6.07437D+00	1 1.25477D-06	1.05500D+00	0.0	0.0	1 4.75030D-06
41	6.07437D+00	1 5.22149D-08	1.05500D+00	0.0	0.0	2 1.76554D-07 25 2.82660D-01 25 3.52280D-01
41	6.0744D+00	1 7.48813D+01	3 7.76831D+01	5 7.91165D+01	11 8.19695D+01	13 8.61207D+01
		15 9.23238D+01	17 9.23322D+01	19 8.62279D+01	21 8.25938D+01	24 7.78868D+01
		25 8.05201D+01				
42	6.08901D+00	1 1.21025D-06	1.05500D+00	0.0	0.0	0.0
42	6.08901D+00	1 1.21025D-06	1.05500D+00	0.0	0.0	1 5.63895D-06
42	6.08901D+00	1 7.72321D-08	1.05500D+00	0.0	0.0	2 2.08254D-07 25 3.12177D-01 25 3.87702D-01
42	6.0890D+00	1 7.48898D+01	3 7.77052D+01	5 7.91407D+01	11 8.19932D+01	13 8.61294D+01
		15 9.22992D+01	17 9.23078D+01	19 8.62381D+01	21 8.26204D+01	24 7.81641D+01
		25 8.08322D+01				
43	6.10511D+00	1 1.24595D-06	1.05500D+00	0.0	0.0	0.0
43	6.10511D+00	1 1.24595D-06	1.05500D+00	0.0	0.0	1 6.66032D-06
43	6.10511D+00	1 9.10564D-08	1.05500D+00	0.0	0.0	2 2.31834D-07 25 3.45002D-01 25 4.26812D-01
43	6.1051D+00	1 7.48989D+01	3 7.77292D+01	5 7.91672D+01	11 8.20193D+01	13 8.61389D+01
		15 9.22722D+01	17 9.22812D+01	19 8.62493D+01	21 8.26495D+01	24 7.84724D+01
		25 8.11772D+01				
44	6.12283D+00	1 1.50642D-06	1.05500D+00	0.0	0.0	0.0
44	6.12283D+00	1 1.50642D-06	1.05500D+00	0.0	0.0	1 7.82719D-06
44	6.12283D+00	1 1.14912D-07	1.05500D+00	0.0	0.0	2 2.62288D-07 25 3.81464D-01 25 4.69915D-01
44	6.1228D+00	1 7.49087D+01	3 7.77555D+01	5 7.91962D+01	11 8.20478D+01	13 8.61492D+01
		15 9.22428D+01	17 9.22520D+01	19 8.62614D+01	21 8.26815D+01	24 7.88155D+01
		25 8.15587D+01				
45	6.14232D+00	1 1.88110D-06	1.05500D+00	0.0	0.0	0.0
45	6.14232D+00	1 1.88110D-06	1.05500D+00	0.0	0.0	1 9.20898D-06
45	6.14232D+00	1 1.54027D-07	1.05500D+00	0.0	0.0	2 2.98383D-07 25 4.22035D-01 25 5.17461D-01
45	6.1423D+00	1 7.49194D+01	3 7.77840D+01	5 7.92277D+01	11 8.20789D+01	13 8.61605D+01

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                    15 9.22106D+01   17 9.22202D+01   19 8.62747D+01   21 8.27165D+01   24 7.91972D+01
                    25 8.19807D+01
46 6.16375D+00   1 2.27180D-06 1.05500D+00 0.0        0.0          0.0
46 6.16375D+00   1 2.27180D-06 1.05500D+00 0.0        0.0          0.0          1 1.07729D-05
46 6.16375D+00   1 2.39658D-07 1.05500D+00 0.0        0.0          0.0          2 3.41961D-07   25 4.67146D-01   25 5.69824D-01
   46      6.1638D+00    1 7.49310D+01    3 7.78151D+01    5 7.92621D+01   11 8.21130D+01   13 8.61727D+01
                    15 9.21755D+01   17 9.21855D+01   19 8.62891D+01   21 8.27548D+01   24 7.96220D+01
                    25 8.24479D+01
47 6.18733D+00   1 2.74952D-06 1.05500D+00 0.0        0.0          0.0
47 6.18733D+00   1 2.74952D-06 1.05500D+00 0.0        0.0          0.0          1 1.25845D-05
47 6.18733D+00   1 3.48882D-07 1.05500D+00 0.0        0.0          0.0          2 3.94840D-07   25 5.17366D-01   25 6.27507D-01
   47      6.1873D+00    1 7.49435D+01    3 7.78489D+01    5 7.92996D+01   11 8.21502D+01   13 8.61860D+01
                    15 9.21372D+01   17 9.21476D+01   19 8.63049D+01   21 8.27967D+01   24 8.00949D+01
                    25 8.29653D+01
48 6.21327D+00   1 3.14404D-06 1.05500D+00 0.0        0.0          0.0
48 6.21327D+00   1 3.14404D-06 1.05500D+00 0.0        0.0          0.0          1 1.45534D-05
48 6.21327D+00   1 4.70400D-07 1.05500D+00 0.0        0.0          0.0          2 4.86879D-07   25 5.73091D-01   25 6.90749D-01
   48      6.2133D+00    1 7.49571D+01    3 7.78856D+01    5 7.93404D+01   11 8.21908D+01   13 8.62003D+01
                    15 9.20954D+01   17 9.21063D+01   19 8.63213D+01   21 8.28426D+01   24 8.06216D+01
                    25 8.35383D+01
49 6.24180D+00   1 3.69481D-06 1.05500D+00 0.0        0.0          0.0
49 6.24180D+00   1 3.69481D-06 1.05500D+00 0.0        0.0          0.0          1 1.68443D-05
49 6.24180D+00   1 5.33275D-07 1.05500D+00 0.0        0.0          0.0          2 6.05214D-07   25 6.35045D-01   25 7.60784D-01
   49      6.2418D+00    1 7.49718D+01    3 7.79254D+01    5 7.93847D+01   11 8.22350D+01   13 8.62159D+01
                    15 9.20499D+01   17 9.20613D+01   19 8.63404D+01   21 8.28928D+01   24 8.12081D+01
                    25 8.41734D+01
50 6.27318D+00   1 4.27736D-06 1.05500D+00 0.0        0.0          0.0
50 6.27318D+00   1 4.27736D-06 1.05500D+00 0.0        0.0          0.0          1 1.94004D-05
50 6.27318D+00   1 8.49191D-07 1.05500D+00 0.0        0.0          0.0          2 7.52500D-07   25 7.03898D-01   25 8.36248D-01
   50      6.2732D+00    1 7.49877D+01    3 7.79686D+01    5 7.94328D+01   11 8.22832D+01   13 8.62327D+01
                    15 9.20004D+01   17 9.20123D+01   19 8.63605D+01   21 8.29477D+01   24 8.18615D+01
                    25 8.48773D+01
51 6.30771D+00   1 4.84307D-06 1.05500D+00 0.0        0.0          0.0
51 6.30771D+00   1 4.84307D-06 1.05500D+00 0.0        0.0          0.0          1 2.21995D-05
51 6.30771D+00   1 1.09675D-06 1.05500D+00 0.0        0.0          0.0          2 9.24246D-07   25 7.80297D-01   25 9.19324D-01
   51      6.3077D+00    1 7.50049D+01    3 7.80153D+01    5 7.94850D+01   11 8.23357D+01   13 8.62509D+01
                    15 9.19465D+01   17 9.19592D+01   19 8.63822D+01   21 8.30076D+01   24 8.25893D+01
                    25 8.56576D+01
52 6.34338D+00   1 7.14365D-06 1.05500D+00 0.0        0.0          0.0
52 6.34338D+00   1 7.14365D-06 1.05500D+00 0.0        0.0          0.0          1 2.38700D-05
52 6.34338D+00   1 1.57791D-06 1.05500D+00 0.0        0.0          0.0          2 1.17563D-06   25 8.11185D-01   25 9.50511D-01
   52      6.3434D+00    1 7.50225D+01    3 7.80627D+01    5 7.95380D+01   11 8.23892D+01   13 8.62692D+01
                    15 9.18916D+01   17 9.19050D+01   19 8.64042D+01   21 8.30691D+01   24 8.33509D+01
                    25 8.64718D+01
53 6.37906D+00   1 7.45952D-06 1.05500D+00 0.0        0.0          0.0
53 6.37906D+00   1 7.45952D-06 1.05500D+00 0.0        0.0          0.0          1 2.33865D-05
53 6.37906D+00   1 1.60099D-06 1.05500D+00 0.0        0.0          0.0          2 1.17022D-06   25 8.22150D-01   25 9.50772D-01
   53      6.3791D+00    1 7.50400D+01    3 7.81094D+01    5 7.95903D+01   11 8.24421D+01   13 8.62872D+01
                    15 9.18374D+01   17 9.18515D+01   19 8.64259D+01   21 8.31301D+01   24 8.41217D+01
                    25 8.72939D+01
54 6.41473D+00   1 5.55985D-06 1.05500D+00 0.0        0.0          0.0
54 6.41473D+00   1 5.55985D-06 1.05500D+00 0.0        0.0          0.0          1 2.20491D-05
54 6.41473D+00   1 1.30230D-06 1.05500D+00 0.0        0.0          0.0          2 1.01503D-06   25 8.28911D-01   25 9.49564D-01
   54      6.4147D+00    1 7.50572D+01    3 7.81553D+01    5 7.96418D+01   11 8.24944D+01   13 8.63047D+01
                    15 9.17839D+01   17 9.17987D+01   19 8.64472D+01   21 8.31907D+01   24 8.49014D+01
                    25 8.81228D+01
55 6.45042D+00   1 4.64777D-06 1.05500D+00 0.0        0.0          0.0
55 6.45042D+00   1 4.64777D-06 1.05500D+00 0.0        0.0          0.0          1 2.08651D-05
55 6.45042D+00   1 1.12831D-06 1.05500D+00 0.0        0.0          0.0          2 9.24890D-07   25 8.35267D-01   25 9.47844D-01
   55      6.4504D+00    1 7.50742D+01    3 7.82005D+01    5 7.96925D+01   11 8.25460D+01   13 8.63219D+01
                    15 9.17311D+01   17 9.17467D+01   19 8.64681D+01   21 8.32509D+01   24 8.56897D+01
                    25 8.89581D+01
56 6.48619D+00   1 4.04007D-06 1.05500D+00 0.0        0.0          0.0
56 6.48619D+00   1 4.04007D-06 1.05500D+00 0.0        0.0          0.0          1 1.97473D-05
56 6.48619D+00   1 9.95249D-07 1.05500D+00 0.0        0.0          0.0          2 8.55468D-07   25 8.42392D-01   25 9.46954D-01
   56      6.4862D+00    1 7.50910D+01    3 7.82450D+01    5 7.97425D+01   11 8.25971D+01   13 8.63388D+01
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                    15 9.16788D+01   17 9.16952D+01   19 8.64887D+01   21 8.33107D+01   24 8.64875D+01
                    25 8.98005D+01
57 6.52208D+00   1 7.24664D-06 1.05500D+00 0.0          0.0          0.0
57 6.52208D+00   1 7.24664D-06 1.05500D+00 0.0          0.0          0.0          1 1.99674D-05
57 6.52208D+00   1 1.42516D-06 1.05500D+00 0.0          0.0          0.0          2 1.04795D-06   25 8.52330D-01   25 9.49137D-01
   57    6.5221D+00    1 7.51075D+01   3 7.82890D+01   5 7.97920D+01   11 8.26477D+01   13 8.63554D+01
                    15 9.16270D+01   17 9.16442D+01   19 8.65091D+01   21 8.33703D+01   24 8.72953D+01
                    25 9.06528D+01
58 6.55800D+00   1 3.69141D-05 1.05500D+00 0.0          0.0          0.0
58 6.55800D+00   2 3.77450D-06 1.05500D+00 0.0          0.0          0.0          1 2.90656D-05
58 6.55800D+00   1 1.39026D-06 1.05500D+00 0.0          0.0          0.0          2 7.14520D-07   25 8.78600D-01   25 9.69192D-01
   58    6.5580D+00    1 7.51238D+01   3 7.83323D+01   5 7.98408D+01   11 8.26977D+01   13 8.63716D+01
                    15 9.15759D+01   17 9.15939D+01   19 8.65291D+01   21 8.34296D+01   24 8.81134D+01
                    25 9.15314D+01
59 6.59392D+00   1 2.25487D-05 1.05500D+00 0.0          0.0          0.0
59 6.59392D+00   2 2.54565D-06 1.05500D+00 0.0          0.0          0.0          1 2.66376D-05
59 6.59392D+00   1 9.91650D-07 1.05500D+00 0.0          0.0          0.0          2 4.94696D-07   25 8.96989D-01   25 9.79990D-01
   59    6.5939D+00    1 7.51398D+01   3 7.83750D+01   5 7.98889D+01   11 8.27471D+01   13 8.63875D+01
                    15 9.15254D+01   17 9.15442D+01   19 8.65487D+01   21 8.34884D+01   24 8.89438D+01
                    25 9.24284D+01
60 6.62984D+00   1 1.46452D-05 1.05500D+00 0.0          0.0          0.0
60 6.62984D+00   2 1.84141D-06 1.05500D+00 0.0          0.0          0.0          1 2.48238D-05
60 6.62984D+00   1 7.74210D-07 1.05500D+00 0.0          0.0          0.0          2 3.75196D-07   25 9.11145D-01   25 9.85784D-01
   60    6.6298D+00    1 7.51556D+01   3 7.84170D+01   5 7.99362D+01   11 8.27953D+01   13 8.64031D+01
                    15 9.14756D+01   17 9.14952D+01   19 8.65681D+01   21 8.35468D+01   24 8.97875D+01
                    25 9.33395D+01
61 6.66576D+00   1 1.02735D-05 1.05500D+00 0.0          0.0          0.0
61 6.66576D+00   2 1.42700D-06 1.05500D+00 0.0          0.0          0.0          1 2.33396D-05
61 6.66576D+00   1 6.49573D-07 1.05500D+00 0.0          0.0          0.0          2 3.08111D-07   25 9.22685D-01   25 9.88526D-01
   61    6.6658D+00    1 7.51712D+01   3 7.84583D+01   5 7.99829D+01   11 8.28440D+01   13 8.64183D+01
                    15 9.14264D+01   17 9.14469D+01   19 8.65871D+01   21 8.36047D+01   24 9.06442D+01
                    25 9.42622D+01
62 6.70168D+00   1 7.62726D-06 1.05500D+00 0.0          0.0          0.0
62 6.70168D+00   1 7.62726D-06 1.05500D+00 0.0          0.0          0.0          1 2.16968D-05
62 6.70168D+00   1 1.80907D-06 1.05500D+00 0.0          0.0          0.0          2 1.14093D-06   25 9.32397D-01   25 9.89152D-01
   62    6.7017D+00    1 7.51865D+01   3 7.84991D+01   5 8.00289D+01   11 8.28915D+01   13 8.64332D+01
                    15 9.13779D+01   17 9.13992D+01   19 8.66058D+01   21 8.36623D+01   24 9.15135D+01
                    25 9.51946D+01
63 6.73760D+00   1 6.36023D-06 1.05500D+00 0.0          0.0          0.0
63 6.73760D+00   1 6.36023D-06 1.05500D+00 0.0          0.0          0.0          1 2.05993D-05
63 6.73760D+00   1 1.59026D-06 1.05500D+00 0.0          0.0          0.0          2 1.03003D-06   25 9.40986D-01   25 9.88186D-01
   63    6.7376D+00    1 7.52016D+01   3 7.85392D+01   5 8.00742D+01   11 8.29383D+01   13 8.64477D+01
                    15 9.13300D+01   17 9.13522D+01   19 8.66242D+01   21 8.37194D+01   24 9.23944D+01
                    25 9.61356D+01
64 6.77352D+00   1 5.37902D-06 1.05500D+00 0.0          0.0          0.0
64 6.77352D+00   1 5.37802D-06 1.05500D+00 0.0          0.0          0.0          1 1.95134D-05
64 6.77352D+00   1 1.34914D-06 1.05500D+00 0.0          0.0          0.0          2 9.14385D-07   25 9.48551D-01   25 9.86680D-01
   64    6.7735D+00    1 7.52164D+01   3 7.85787D+01   5 8.01189D+01   11 8.29845D+01   13 8.64620D+01
                    15 9.12827D+01   17 9.13058D+01   19 8.66424D+01   21 8.37762D+01   24 9.32861D+01
                    25 9.70842D+01
65 6.80944D+00   1 4.69661D-06 1.05500D+00 0.0          0.0          0.0
65 6.80944D+00   1 4.69661D-06 1.05500D+00 0.0          0.0          0.0          1 1.84714D-05
65 6.80944D+00   1 1.16919D-06 1.05500D+00 0.0          0.0          0.0          2 8.21716D-07   25 9.55224D-01   25 9.83913D-01
   65    6.8094D+00    1 7.52310D+01   3 7.86176D+01   5 8.01629D+01   11 8.30302D+01   13 8.64759D+01
                    15 9.12360D+01   17 9.12601D+01   19 8.66602D+01   21 8.38326D+01   24 9.41877D+01
                    25 9.80394D+01
66 6.84536D+00   1 4.14718D-06 1.05500D+00 0.0          0.0          0.0
66 6.84536D+00   1 4.14718D-06 1.05500D+00 0.0          0.0          0.0          1 1.74953D-05
66 6.84536D+00   1 1.05128D-06 1.05500D+00 0.0          0.0          0.0          2 7.53460D-07   25 9.61159D-01   25 9.80381D-01
   66    6.8454D+00    1 7.52454D+01   3 7.86560D+01   5 8.02063D+01   11 8.30752D+01   13 8.64896D+01
                    15 9.11900D+01   17 9.12149D+01   19 8.66778D+01   21 8.38885D+01   24 9.50984D+01
                    25 9.90005D+01
67 6.88128D+00   1 3.72081D-06 1.05500D+00 0.0          0.0          0.0
67 6.88128D+00   1 3.72081D-06 1.05500D+00 0.0          0.0          0.0          1 1.65966D-05
67 6.88128D+00   1 9.22972D-07 1.05500D+00 0.0          0.0          0.0          2 7.09565D-07   25 9.66554D-01   25 9.76312D-01
   67    6.8813D+00    1 7.52596D+01   3 7.86938D+01   5 8.02490D+01   11 8.31196D+01   13 8.65029D+01
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                    15 9.11445D+01   17 9.11704D+01   19 8.66951D+01   21 8.39441D+01   24 9.60173D+01
                    25 9.99672D+01
68 6.91720D+00   1 3.23477D-06 1.05500D+00 0.0          0.0              0.0
68 6.91720D+00   1 3.23477D-03 1.05500D+00 0.0          0.0              0.0          1 1.56800D-05
68 6.91720D+00   1 8.15963D-07 1.05500D+00 0.0          0.0              0.0          2 6.65222D-07   25 9.71276D-01   25 9.71596D-01
   68      6.9172D+00    1 7.52736D+01    3 7.87310D+01    5 8.02912D+01   11 8.31634D+01   13 8.65160D+01
                    15 9.10986D+01   17 9.11264D+01   19 8.67121D+01   21 8.39993D+01   24 9.69437D+01
                    25 1.00938D+02
69 6.95312D+00   1 2.87088D-06 1.05500D+00 0.0          0.0              0.0
69 6.95312D+00   1 2.87088D-06 1.05500D+00 0.0          0.0              0.0          1 1.48443D-05
69 6.95312D+00   1 7.24076D-07 1.05500D+00 0.0          0.0              0.0          2 6.29100D-07   25 9.75509D-01   25 9.66440D-01
   69      6.9531D+00    1 7.52873D+01    3 7.87677D+01    5 8.03327D+01   11 8.32066D+01   13 8.65288D+01
                    15 9.10553D+01   17 9.10831D+01   19 8.67289D+01   21 8.40521D+01   24 9.78769D+01
                    25 1.01914D+02
70 6.97656D+00   1 8.01792D-06 1.05500D+00 0.0          0.0              0.0
70 6.97656D+00   1 8.01792D-06 1.05500D+00 0.0          0.0              0.0          1 1.15795D-05
70 6.97656D+00   1 1.24428D-06 1.05500D+00 0.0          0.0              0.0          2 8.57867D-07   25 6.47052D-01   25 6.34900D-01
   70      6.9766D+00    1 7.52969D+01    3 7.87913D+01    5 8.03595D+01   11 8.32345D+01   13 8.65370D+01
                    15 9.10267D+01   17 9.10551D+01   19 8.67397D+01   21 8.40897D+01   24 9.84900D+01
                    25 1.02561D+02
71 7.00000D+00   1 2.49912D-06 1.05500D+00 0.0          0.0              0.0
71 7.00000D+00   1 2.49912D-06 1.05500D+00 0.0          0.0              0.0          1 6.10058D-06
71 7.00000D+00   1 1.57225D-07 1.05500D+00 0.0          0.0              0.0          2 2.20877D-07   25 6.46592D-01   25 6.30447D-01
   71      7.0000D+00    1 7.53059D+01    3 7.88148D+01    5 8.03861D+01   11 8.32621D+01   13 8.65451D+01
                    15 9.09983D+01   17 9.10274D+01   19 8.67504D+01   21 8.41251D+01   24 9.91065D+01
                    25 1.03208D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.55 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 71 TIME STEPS, TIME = 7.000000+00

GROSS GRID			1
			1
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75131
	2	0.03	77103
2	3	0.06	78181
	4	0.08	79155
3	5	0.10	80139
	6	0.57	79176
	7	1.04	79153
	8	1.51	79177
	9	1.98	80149
	10	2.45	81168
4	11	2.92	83126
	12	3.14	84142
5	13	3.35	86155
	14	3.57	89101
6	15	3.79	91100
	16	4.01	91177
7	17	4.23	91103
	18	4.45	89110
8	19	4.67	86175
	20	4.89	84186
9	21	5.10	84113
	22	5.18	85120
	23	5.25	89126
10	24	5.32	99111
11	25	5.35	103121

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	77.210000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.343945040-02

ELAPSED CPU TIME IS 0.85 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.03208D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.530590+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
72	7.02578D+00	1	3.10037D-06	1.05500D+00	0.0	0.0	0.0				
72	7.02578D+00	1	3.10037D-06	1.05500D+00	0.0	0.0	0.0	1	6.86161D-06		
72	7.02578D+00	1	2.31713D-07	1.05500D+00	0.0	0.0	0.0	2	2.77651D-07	25 7.10211D-01	25 6.88139D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
72	7.0258D+00	1 7.53156D+01	3 7.88403D+01	5 8.04150D+01	11 8.32922D+01	13 8.65538D+01
		15 9.09674D+01	17 9.09971D+01	19 8.67621D+01	21 8.41639D+01	24 9.97879D+01
		25 1.03918D+02				
73	7.05415D+00	1 2.47875D-06	1.05500D+00	0.0	0.0	0.0
73	7.05415D+00	1 2.47875D-06	1.05500D+00	0.0	0.0	0.0
73	7.05415D+00	1 1.75596D-07	1.05500D+00	0.0	0.0	0.0
73	7.0541D+00	1 7.53259D+01	3 7.88681D+01	5 8.04465D+01	11 8.33250D+01	13 8.65633D+01
		15 9.09337D+01	17 9.09642D+01	19 8.67748D+01	21 8.42064D+01	24 1.00541D+02
		25 1.04698D+02				
74	7.08534D+00	1 1.84069D-06	1.05500D+00	0.0	0.0	0.0
74	7.08534D+00	1 1.84069D-06	1.05500D+00	0.0	0.0	0.0
74	7.08534D+00	1 9.05591D-08	1.05500D+00	0.0	0.0	0.0
74	7.0853D+00	1 7.53370D+01	3 7.88983D+01	5 8.04807D+01	11 8.33606D+01	13 8.65735D+01
		15 9.08970D+01	17 9.09284D+01	19 8.67886D+01	21 8.42528D+01	24 1.01372D+02
		25 1.05557D+02				
75	7.11966D+00	1 1.42395D-06	1.05500D+00	0.0	0.0	0.0
75	7.11966D+00	1 1.42395D-06	1.05500D+00	0.0	0.0	0.0
75	7.11966D+00	1 1.49559D-07	1.05500D+00	0.0	0.0	0.0
75	7.1197D+00	1 7.53490D+01	3 7.89310D+01	5 8.05178D+01	11 8.33593D+01	13 8.65846D+01
		15 9.08572D+01	17 9.08895D+01	19 8.68036D+01	21 8.43036D+01	24 1.02289D+02
		25 1.06502D+02				
76	7.15570D+00	1 1.63893D-06	1.05500D+00	0.0	0.0	0.0
76	7.15570D+00	1 1.63893D-06	1.05500D+00	0.0	0.0	0.0
76	7.15570D+00	1 3.64617D-07	1.05500D+00	0.0	0.0	0.0
76	7.1557D+00	1 7.53615D+01	3 7.89649D+01	5 8.05563D+01	11 8.34394D+01	13 8.65959D+01
		15 9.08158D+01	17 9.08492D+01	19 8.68192D+01	21 8.43566D+01	24 1.03255D+02
		25 1.07497D+02				
77	7.19195D+00	1 2.92752D-06	1.05500D+00	0.0	0.0	0.0
77	7.19195D+00	1 2.92752D-06	1.05500D+00	0.0	0.0	0.0
77	7.19195D+00	1 5.62087D-07	1.05500D+00	0.0	0.0	0.0
77	7.1919D+00	1 7.53740D+01	3 7.89985D+01	5 8.05944D+01	11 8.34792D+01	13 8.66071D+01
		15 9.07748D+01	17 9.08092D+01	19 8.68346D+01	21 8.44095D+01	24 1.04229D+02
		25 1.08501D+02				
78	7.22843D+00	1 1.64909D-06	1.05500D+00	0.0	0.0	0.0
78	7.22843D+00	1 1.64909D-06	1.05500D+00	0.0	0.0	0.0
78	7.22843D+00	1 3.90430D-07	1.05500D+00	0.0	0.0	0.0
78	7.2284D+00	1 7.53864D+01	3 7.90319D+01	5 8.06323D+01	11 8.35186D+01	13 8.66180D+01
		15 9.07340D+01	17 9.07695D+01	19 8.68499D+01	21 8.44625D+01	24 1.05213D+02
		25 1.09513D+02				
79	7.26514D+00	1 1.35418D-06	1.05500D+00	0.0	0.0	0.0
79	7.26514D+00	1 1.35418D-06	1.05500D+00	0.0	0.0	0.0
79	7.26514D+00	1 2.66728D-07	1.05500D+00	0.0	0.0	0.0
79	7.2651D+00	1 7.53987D+01	3 7.90649D+01	5 8.06698D+01	11 8.35578D+01	13 8.66289D+01
		15 9.06935D+01	17 9.07300D+01	19 8.68651D+01	21 8.45154D+01	24 1.06206D+02
		25 1.10533D+02				
80	7.30210D+00	1 1.35686D-06	1.05500D+00	0.0	0.0	0.0
80	7.30210D+00	1 1.35686D-06	1.05500D+00	0.0	0.0	0.0
80	7.30210D+00	1 2.20073D-07	1.05500D+00	0.0	0.0	0.0
80	7.3021D+00	1 7.54110D+01	3 7.90977D+01	5 8.07070D+01	11 8.35966D+01	13 8.66395D+01
		15 9.06533D+01	17 9.06909D+01	19 8.68803D+01	21 8.45684D+01	24 1.07208D+02
		25 1.11561D+02				
81	7.33931D+00	1 1.36110D-06	1.05500D+00	0.0	0.0	0.0
81	7.33931D+00	1 1.36110D-06	1.05500D+00	0.0	0.0	0.0
81	7.33931D+00	1 2.21230D-07	1.05500D+00	0.0	0.0	0.0
81	7.3393D+00	1 7.54231D+01	3 7.91302D+01	5 8.07439D+01	11 8.36351D+01	13 8.66500D+01

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                    15 9.06133D+01   17 9.06520D+01   19 8.68953D+01   21 8.46213D+01   24 1.08219D+02
                    25 1.12598D+02
 82 7.37679D+00   1 1.36748D-06 1.05500D+00 0.0          0.0          0.0
 82 7.37679D+00   1 1.36748D-06 1.05500D+00 0.0          0.0          0.0              1 8.37714D-06
 82 7.37679D+00   1 2.23410D-07 1.05500D+00 0.0          0.0          0.0              2 3.60308D-07   25 1.04440D+00   24 9.42883D-01
   82      7.3768D+00     1 7.54352D+01    3 7.91624D+01   5 8.07805D+01   11 8.36733D+01   13 8.66603D+01
                    15 9.05735D+01   17 9.06134D+01   19 8.69103D+01   21 8.46743D+01   24 1.09240D+02
                    25 1.13642D+02
 83 7.41456D+00   1 1.37596D-06 1.05500D+00 0.0          0.0          0.0
 83 7.41456D+00   1 1.37596D-06 1.05500D+00 0.0          0.0          0.0              1 7.98109D-06
 83 7.41456D+00   1 2.26298D-07 1.05500D+00 0.0          0.0          0.0              2 3.66223D-07   25 1.05253D+00   24 9.42581D-01
   83      7.4146D+00     1 7.54471D+01    3 7.91945D+01   5 8.08169D+01   11 8.37113D+01   13 8.66704D+01
                    15 9.05340D+01   17 9.05750D+01   19 8.69251D+01   21 8.47274D+01   24 1.10270D+02
                    25 1.14695D+02
 84 7.45262D+00   1 1.38640D-06 1.05500D+00 0.0          0.0          0.0
 84 7.45262D+00   1 1.38640D-06 1.05500D+00 0.0          0.0          0.0              1 7.64475D-06
 84 7.45262D+00   1 2.29739D-07 1.05500D+00 0.0          0.0          0.0              2 3.53388D-07   25 1.06094D+00   24 9.42294D-01
   84      7.4526D+00     1 7.54590D+01    3 7.92262D+01   5 8.08530D+01   11 8.37489D+01   13 8.66804D+01
                    15 9.04947D+01   17 9.05369D+01   19 8.69399D+01   21 8.47805D+01   24 1.11309D+02
                    25 1.15756D+02
 85 7.49099D+00   1 1.39861D-06 1.05500D+00 0.0          0.0          0.0
 85 7.49099D+00   1 1.39861D-06 1.05500D+00 0.0          0.0          0.0              1 7.40192D-06
 85 7.49099D+00   1 2.33646D-07 1.05500D+00 0.0          0.0          0.0              2 3.65975D-07   25 1.06946D+00   24 9.42034D-01
   85      7.4910D+00     1 7.54708D+01    3 7.92578D+01   5 8.08888D+01   11 8.37863D+01   13 8.66902D+01
                    15 9.04556D+01   17 9.04990D+01   19 8.69547D+01   21 8.48337D+01   24 1.12357D+02
                    25 1.16825D+02
 86 7.52969D+00   1 4.59131D-06 1.05500D+00 0.0          0.0          0.0
 86 7.52969D+00   1 4.59131D-06 1.05500D+00 0.0          0.0          0.0              1 8.21388D-06
 86 7.52969D+00   1 6.19707D-07 1.05500D+00 0.0          0.0          0.0              2 5.95319D-07   25 1.07548D+00   24 9.41450D-01
   86      7.5297D+00     1 7.54825D+01    3 7.92891D+01   5 8.09244D+01   11 8.38234D+01   13 8.66999D+01
                    15 9.04168D+01   17 9.04613D+01   19 8.69694D+01   21 8.48870D+01   24 1.13415D+02
                    25 1.17901D+02
 87 7.56873D+00   1 1.32299D-05 1.05500D+00 0.0          0.0          0.0
 87 7.56873D+00   2 1.23198D-06 1.05500D+00 0.0          0.0          0.0              1 1.05747D-05
 87 7.56873D+00   1 5.54306D-07 1.05500D+00 0.0          0.0          0.0              2 2.67041D-07   25 1.07561D+00   24 9.40069D-01
   87      7.5687D+00     1 7.54941D+01    3 7.93203D+01   5 8.09598D+01   11 8.38603D+01   13 8.67095D+01
                    15 9.03781D+01   17 9.04239D+01   19 8.69841D+01   21 8.49405D+01   24 1.14481D+02
                    25 1.18976D+02
 88 7.60819D+00   1 8.18883D-06 1.05500D+00 0.0          0.0          0.0
 88 7.60819D+00   1 8.18883D-06 1.05500D+00 0.0          0.0          0.0              1 9.64795D-06
 88 7.60819D+00   1 1.29453D-06 1.05500D+00 0.0          0.0          0.0              2 8.97466D-07   25 1.08022D+00   24 9.38508D-01
   88      7.6082D+00     1 7.55057D+01    3 7.93512D+01   5 8.09949D+01   11 8.38970D+01   13 8.67189D+01
                    15 9.03395D+01   17 9.03865D+01   19 8.69987D+01   21 8.49941D+01   24 1.15556D+02
                    25 1.20057D+02
 89 7.64814D+00   1 6.27467D-06 1.05500D+00 0.0          0.0          0.0
 89 7.64814D+00   1 6.27467D-06 1.05500D+00 0.0          0.0          0.0              1 9.30385D-06
 89 7.64814D+00   1 1.05555D-06 1.05500D+00 0.0          0.0          0.0              2 7.95558D-07   25 1.08776D+00   24 9.37929D-01
   89      7.6481D+00     1 7.55172D+01    3 7.93821D+01   5 8.10300D+01   11 8.39335D+01   13 8.67281D+01
                    15 9.03010D+01   17 9.03493D+01   19 8.70134D+01   21 8.50481D+01   24 1.16639D+02
                    25 1.21144D+02
 90 7.68860D+00   1 4.81503D-06 1.05500D+00 0.0          0.0          0.0
 90 7.68860D+00   1 4.81503D-06 1.05500D+00 0.0          0.0          0.0              1 8.92517D-06
 90 7.68860D+00   1 9.07071D-07 1.05500D+00 0.0          0.0          0.0              2 7.33579D-07   25 1.09697D+00   24 9.37609D-01
   90      7.6886D+00     1 7.55287D+01    3 7.94129D+01   5 8.10649D+01   11 8.39699D+01   13 8.67373D+01
                    15 9.02625D+01   17 9.03122D+01   19 8.70281D+01   21 8.51024D+01   24 1.17733D+02
                    25 1.22241D+02
 91 7.72959D+00   1 4.44098D-06 1.05500D+00 0.0          0.0          0.0
 91 7.72959D+00   1 4.44098D-06 1.05500D+00 0.0          0.0          0.0              1 8.67151D-06
 91 7.72959D+00   1 8.46849D-07 1.05500D+00 0.0          0.0          0.0              2 7.15207D-07   25 1.10688D+00   24 9.37492D-01
   91      7.7296D+00     1 7.55402D+01    3 7.94435D+01   5 8.10997D+01   11 8.40062D+01   13 8.67463D+01
                    15 9.02241D+01   17 9.02751D+01   19 8.70428D+01   21 8.51570D+01   24 1.18837D+02
                    25 1.23348D+02
 92 7.77113D+00   1 3.90557D-06 1.05500D+00 0.0          0.0          0.0
 92 7.77113D+00   1 3.90557D-06 1.05500D+00 0.0          0.0          0.0              1 8.34196D-06
 92 7.77113D+00   1 8.15[illegible]-07 1.05500D+00 0.0          0.0          0.0              2 6.98665D-07   25 1.11748D+00   24 9.37479D-01
   92      7.7711D+00     1 [illegible]+01    3 7.94741D+01   5 8.11341D+01   11 8.40423D+01   13 8.67553D+01
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                    15 9.01857D+01   17 9.02381D+01   19 8.70575D+01   21 8.52120D+01   24 1.19951D+02
                    25 1.24466D+02
93 7.81322D+00   1 4.07822D-06 1.05500D+00 0.0          0.0          0.0
93 7.81322D+00   1 4.07822D-06 1.05500D+00 0.0          0.0          0.0          1 8.40497D-06
93 7.81322D+00   1 8.33263D-07 1.05500D+00 0.0          0.0          0.0          2 7.07763D-07   25 1.12813D+00   24 9.37507D-01
   93      7.8132D+00    1 7.55629D+01    3 7.95045D+01    5 8.11689D+01   11 8.40783D+01   13 8.67641D+01
                    15 9.01474D+01   17 9.02012D+01   19 8.70723D+01   21 8.52673D+01   24 1.21075D+02
                    25 1.25594D+02
94 7.85588D+00   1 3.95524D-06 1.05500D+00 0.0          0.0          0.0
94 7.85588D+00   1 3.95524D-06 1.05500D+00 0.0          0.0          0.0          1 8.43574D-06
94 7.85588D+00   1 8.24865D-07 1.05500D+00 0.0          0.0          0.0          2 7.04362D-07   25 1.13901D+00   24 9.37542D-01
   94      7.8559D+00    1 7.55743D+01    3 7.95349D+01    5 8.12034D+01   11 8.41141D+01   13 8.67728D+01
                    15 9.01091D+01   17 9.01644D+01   19 8.70872D+01   21 8.53230D+01   24 1.22210D+02
                    25 1.26733D+02
95 7.89910D+00   1 3.79390D-06 1.05500D+00 0.0          0.0          0.0
95 7.89910D+00   1 3.79390D-06 1.05500D+00 0.0          0.0          0.0          1 8.43022D-06
95 7.89910D+00   1 7.75926D-07 1.05500D+00 0.0          0.0          0.0          2 6.90181D-07   25 1.15012D+00   24 9.37604D-01
   95      7.8991D+00    1 7.55856D+01    3 7.95651D+01    5 8.12376D+01   11 8.41498D+01   13 8.67813D+01
                    15 9.00709D+01   17 9.01277D+01   19 8.71020D+01   21 8.53790D+01   24 1.23356D+02
                    25 1.27883D+02
96 7.94289D+00   1 4.04569D-06 1.05500D+00 0.0          0.0          0.0
96 7.94289D+00   1 4.04569D-06 1.05500D+00 0.0          0.0          0.0          1 8.53850D-06
96 7.94289D+00   1 8.10650D-07 1.05500D+00 0.0          0.0          0.0          2 7.05580D-07   25 1.16117D+00   24 9.37644D-01
   96      7.9429D+00    1 7.55968D+01    3 7.95951D+01    5 8.12718D+01   11 8.41852D+01   13 8.67898D+01
                    15 9.00328D+01   17 9.00911D+01   19 8.71170D+01   21 8.54353D+01   24 1.24513D+02
                    25 1.29044D+02
97 7.97145D+00   1 9.86246D-06 1.05500D+00 0.0          0.0          0.0
97 7.97145D+00   1 9.86246D-06 1.05500D+00 0.0          0.0          0.0          1 7.47082D-06
97 7.97145D+00   1 1.30787D-06 1.05500D+00 0.0          0.0          0.0          2 8.26620D-07   25 7.66757D-01   24 6.04865D-01
   97      7.9714D+00    1 7.56046D+01    3 7.96145D+01    5 8.12937D+01   11 8.42080D+01   13 8.67951D+01
                    15 9.00082D+01   17 9.00676D+01   19 8.71266D+01   21 8.54718D+01   24 1.25266D+02
                    25 1.29811D+02
98 8.00000D+00   1 4.40374D-06 1.05500D+00 0.0          0.0          0.0
98 8.00000D+00   1 4.40374D-06 1.05500D+00 0.0          0.0          0.0          1 4.37251D-06
98 8.00000D+00   1 6.19501D-07 1.05500D+00 0.0          0.0          0.0          2 4.20551D-07   25 7.62030D-01   24 6.00980D-01
   98      8.0000D+00    1 7.56120D+01    3 7.96336D+01    5 8.13153D+01   11 8.42305D+01   13 8.68004D+01
                    15 8.99839D+01   17 9.00443D+01   19 8.71362D+01   21 8.55082D+01   24 1.26019D+02
                    25 1.30573D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 57 56 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 98 TIME STEPS, TIME = 8.000000D+00

GROSS GRID			1
	FINE GRID		1
		DISTANCE	0.0
1	1	0.0	75161
	2	0.03	77160
2	3	0.06	79163
	4	0.08	80144
3	5	0.10	81132
	6	0.57	81105
	7	1.04	81105
	8	1.51	81137
	9	1.98	82102
	10	2.45	82199
4	11	2.92	84123
	12	3.14	85120
5	13	3.35	86180
	14	3.57	88158
6	15	3.79	89198
	16	4.01	90153
7	17	4.23	90104
	18	4.45	88174
8	19	4.67	87114
	20	4.89	85187
9	21	5.10	85151
	22	5.18	94163
	23	5.25	107115
10	24	5.32	126102
11	25	5.35	130157

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.85530536D-02

ELAPSED CPU TIME IS 1.11 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.30573D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.56120D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
99	8.03141D+00	1	5.33807D-06	1.05500D+00	0.0	0.0	0.0				
99	8.03141D+00	1	5.33807D-06	1.05500D+00	0.0	0.0	0.0	1	5.10772D-06		
99	8.03141D+00	1	7.81527D-07	1.05500D+00	0.0	0.0	0.0	2	4.88731D-07	25 8.32639D-01	24 6.56225D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
99	8.0314D+00	1 7.56198D+01	3 7.96544D+01	5 8.13389D+01	11 8.42550D+01	13 8.68061D+01
		15 8.99575D+01	17 9.00189D+01	19 8.71467D+01	21 8.55480D+01	24 1.26846D+02
		25 1.31405D+02				
100	8.06596D+00	1 4.79512D-06	1.05500D+00	0.0	0.0	0.0
100	8.06596D+00	1 4.79512D-06	1.05500D+00	0.0	0.0	0.0	1	5.83469D-06		
100	8.06596D+00	1 7.93018D-07	1.05500D+00	0.0	0.0	0.0	2	5.15607D-07	25 9.10813D-01	24 7.15359D-01
100	8.0660D+00	1 7.56281D+01	3 7.96769D+01	5 8.13644D+01	11 8.42815D+01	13 8.68122D+01
		15 8.99287D+01	17 8.99914D+01	19 8.71581D+01	21 8.55915D+01	24 1.27753D+02
		25 1.32316D+02				
101	8.10396D+00	1 4.65639D-06	1.05500D+00	0.0	0.0	0.0
101	8.10396D+00	1 4.65639D-06	1.05500D+00	0.0	0.0	0.0	1	6.81242D-06		
101	8.10396D+00	1 8.20738D-07	1.05500D+00	0.0	0.0	0.0	2	5.72192D-07	25 9.96921D-01	24 7.78695D-01
101	8.1040D+00	1 7.56371D+01	3 7.97014D+01	5 8.13921D+01	11 8.43103D+01	13 8.68187D+01
		15 8.98974D+01	17 8.99615D+01	19 8.71707D+01	21 8.56391D+01	24 1.28748D+02
		25 1.33313D+02				
102	8.14577D+00	1 4.65862D-06	1.05500D+00	0.0	0.0	0.0
102	8.14577D+00	1 4.65862D-06	1.05500D+00	0.0	0.0	0.0	1	7.95716D-06		
102	8.14577D+00	1 8.89620D-07	1.05500D+00	0.0	0.0	0.0	2	6.58105D-07	25 1.09171D+00	24 8.46575D-01
102	8.1458D+00	1 7.56468D+01	3 7.97278D+01	5 8.14221D+01	11 8.43413D+01	13 8.68257D+01
		15 8.98635D+01	17 8.99291D+01	19 8.71843D+01	21 8.56911D+01	24 1.29838D+02
		25 1.34405D+02				
103	8.19175D+00	1 5.45560D-06	1.05500D+00	0.0	0.0	0.0
103	8.19175D+00	1 5.45560D-06	1.05500D+00	0.0	0.0	0.0	1	9.41110D-06		
103	8.19175D+00	1 1.08408D-06	1.05500D+00	0.0	0.0	0.0	2	8.07253D-07	25 1.19555D+00	24 9.19321D-01
103	8.1918D+00	1 7.56573D+01	3 7.97564D+01	5 8.14545D+01	11 8.43749D+01	13 8.68332D+01
		15 8.98267D+01	17 8.98941D+01	19 8.71992D+01	21 8.57479D+01	24 1.31032D+02
		25 1.35600D+02				
104	8.23927D+00	1 2.13243D-06	1.05500D+00	0.0	0.0	0.0
104	8.23927D+00	1 2.13243D-06	1.05500D+00	0.0	0.0	0.0	1	9.08284D-06		
104	8.2392D+00	1 4.35245D-07	1.05500D+00	0.0	0.0	0.0	2	6.05046D-07	25 1.23314D+00	24 9.37381D-01
104	8.2393D+00	1 7.56680D+01	3 7.97853D+01	5 8.14873D+01	11 8.44089D+01	13 8.68407D+01
		15 8.97893D+01	17 8.98585D+01	19 8.72145D+01	21 8.58062D+01	24 1.32260D+02
		25 1.36834D+02				
105	8.28743D+00	1 2.07801D-06	1.05500D+00	0.0	0.0	0.0
105	8.28743D+00	1 2.07801D-06	1.05500D+00	0.0	0.0	0.0	1	9.07680D-06		
105	8.28743D+00	1 4.45356D-07	1.05500D+00	0.0	0.0	0.0	2	5.97530D-07	25 1.24748D+00	24 9.37749D-01
105	8.2874D+00	1 7.56787D+01	3 7.98141D+01	5 8.15199D+01	11 8.44426D+01	13 8.68481D+01
		15 8.97520D+01	17 8.98231D+01	19 8.72298D+01	21 8.58648D+01	24 1.33500D+02
		25 1.38081D+02				
106	8.33622D+00	1 3.01868D-06	1.05500D+00	0.0	0.0	0.0
106	8.33622D+00	1 3.01868D-06	1.05500D+00	0.0	0.0	0.0	1	9.31578D-06		
106	8.33622D+00	1 7.11618D-07	1.05500D+00	0.0	0.0	0.0	2	6.88435D-07	25 1.26063D+00	24 9.38109D-01
106	8.3362D+00	1 7.56893D+01	3 7.98427D+01	5 8.15523D+01	11 8.44761D+01	13 8.68553D+01
		15 8.97149D+01	17 8.97879D+01	19 8.72452D+01	21 8.59237D+01	24 1.34753D+02
		25 1.39342D+02				
107	8.38563D+00	1 4.00990D-06	1.05500D+00	0.0	0.0	0.0
107	8.38563D+00	1 4.00990D-06	1.05500D+00	0.0	0.0	0.0	1	9.49978D-06		
107	8.38563D+00	1 8.19034D-07	1.05500D+00	0.0	0.0	0.0	2	7.33646D-07	25 1.27286D+00	24 9.38243D-01
107	8.3856D+00	1 7.56999D+01	3 7.98710D+01	5 8.15844D+01	11 8.45093D+01	13 8.68623D+01
		15 8.96779D+01	17 8.97529D+01	19 8.72607D+01	21 8.59829D+01	24 1.36017D+02
		25 1.40615D+02				
108	8.43565D+00	1 4.13718D-06	1.05500D+00	0.0	0.0	0.0
108	8.43565D+00	1 4.13718D-06	1.05500D+00	0.0	0.0	0.0	1	9.57472D-06		
108	8.43565D+00	1 8.57198D-07	1.05500D+00	0.0	0.0	0.0	2	7.49168D-07	25 1.28502D+00	24 9.38266D-01
108	8.4357D+00	1 7.57104D+01	3 7.98992D+01	5 8.16163D+01	11 8.45422D+01	13 8.68692D+01

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                    15 8.96411D+01   17 8.97180D+01   19 8.72763D+01   21 8.60423D+01   24 1.37293D+02
                    25 1.41900D+02
109 8.48630D+00   1 4.61874D-06 1.05500D+00 0.0          0.0              0.0              1 9.71934D-06
109 8.48630D+00   1 4.61874D-06 1.05500D+00 0.0          0.0              0.0              2 7.80963D-07   25 1.29699D+00   24 9.38242D-01
109 8.48630D+00   1 9.30582D-07 1.05500D+00 0.0          0.0              0.0
      109    8.4863D+00   1 7.57209D+01   3 7.99271D+01   5 8.16478D+01   11 8.45748D+01   13 8.68759D+01
                    15 8.96044D+01   17 8.96935D+01   19 8.72920D+01   21 8.61020D+01   24 1.38581D+02
                    25 1.43197D+02
110 8.53759D+00   1 2.61082D-05 1.05500D+00 0.0          0.0              0.0              1 1.52638D-05
110 8.53759D+00   2 2.27526D-06 1.05500D+00 0.0          0.0              0.0              2 5.97903D-07   24 1.29782D+00   24 9.36506D-01
110 8.53759D+00   1 1.81925D-06 1.05500D+00 0.0          0.0              0.0
      110    8.5376D+00   1 7.57312D+01   3 7.99547D+01   5 8.16791D+01   11 8.46070D+01   13 8.68825D+01
                    15 8.95680D+01   17 8.96491D+01   19 8.73077D+01   21 8.61620D+01   24 1.39879D+02
                    25 1.44491D+02
111 8.58961D+00   1 8.75484D-05 1.05500D+00 0.0          0.0              0.0              1 3.11209D-05
111 8.58961D+00   2 7.46893D-06 1.05500D+00 0.0          0.0              0.0              2 1.87201D-06   24 1.29910D+00   24 9.28730D-01
111 8.58961D+00   1 6.09777D-06 1.05500D+00 0.0          0.0              0.0
      111    8.5896D+00   1 7.57415D+01   3 7.99821D+01   5 8.17102D+01   11 8.46390D+01   13 8.68889D+01
                    15 8.95316D+01   17 8.96149D+01   19 8.73236D+01   21 8.62223D+01   24 1.41178D+02
                    25 1.45744D+02
112 8.64283D+00   1 5.06791D-05 1.05500D+00 0.0          0.0              0.0              1 2.86741D-05
112 8.64283D+00   2 4.70208D-06 1.05500D+00 0.0          0.0              0.0              2 1.23741D-06   24 1.30126D+00   24 9.21713D-01
112 8.64283D+00   1 4.11082D-06 1.05500D+00 0.0          0.0              0.0
      112    8.6428D+00   1 7.57517D+01   3 8.00096D+01   5 8.17412D+01   11 8.46710D+01   13 8.68951D+01
                    15 8.94950D+01   17 8.95807D+01   19 8.73397D+01   21 8.62835D+01   24 1.42479D+02
                    25 1.46987D+02
113 8.69768D+00   1 3.52045D-05 1.05500D+00 0.0          0.0              0.0              1 2.82324D-05
113 8.69768D+00   2 3.50859D-06 1.05500D+00 0.0          0.0              0.0              2 9.61157D-07   24 1.31007D+00   24 9.19483D-01
113 8.69768D+00   1 3.28723D-06 1.05500D+00 0.0          0.0              0.0
      113    8.6977D+00   1 7.57621D+01   3 8.00373D+01   5 8.17725D+01   11 8.47032D+01   13 8.69013D+01
                    15 8.94581D+01   17 8.95461D+01   19 8.73562D+01   21 8.63460D+01   24 1.43789D+02
                    25 1.48237D+02
114 8.75435D+00   1 2.89113D-05 1.05500D+00 0.0          0.0              0.0              1 2.84396D-05
114 8.75435D+00   2 2.97760D-06 1.05500D+00 0.0          0.0              0.0              2 8.49998D-07   24 1.32214D+00   24 9.19497D-01
114 8.75435D+00   1 3.00775D-06 1.05500D+00 0.0          0.0              0.0
      114    8.7544D+00   1 7.57725D+01   3 8.00652D+01   5 8.18041D+01   11 8.47356D+01   13 8.69075D+01
                    15 8.94206D+01   17 8.95111D+01   19 8.73732D+01   21 8.64101D+01   24 1.45112D+02
                    25 1.49503D+02
115 8.81290D+00   1 2.61632D-05 1.05500D+00 0.0          0.0              0.0              1 2.87587D-05
115 8.81290D+00   2 2.69764D-06 1.05500D+00 0.0          0.0              0.0              2 7.89566D-07   24 1.33563D+00   24 9.20414D-01
115 8.81290D+00   1 2.86745D-06 1.05500D+00 0.0          0.0              0.0
      115    8.8129D+00   1 7.57830D+01   3 8.00933D+01   5 8.18359D+01   11 8.47683D+01   13 8.69135D+01
                    15 8.93826D+01   17 8.94757D+01   19 8.73906D+01   21 8.64757D+01   24 1.46447D+02
                    25 1.50789D+02
116 8.87333D+00   1 2.47729D-05 1.05500D+00 0.0          0.0              0.0              1 2.89950D-05
116 8.87333D+00   2 2.51306D-06 1.05500D+00 0.0          0.0              0.0              2 7.63250D-07   24 1.34976D+00   24 9.21667D-01
116 8.87333D+00   1 2.85636D-06 1.05500D+00 0.0          0.0              0.0
      116    8.8733D+00   1 7.57935D+01   3 8.01217D+01   5 8.18679D+01   11 8.48011D+01   13 8.69195D+01
                    15 8.93441D+01   17 8.94400D+01   19 8.74085D+01   21 8.65427D+01   24 1.47797D+02
                    25 1.52094D+02
117 8.93563D+00   1 2.39565D-05 1.05500D+00 0.0          0.0              0.0              1 2.90805D-05
117 8.93563D+00   2 2.36951D-06 1.05500D+00 0.0          0.0              0.0              2 7.35919D-07   24 1.36422D+00   24 9.23036D-01
117 8.93563D+00   1 2.80713D-06 1.05500D+00 0.0          0.0              0.0
      117    8.9356D+00   1 7.58041D+01   3 8.01501D+01   5 8.19000D+01   11 8.48340D+01   13 8.69253D+01
                    15 8.93053D+01   17 8.94041D+01   19 8.74268D+01   21 8.66111D+01   24 1.49161D+02
                    25 1.53419D+02
118 9.00000D+00   1 2.37492D-05 1.05500D+00 0.0          0.0              0.0              1 2.92194D-05
118 9.00000D+00   2 2.27109D-06 1.05500D+00 0.0          0.0              0.0              2 7.30870D-07   24 1.38445D+00   24 9.28158D-01
118 9.00000D+00   1 2.85933D-06 1.05500D+00 0.0          0.0              0.0
      118    9.0000D+00   1 7.58148D+01   3 8.01788D+01   5 8.19323D+01   11 8.48671D+01   13 8.69310D+01
                    15 8.92660D+01   17 8.93679D+01   19 8.74457D+01   21 8.66811D+01   24 1.50546D+02
                    25 1.54770D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.57.57 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER :18 TIME STEPS, TIME = 9.000000+00

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75181
	2	0.03	77198
2	3	0.06	80118
	4	0.08	81103
3	5	0.10	81193
	6	0.57	81192
	7	1.04	82108
	8	1.51	82146
	9	1.98	83106
	10	2.45	83187
4	11	2.92	84187
	12	3.14	85170
5	13	3.35	86193
	14	3.57	88125
6	15	3.79	89127
	16	4.01	89167
7	17	4.23	89137
	18	4.45	88150
8	19	4.67	87145
	20	4.89	86169
9	21	5.10	86168
	22	5.18	104108
	23	5.25	124155
10	24	5.32	150155
11	25	5.35	154177

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	80.500000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 6.43749457D-02

ELAPSED CPU TIME IS 1.32 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.54770D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58148D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
119	9.06589D+00	1	1.73216D-05	1.05500D+00	0.0	0.0	0.0	1	2.77781D-05				
119	9.06589D+00	2	1.73630D-06	1.05500D+00	0.0	0.0	0.0	2	5.87195D-07	24	1.39409D+00	24	9.26024D-01
119	9.06589D+00	1	2.27825D-06	1.05500D+00	0.0	0.0	0.0						

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
119	9.0659D+00	1 7.58255D+01	3 8.02073D+01	5 8.19645D+01	11 8.48999D+01	13 8.69365D+01	
		15 8.92266D+01	17 8.93318D+01	19 8.74649D+01	21 8.67520D+01	24 1.51940D+02	
		25 1.56138D+02					
120	9.13349D+00	1 1.94522D-05	1.05500D+00	0.0	0.0		
120	9.13349D+00	2 1.79645D-06	1.05500D+00	0.0	0.0	1 2.75229D-05	
120	9.13349D+00	1 2.45086D-06	1.05500D+00	0.0	0.0	2 6.19380D-07	24 1.40953D+00 1 9.27691D-01
120	9.1335D+00	1 7.58361D+01	3 8.02357D+01	5 8.19965D+01	11 8.49326D+01	13 8.69419D+01	
		15 8.91872D+01	17 8.92956D+01	19 8.74845D+01	21 8.68239D+01	24 1.53349D+02	
		25 1.57527D+02					
121	9.20271D+00	1 1.89853D-05	1.05500D+00	0.0	0.0		
121	9.20271D+00	2 1.69397D-06	1.05500D+00	0.0	0.0	1 2.68914D-05	
121	9.20271D+00	1 2.40325D-06	1.05500D+00	0.0	0.0	2 6.04751D-07	24 1.42453D+00 24 9.28946D-01
121	9.2027D+00	1 7.58467D+01	3 8.02639D+01	5 8.20283D+01	11 8.49651D+01	13 8.69470D+01	
		15 8.91476D+01	17 8.92596D+01	19 8.75045D+01	21 8.68967D+01	24 1.54774D+02	
		25 1.58935D+02					
122	9.27350D+00	1 1.88733D-05	1.05500D+00	0.0	0.0		
122	9.27350D+00	2 1.67253D-06	1.05500D+00	0.0	0.0	1 2.62745D-05	
122	9.27350D+00	1 2.34918D-06	1.05500D+00	0.0	0.0	2 5.94602D-07	24 1.43937D+00 24 9.29983D-01
122	9.2735D+00	1 7.58572D+01	3 8.02919D+01	5 8.20599D+01	11 8.49972D+01	13 8.69519D+01	
		15 8.91081D+01	17 8.92238D+01	19 8.75249D+01	21 8.69703D+01	24 1.56213D+02	
		25 1.60362D+02					
123	9.34581D+00	1 1.77563D-05	1.05500D+00	0.0	0.0		
123	9.34581D+00	2 1.61548D-06	1.05500D+00	0.0	0.0	1 2.54682D-05	
123	9.34581D+00	1 2.26108D-06	1.05500D+00	0.0	0.0	2 5.72869D-07	24 1.45420D+00 24 9.30906D-01
123	9.3458D+00	1 7.58676D+01	3 8.03197D+01	5 8.20911D+01	11 8.50289D+01	13 8.69566D+01	
		15 8.90687D+01	17 8.91882D+01	19 8.75456D+01	21 8.70445D+01	24 1.57667D+02	
		25 1.61806D+02					
124	9.41961D+00	1 1.70107D-05	1.05500D+00	0.0	0.0		
124	9.41961D+00	2 1.59147D-06	1.05500D+00	0.0	0.0	1 2.46631D-05	
124	9.41961D+00	1 2.25380D-06	1.05500D+00	0.0	0.0	2 5.65841D-07	24 1.46909D+00 24 9.31768D-01
124	9.4196D+00	1 7.58779D+01	3 8.03471D+01	5 8.21220D+01	11 8.50602D+01	13 8.69610D+01	
		15 8.90295D+01	17 8.91529D+01	19 8.75667D+01	21 8.71193D+01	24 1.59136D+02	
		25 1.63269D+02					
125	9.49485D+00	1 1.68076D-05	1.05500D+00	0.0	0.0		
125	9.49485D+00	2 1.61890D-06	1.05500D+00	0.0	0.0	1 2.39225D-05	
125	9.49485D+00	1 2.16658D-06	1.05500D+00	0.0	0.0	2 5.50912D-07	24 1.48398D+00 24 9.32521D-01
125	9.4948D+00	1 7.58880D+01	3 8.03741D+01	5 8.21524D+01	11 8.50910D+01	13 8.69651D+01	
		15 8.89904D+01	17 8.91180D+01	19 8.75881D+01	21 8.71947D+01	24 1.60620D+02	
		25 1.64750D+02					
126	9.57150D+00	1 1.68038D-04	1.05500D+00	0.0	0.0		
126	9.57150D+00	3 2.13950D-06	1.05500D+00	0.0	0.0	1 4.93297D-05	
126	9.57150D+00	2 1.97503D-06	1.05500D+00	0.0	0.0	2 3.22579D-06	24 1.48243D+00 24 9.22938D-01
126	9.5715D+00	1 7.58980D+01	3 8.04008D+01	5 8.21823D+01	11 8.51212D+01	13 8.69690D+01	
		15 8.89516D+01	17 8.90835D+01	19 8.76099D+01	21 8.72704D+01	24 1.62103D+02	
		25 1.66170D+02					
127	9.65040D+00	1 2.91834D-04	1.05500D+00	0.0	0.0		
127	9.65040D+00	3 3.73788D-06	1.05500D+00	0.0	0.0	1 7.96140D-05	
127	9.65040D+00	2 3.71398D-06	1.05500D+00	0.0	0.0	2 5.76840D-06	24 1.45465D+00 24 8.97360D-01
127	9.6504D+00	1 7.59080D+01	3 8.04273D+01	5 8.22121D+01	11 8.51512D+01	13 8.69726D+01	
		15 8.89127D+01	17 8.90491D+01	19 8.76322D+01	21 8.73473D+01	24 1.63558D+02	
		25 1.67479D+02					
128	9.73393D+00	1 1.61506D-04	1.05500D+00	0.0	0.0		
128	9.73393D+00	3 2.13029D-06	1.05500D+00	0.0	0.0	1 7.48965D-05	
128	9.73393D+00	2 2.57665D-06	1.05500D+00	0.0	0.0	2 3.66039D-06	24 1.43960D+00 24 8.80177D-01
[illegible]	9.7339D+00	1 7.59181D+01	3 8.04543D+01	[illegible]	11 8.51818D+01	13 8.69760D+01	

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                    15 8.88726D+01   17 8.90139D+01   19 8.76558D+01   21 8.74277D+01   24 1.64997D+02
                    25 1.68771D+02
129 9.82408D+00   1 1.34254D-04 1.05500D+00 0.0          0.0          0.0
129 9.82408D+00   3 1.80091D-06 1.05500D+00 0.0          0.0          0.0          1 7.76037D-05
129 9.82408D+00   2 2.52094D-06 1.05500D+00 0.0          0.0          0.0          2 3.20996D-06   24 1.45161D+00   24 8.19779D-01
  129     9.8241D+00    1 7.59285D+01    3 8.04823D+01    5 8.22738D+01   11 8.52134D+01   13 8.69793D+01
                    15 8.88305D+01   17 8.89772D+01   19 8.76812D+01   21 8.75131D+01   24 1.66449D+02
                    25 1.70091D+02
130 9.91204D+00   1 8.24952D-05 1.05500D+00 0.0          0.0          0.0
130 9.91204D+00   2 7.29760D-06 1.05500D+00 0.0          0.0          0.0          1 6.68771D-05
130 9.91204D+00   2 1.55287D-06 1.05500D+00 0.0          0.0          0.0          2 2.89552D-06   24 1.33376D+00   24 8.01303D-01
  130     9.9120D+00    1 7.59385D+01    3 8.05086D+01    5 8.23033D+01   11 8.52429D+01   13 8.69821D+01
                    15 8.87906D+01   17 8.89427D+01   19 8.77059D+01   21 8.75952D+01   24 1.67783D+02
                    25 1.71328D+02
131 1.00000D+01   1 7.59704D-05 1.05500D+00 0.0          0.0          0.0
131 1.00000D+01   2 7.40031D-06 1.05500D+00 0.0          0.0          0.0          1 6.04166D-05
131 1.00000D+01   2 1.37859D-06 1.05500D+00 0.0          0.0          0.0          2 2.56286D-06   24 1.26943D+00   24 7.56591D-01
  131     1.0000D+01    1 7.59480D+01    3 8.05339D+01    5 8.23315D+01   11 8.52712D+01   13 8.69846D+01
                    15 8.87518D+01   17 8.89095D+01   19 8.77305D+01   21 8.76759D+01   24 1.69052D+02
                    25 1.72519D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 57 57 11-16 89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 131 TIME STEPS, TIME = 1.000000+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75195
	2	0.03	78123
2	3	0.06	80153
	4	0.08	81142
3	5	0.10	82133
	6	0.57	82149
	7	1.04	82177
	8	1.51	83119
	9	1.98	83175
	10	2.45	84145
4	11	2.92	85127
	12	3.14	86101
5	13	3.35	86198
	14	3.57	87199
6	15	3.79	88175
	16	4.01	89106
7	17	4.23	88191
	18	4.45	88136
8	19	4.67	87173
	20	4.89	87138
9	21	5.10	87168
	22	5.18	111191
	23	5.25	138149
10	24	5.32	169105
11	25	5.35	172152

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 8.795992250-02

ELAPSED CPU TIME IS 1.46 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.72519D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.59480D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
132	1.00968D+01	1	8.87966D-05	1.05500D+00	0.0	0.0	0.0					
132	1.00968D+01	2	9.78092D-06	1.05500D+00	0.0	0.0	0.0	1	6.36951D-05			
132	1.00968D+01	2	1.77721D-06	1.05500D+00	0.0	0.0	0.0	2	2.89466D-06	24 1.33502D+00	24	7.89710D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
132	1.0097D+01	1 7.59579D+01	3 8.05605D+01	5 8.23613D+01	11 8.53009D+01	13 8.69868D+01	
		15 8.87105D+01	17 8.88743D+01	19 8.77576D+01	21 8.77633D+01	24 1.70387D+02	
		25 1.73783D+02					
133	1.02032D+01	1 8.90402D-05	1.05500D+00	0.0	0.0	0.0	
133	1.02032D+01	3 1.56135D-06	1.05500D+00	0.0	0.0	1 6.79811D-05	
133	1.02032D+01	2 2.10648D-06	1.05500D+00	0.0	0.0	2 2.18137D-06	24 1.40766D+00 24 8.26157D-01
133	1.0203D+01	1 7.59682D+01	3 8.05884D+01	5 8.23925D+01	11 8.53319D+01	13 8.69888D+01	
		15 8.86664D+01	17 8.88373D+01	19 8.77873D+01	21 8.78575D+01	24 1.71795D+02	
		25 1.75132D+02					
134	1.03203D+01	1 9.20473D-05	1.05500D+00	0.0	0.0	0.0	
134	1.03203D+01	3 2.14932D-06	1.05500D+00	0.0	0.0	1 7.11423D-05	
134	1.03203D+01	2 2.47897D-06	1.05500D+00	0.0	0.0	2 2.28336D-06	24 1.49065D+00 24 8.67695D-01
134	1.0320D+01	1 7.59790D+01	3 8.06175D+01	5 8.24250D+01	11 8.53641D+01	13 8.69904D+01	
		15 8.86197D+01	17 8.87985D+01	19 8.78199D+01	21 8.79589D+01	24 1.73285D+02	
		25 1.76576D+02					
135	1.04484D+01	1 9.55181D-05	1.05500D+00	0.0	0.0	0.0	
135	1.04484D+01	3 2.85132D-06	1.05500D+00	0.0	0.0	1 7.30949D-05	
135	1.04484D+01	2 2.87730D-06	1.05500D+00	0.0	0.0	2 2.38826D-06	24 1.57876D+00 24 9.11076D-01
135	1.0448D+01	1 7.59902D+01	3 8.06475D+01	5 8.24585D+01	11 8.53972D+01	13 8.69915D+01	
		15 8.85706D+01	17 8.87583D+01	19 8.78555D+01	21 8.80672D+01	24 1.74864D+02	
		25 1.78121D+02					
136	1.05821D+01	1 1.46794D-04	1.05500D+00	0.0	0.0	0.0	
136	1.05821D+01	3 4.01873D-06	1.05500D+00	0.0	0.0	1 7.58902D-05	
136	1.05821D+01	2 4.33663D-06	1.05500D+00	0.0	0.0	2 3.35749D-06	24 1.59482D+00 24 9.12034D-01
136	1.0582D+01	1 7.60013D+01	3 8.06769D+01	5 8.24913D+01	11 8.54294D+01	13 8.69920D+01	
		15 8.85215D+01	17 8.87188D+01	19 8.78926D+01	21 8.81772D+01	24 1.76459D+02	
		25 1.79681D+02					
137	1.07213D+01	1 7.39914D-04	1.05500D+00	0.0	0.0	0.0	
137	1.07213D+01	4 2.09033D-06	1.05500D+00	0.0	0.0	1 1.42021D-04	
137	1.07213D+01	3 4.06504D-06	1.05500D+00	0.0	0.0	2 1.46766D-05	
137	1.07213D+01	2 3.66548D-06	1.05500D+00	0.0	0.0	3 2.51571D-06	24 1.54538D+00 24 8.75775D-01
137	1.0721D+01	1 7.60121D+01	3 8.07056D+01	5 8.25231D+01	11 8.54606D+01	13 8.69918D+01	
		15 8.84726D+01	17 8.86801D+01	19 8.79310D+01	21 8.82887D+01	24 1.78004D+02	
		25 1.81069D+02					
138	1.08607D+01	1 2.05940D-04	1.05500D+00	0.0	0.0	0.0	
138	1.08607D+01	3 4.29492D-06	1.05500D+00	0.0	0.0	1 1.08017D-04	
138	1.08607D+01	2 7.33410D-06	1.05500D+00	0.0	0.0	2 5.17321D-06	24 1.40416D+00 24 7.88833D-01
138	1.0861D+01	1 7.60224D+01	3 8.07324D+01	5 8.25528D+01	11 8.54894D+01	13 8.69909D+01	
		15 8.84258D+01	17 8.86439D+01	19 8.79694D+01	21 8.83972D+01	24 1.79408D+02	
		25 1.82380D+02					
139	1.10000D+01	1 1.96453D-04	1.05500D+00	0.0	0.0	0.0	
139	1.10000D+01	3 5.10312D-06	1.05500D+00	0.0	0.0	1 9.40167D-05	
139	1.10000D+01	2 6.54685D-06	1.05500D+00	0.0	0.0	2 4.66801D-06	24 1.30946D+00 24 7.29878D-01
139	1.1000D+01	1 7.60320D+01	3 8.07574D+01	5 8.25804D+01	11 8.55161D+01	13 8.69894D+01	
		15 8.83810D+01	17 8.86100D+01	19 8.80076D+01	21 8.85026D+01	24 1.80718D+02	
		25 1.83623D+02					

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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20 57 57 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 139 TIME STEPS, TIME = 1.10000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	76.03
	2	0.03	78139
2	3	0.06	80176
	4	0.08	81165
3	5	0.10	82158
	6	0.57	82186
	7	1.04	83122
	8	1.51	83165
	9	1.98	84120
	10	2.45	84182
4	11	2.92	85152
	12	3.14	86119
5	13	3.35	86199
	14	3.57	87178
6	15	3.79	88138
	16	4.01	88167
7	17	4.23	88161
	18	4.45	88132
8	19	4.67	88101
	20	4.89	87198
9	21	5.10	88150
	22	5.18	117136
	23	5.25	147175
10	24	5.32	180172
11	25	5.35	183162

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	85.000000
2	0.0
3	73.00000

THE CURRENT TIME STEP (DELTWT) = 1.39341286D-01

ELAPSED CPU TIME IS 1.57 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.83623D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.60320D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
140	1.11533D+01	1	1.948040-04	1.055000+00	0.0	0.0	0.0						
140	1.11533D+01	3	6.001300-06	1.055000+00	0.0	0.0	0.0	1	9.310420-05				
140	1.11533D+01	2	7.252060-06	1.055000+00	0.0	0.0	0.0	2	4.624490-06	24	1.35804D+00	24	7.51469D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
140	1.11530+01	1 7.60416D+01	3 8.07829D+01	5 8.26086D+01	11 8.55431D+01	13 8.69871D+01	
		15 8.83341D+01	17 8.85753D+01	19 8.80435D+01	21 8.86151D+01	24 1.82076D+02	
		25 1.84927D+02					
141	1.13219D+01	1 1.67513D-04	1.055000+00	0.0	0.0	0.0	
141	1.13219D+01	3 5.82702D-06	1.055000+00	0.0	0.0	0.0	
141	1.13219D+01	2 7.14805D-06	1.055000+00	0.0	0.0	0.0	
141	1.1322D+01	1 7.60513D+01	3 8.08087D+01	5 8.26370D+01	11 8.55701D+01	13 8.69839D+01	
		15 8.82651D+01	17 8.85401D+01	19 8.80953D+01	21 8.87349D+01	24 1.83497D+02	
		25 1.86313D+02					
142	1.15073D+01	1 1.54902D-04	1.055000+00	0.0	0.0	0.0	
142	1.15073D+01	3 6.77552D-06	1.055000+00	0.0	0.0	0.0	
142	1.15073D+01	2 7.30625D-06	1.055000+00	0.0	0.0	0.0	
142	1.1507D+01	1 7.60611D+01	3 8.08345D+01	5 8.26653D+01	11 8.55968D+01	13 8.69795D+01	
		15 8.82343D+01	17 8.85048D+01	19 8.81453D+01	21 8.88619D+01	24 1.85001D+02	
		25 1.87797D+02					
143	1.17114D+01	1 3.03348D-04	1.055000+00	0.0	0.0	0.0	
143	1.17114D+01	4 5.00792D-06	1.055000+00	0.0	0.0	0.0	
143	1.17114D+01	3 3.73703D-06	1.055000+00	0.0	0.0	0.0	
143	1.1711D+01	1 7.60707D+01	3 8.08599D+01	5 8.26931D+01	11 8.56227D+01	13 8.69737D+01	
		15 8.81819D+01	17 8.84699D+01	19 8.82000D+01	21 8.89963D+01	24 1.86593D+02	
		25 1.89362D+02					
144	1.18557D+01	1 4.42167D-05	1.055000+00	0.0	0.0	0.0	
144	1.18557D+01	2 5.32799D-06	1.055000+00	0.0	0.0	0.0	
144	1.18557D+01	1 5.54264D-06	1.055000+00	0.0	0.0	0.0	
144	1.1856D+01	1 7.60780D+01	3 8.08764D+01	5 8.27109D+01	11 8.56390D+01	13 8.69692D+01	
		15 8.81468D+01	17 8.84475D+01	19 8.82384D+01	21 8.90881D+01	24 1.87688D+02	
		25 1.90459D+02					
145	1.20000D+01	1 1.09659D-04	1.055000+00	0.0	0.0	0.0	
145	1.20000D+01	3 3.69761D-06	1.055000+00	0.0	0.0	0.0	
145	1.20000D+01	2 3.56122D-06	1.055000+00	0.0	0.0	0.0	
145	1.2000D+01	1 7.60839D+01	3 8.08915D+01	5 8.27272D+01	11 8.56537D+01	13 8.69642D+01	
		15 8.81134D+01	17 8.84270D+01	19 8.82766D+01	21 8.91774D+01	24 1.88763D+02	
		25 1.91522D+02					

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.57.57 11.16.80

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 145 TIME STEPS, TIME = 1.200000+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	76108
	2	0.03	78148
2	3	0.06	80189
	4	0.08	81180
3	5	0.10	82173
	6	0.57	83109
	7	1.04	83150
	8	1.51	83196
	9	1.98	84147
	10	2.45	85104
4	11	2.92	85165
	12	3.14	86128
5	13	3.35	86196
	14	3.57	87161
6	15	3.79	88111
	16	4.01	88139
7	17	4.23	88143
	18	4.45	88133
8	19	4.67	88128
	20	4.89	88149
9	21	5.10	89118
	22	5.18	121101
	23	5.25	153194
10	24	5.32	188176
11	25	5.35	191152

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.44324401D-01

ELAPSED CPU TIME IS 1.65 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.915220+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.608390+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
146	1.21588D+01	1	9.50675D-05	1.05500D+00	0.0	0.0	0.0					
146	1.21588D+01	3	3.25550D-06	1.05500D+00	0.0	0.0	0.0	1	4.25811D-05			
146	1.21588D+01	2	3.66200D-06	1.05500D+00	0.0	0.0	0.0	2	2.31941D-06	24 1.15172D+00	24	6.10175D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
146	1.21590D+01	1 7.60897D+01	3 8.09066D+01	5 8.27435D+01	11 8.56682D+01	13 8.69583D+01	
		15 8.80785D+01	17 8.84064D+01	19 8.83182D+01	21 8.92729D+01	24 1.89915D+02	
		25 1.92662D+02					
147	1.23334D+01	1 7.20957D-05	1.05500D+00	0.0	0.0	0.0	
147	1.23334D+01	3 4.02096D-06	1.05500D+00	0.0	0.0	0.0	1 4.32657D-05
147	1.23334D+01	2 3.25021D-06	1.05500D+00	0.0	0.0	0.0	2 1.93519D-06 24 1.23684D+00 24 6.51261D-01
147	1.2333D+01	1 7.60954D+01	3 8.09216D+01	5 8.27546D+01	11 8.56822D+01	13 8.69514D+01	
		15 8.80421D+01	17 8.83861D+01	19 8.83637D+01	21 8.93749D+01	24 1.91152D+02	
		25 1.93895D+02					
148	1.25255D+01	1 7.45411D-05	1.05500D+00	0.0	0.0	0.0	
148	1.25255D+01	3 5.09288D-06	1.05500D+00	0.0	0.0	0.0	1 4.46708D-05
148	1.25255D+01	2 3.72956D-06	1.05500D+00	0.0	0.0	0.0	2 2.06803D-06 25 1.33751D+00 24 6.98428D-01
148	1.2525D+01	1 7.61011D+01	3 8.09363D+01	5 8.27753D+01	11 8.56955D+01	13 8.69434D+01	
		15 8.80045D+01	17 8.83664D+01	19 8.84133D+01	21 8.94836D+01	24 1.92487D+02	
		25 1.95233D+02					
149	1.27368D+01	1 1.94767D-03	1.05500D+00	0.0	0.0	0.0	
149	1.27368D+01	4 3.78518D-06	1.05500D+00	0.0	0.0	0.0	1 2.12468D-04
149	1.27368D+01	4 2.79632D-07	1.05500D+00	0.0	0.0	0.0	2 4.13735D-05
149	1.27368D+01	3 6.02595D-06	1.05500D+00	0.0	0.0	0.0	3 9.52901D-06 24 1.26286D+00 24 6.56078D-01
149	1.2737D+01	1 7.61065D+01	3 8.09503D+01	5 8.27901D+01	11 8.57078D+01	13 8.69340D+01	
		15 8.79659D+01	17 8.83477D+01	19 8.84672D+01	21 8.95993D+01	24 1.93750D+02	
		25 1.96258D+02					
150	1.28684D+01	1 4.39195D-04	1.05500D+00	0.0	0.0	0.0	
150	1.28684D+01	4 1.25493D-06	1.05500D+00	0.0	0.0	0.0	1 1.17327D-04
150	1.28684D+01	3 2.60590D-06	1.05500D+00	0.0	0.0	0.0	2 1.03090D-05
150	1.28684D+01	2 2.47365D-06	1.05500D+00	0.0	0.0	0.0	3 1.83156D-06 24 5.99465D-01 23 3.56165D-01
150	1.2868D+01	1 7.61101D+01	3 8.09581D+01	5 8.27982D+01	11 8.57142D+01	13 8.69279D+01	
		15 8.79432D+01	17 8.83375D+01	19 8.85005D+01	21 8.96693D+01	24 1.94349D+02	
		25 1.96721D+02					
151	1.30000D+01	1 1.68580D-04	1.05500D+00	0.0	0.0	0.0	
151	1.30000D+01	3 3.67021D-06	1.05500D+00	0.0	0.0	0.0	1 7.55062D-05
151	1.30000D+01	2 5.82544D-06	1.05500D+00	0.0	0.0	0.0	2 4.32565D-06 23 4.92600D-01 23 3.11320D-01
151	1.30000D+01	1 7.61130D+01	3 8.09652D+01	5 8.28055D+01	11 8.57198D+01	13 8.69217D+01	
		15 8.79216D+01	17 8.83284D+01	19 8.85336D+01	21 8.97377D+01	24 1.94837D+02	
		25 1.97114D+02					

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HEATING6 02/12/83
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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.58 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 151 TIME STEPS, TIME = 1.300000D+01

GROSS GRID		1
		1
FINE GRID		1
	DISTANCE	0.0
1	1	0.0	76111
	2	0.03	78154
2	3	0.06	80197
	4	0.08	81188
3	5	0.10	82181
	6	0.57	83122
	7	1.04	83166
	8	1.51	84113
	9	1.98	84163
	10	2.45	85117
4	11	2.92	85172
	12	3.14	86131
5	13	3.35	86192
	14	3.57	87148
6	15	3.79	87192
	16	4.01	88120
7	17	4.23	88133
	18	4.45	88139
8	19	4.67	88153
	20	4.89	88193
9	21	5.10	89174
	22	5.18	123183
	23	5.25	158172
10	24	5.32	194184
11	25	5.35	197111

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	89.500000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.316047500-01

ELAPSED CPU TIME IS 1.75 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.97114D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.61130D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

cc

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
152	1.31448D+01	1	2.00633D-04	1.05500D+00	0.0	0.0	0.0					
152	1.31448D+01	3	5.75319D-06	1.05500D+00	0.0	0.0	0.0	1	7.73359D-05			
152	1.31448D+01	2	7.43080D-06	1.05500D+00	0.0	0.0	0.0	2	4.88482D-06	23 4.67938D-01	23	2.94816D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
152	1.3145D+01	1 7.61157D+01	3 8.09722D+01	5 8.28126D+01	11 8.57251D+01	13 8.69147D+01	
		15 8.78988D+01	17 8.83196D+01	19 8.85698D+01	21 8.98112D+01	24 1.95280D+02	
		25 1.97475D+02					
153	1.33040D+01	1 1.66327D-04	1.05500D+00	0.0	0.0	0.0	
153	1.33040D+01	3 5.31988D-06	1.05500D+00	0.0	0.0	0.0	1 7.57180D-05
153	1.33040D+01	2 7.03229D-06	1.05500D+00	0.0	0.0	0.0	2 4.11946D-06 23 4.37070D-01 23 2.74556D-01
153	1.3304D+01	1 7.61184D+01	3 8.09789D+01	5 8.28194D+01	11 8.57298D+01	13 8.69068D+01	
		15 8.78751D+01	17 8.83113D+01	19 8.86092D+01	21 8.98897D+01	24 1.95684D+02	
		25 1.97817D+02					
154	1.34792D+01	1 1.53204D-04	1.05500D+00	0.0	0.0	0.0	
154	1.34792D+01	3 5.74253D-06	1.05500D+00	0.0	0.0	0.0	1 7.28959D-05
154	1.34792D+01	2 7.21839D-06	1.05500D+00	0.0	0.0	0.0	2 3.79261D-06 23 4.03993D-01 23 2.53085D-01
154	1.3479D+01	1 7.61209D+01	3 8.09854D+01	5 8.28258D+01	11 8.57339D+01	13 8.68979D+01	
		15 8.78505D+01	17 8.83038D+01	19 8.86522D+01	21 8.99731D+01	24 1.96062D+02	
		25 1.98148D+02					
155	1.36719D+01	1 2.25093D-03	1.05500D+00	0.0	0.0	0.0	
155	1.36719D+01	4 3.37326D-06	1.05500D+00	0.0	0.0	0.0	1 2.67593D-04
155	1.36719D+01	4 7.67261D-07	1.05500D+00	0.0	0.0	0.0	2 4.85599D-05
155	1.36719D+01	3 5.73096D-06	1.05500D+00	0.0	0.0	0.0	3 1.07895D-05
155	1.36719D+01	2 5.40623D-06	1.05500D+00	0.0	0.0	0.0	4 2.43532D-06 23 3.34289D-01 22 2.11553D-01
155	1.3672D+01	1 7.61233D+01	3 8.09912D+01	5 8.28315D+01	11 8.57370D+01	13 8.68880D+01	
		15 8.78252D+01	17 8.82972D+01	19 8.86990D+01	21 9.00613D+01	24 1.96208D+02	
		25 1.97949D+02					
156	1.38359D+01	1 2.69250D-03	1.05500D+00	0.0	0.0	0.0	
156	1.38359D+01	4 6.61975D-06	1.05500D+00	0.0	0.0	0.0	1 3.94590D-04
156	1.38359D+01	4 1.40631D-06	1.05500D+00	0.0	0.0	0.0	2 5.95327D-05
156	1.38359D+01	3 4.68417D-06	1.05500D+00	0.0	0.0	0.0	3 1.20241D-05
156	1.38359D+01	2 4.40266D-06	1.05500D+00	0.0	0.0	0.0	4 2.44229D-06 25 9.77542D-01 25 4.93837D-01
156	1.3836D+01	1 7.61252D+01	3 8.09954D+01	5 8.28354D+01	11 8.57387D+01	13 8.68794D+01	
		15 8.78050D+01	17 8.82930D+01	19 8.87385D+01	21 9.01335D+01	24 1.95803D+02	
		25 1.96971D+02					
157	1.40000D+01	1 5.47596D-04	1.05500D+00	0.0	0.0	0.0	
157	1.40000D+01	4 1.28631D-06	1.05500D+00	0.0	0.0	0.0	1 2.50206D-04
157	1.40000D+01	3 5.76769D-06	1.05500D+00	0.0	0.0	0.0	2 1.49240D-05
157	1.40000D+01	2 5.43265D-06	1.05500D+00	0.0	0.0	0.0	3 3.03074D-06 25 1.18384D+00 25 6.01023D-01
157	1.4000D+01	1 7.61266D+01	3 8.09988D+01	5 8.28385D+01	11 8.57396D+01	13 8.68707D+01	
		15 8.77860D+01	17 8.82900D+01	19 8.87775D+01	21 9.02027D+01	24 1.94916D+02	
		25 1.95787D+02					

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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.58 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 157 TIME STEPS, TIME = 1.4_ 0D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
			1
			I
			1
1	1	0.0	76113
	2	0.03	78156
2	3	0.06	81100
	4	0.08	81192
3	5	0.10	82184
	6	0.57	83129
	7	1.04	83175
	8	1.51	84123
	9	1.98	84172
	10	2.45	85123
4	11	2.92	85174
	12	3.14	86131
5	13	3.35	86187
	14	3.57	87138
6	15	3.79	87179
	16	4.01	88108
7	17	4.23	88129
	18	4.45	88148
8	19	4.67	88178
	20	4.89	89131
9	21	5.10	90120
	22	5.18	125125
	23	5.25	160135
10	24	5.32	194192
11	25	5.35	195179

TEMPERATURES .4 NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.64072295D-01

ELAPSED CPU TIME IS 1.86 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.95787D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.61266D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

cc

NO (TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
158	1.41805D+01	1	7.46361D-04	1.05500D+00	0 0	0.0	0.0						
158	1.41805D+01	4	1.47015D-06	1.05500D+00	0 0	0.0	0.0	1	2.41689D-04				
158	1.41805D+01	3	8.07759D-06	1.05500D+00	0 0	0.0	0.0	2	1.75728D-05				
158	1.41805D+01	2	7.56679D-06	1.05500D+00	0 0	0.0	0.0	3	3.75384D-06	25	1.52462D+00	25	7.78715D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
158	1.41800D+01	1 7.61279D+01	3 8.10018D+01	5 8.28409D+01	11 8.57397D+01	13 8.68612D+01	
		15 8.77664D+01	17 8.82880D+01	19 8.88198D+01	21 9.02748D+01	24 1.93636D+02	
		25 1.94263D+02					
159	1.43790D+01	1 5.87230D-04	1.05500D+00	0 0	0.0	0.0	
159	1.43790D+01	4 1.44593D-06	1.05500D+00	0 0	0.0	0.0	1 2.22074D-04
159	1.43790D+01	3 7.53808D-06	1.05500D+00	0 0	0.0	0.0	2 1.38819D-05
159	1.43790D+01	2 6.95883D-06	1.05500D+00	0 0	0.0	0.0	3 3.09803D-06 25 1.83764D+00 25 9.45955D-01
159	1.43790D+01	1 7.61290D+01	3 8.10041D+01	5 8.28427D+01	11 8.57388D+01	13 8.68506D+01	
		15 8.77463D+01	17 8.82873D+01	19 8.88658D+01	21 9.03487D+01	24 1.91983D+02	
		25 1.92425D+02					
160	1.45784D+01	1 5.24506D-04	1.05500D+00	0 0	0.0	0.0	
160	1.45784D+01	4 1.40264D-06	1.05500D+00	0 0	0.0	0.0	1 1.84198D-04
160	1.45784D+01	3 6.47188D-06	1.05500D+00	0 0	0.0	0.0	2 1.19283D-05
160	1.45784D+01	2 5.99364D-06	1.05500D+00	0 0	0.0	0.0	3 2.66686D-06 25 1.98304D+00 25 1.03055D+00
160	1.45628D+01	1 5.58527D-05	1.05500D+00	0 0	0.0	0.0	
160	1.45628D+01	3 2.57903D-06	1.05500D+00	0 0	0.0	0.0	1 6.86666D-06
160	1.45628D+01	2 2.30892D-06	1.05500D+00	0 0	0.0	0.0	2 1.14053D-06 25 1.84127D+00 25 9.56879D-01
160	1.45630D+01	1 7.61297D+01	3 8.10056D+01	5 8.28435D+01	11 8.57372D+01	13 8.68408D+01	
		15 8.77290D+01	17 8.82879D+01	19 8.89075D+01	21 9.04116D+01	24 1.90290D+02	
		25 1.90584D+02					
161	1.47466D+01	1 1.10893D-03	1.05500D+00	0 0	0.0	0.0	
161	1.47466D+01	4 1.99961D-06	1.05500D+00	0 0	0.0	0.0	1 2.03567D-04
161	1.47466D+01	4 4.34352D-07	1.05500D+00	0 0	0.0	0.0	2 2.38068D-05
161	1.47466D+01	3 2.31964D-06	1.05500D+00	0 0	0.0	0.0	3 4.97618D-06 25 2.13415D+00 25 1.11980D+00
161	1.47187D+01	1 8.01914D-05	1.05500D+00	0 0	0.0	0.0	
161	1.47187D+01	3 3.14173D-06	1.05500D+00	0 0	0.0	0.0	1 1.01806D-05
161	1.47187D+01	2 2.56298D-06	1.05500D+00	0 0	0.0	0.0	2 1.57801D-06 25 1.83218D+00 25 9.61355D-01
161	1.47190D+01	1 7.61302D+01	3 8.10063D+01	5 8.28435D+01	11 8.57352D+01	13 8.68325D+01	
		15 8.77153D+01	17 8.82894D+01	19 8.89423D+01	21 9.04608D+01	24 1.88685D+02	
		25 1.88751D+02					
162	1.48594D+01	1 2.46569D-04	1.05500D+00	0 0	0.0	0.0	
162	1.48594D+01	3 5.71316D-06	1.05500D+00	0 0	0.0	0.0	1 1.07068D-04
162	1.48594D+01	2 8.65568D-06	1.05500D+00	0 0	0.0	0.0	2 6.04157D-06 25 1.74582D+00 25 9.24932D-01
162	1.48590D+01	1 7.61304D+01	3 8.10066D+01	5 8.28422D+01	11 8.57300D+01	13 8.68250D+01	
		15 8.77037D+01	17 8.82913D+01	19 8.89732D+01	21 9.05019D+01	24 1.87085D+02	
		25 * 87006D+02					
163	1.50000D+01	1 1.53232D-04	1.05500D+00	0 0	0.0	0.0	
163	1.50000D+01	3 3.75848D-06	1.05500D+00	0 0	0.0	0.0	1 7.98656D-05
163	1.50000D+01	2 5.32182D-06	1.05500D+00	0 0	0.0	0.0	2 3.74726D-06 25 1.80315D+00 25 9.64223D-01
163	1.50000D+01	1 7.61305D+01	3 8.10065D+01	5 8.28425D+01	11 8.57305D+01	13 8.68175D+01	
		15 8.76927D+01	17 8.82938D+01	19 8.90034D+01	21 9.05398D+01	24 1.85392D+02	
		25 1.85202D+02					

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HEATING6 02/12/83
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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.58 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 163 TIME STEPS, TIME = 1.50000D+01

		GROSS GRID	1
			I
	FINE GRID		1
		DISTANCE	0.0
1	1	0.0	75113
	2	0.03	78157
2	3	0.06	81101
	4	0.08	81192
3	5	0.10	82184
	6	0.57	83131
	7	1.04	83179
	8	1.51	84127
	9	1.98	84175
	10	2.45	85124
4	11	2.92	85173
	12	3.14	86129
5	13	3.35	86182
	14	3.57	87129
6	15	3.79	87169
	16	4.01	88102
7	17	4.23	88129
	18	4.45	88159
8	19	4.67	89100
	20	4.89	89163
9	21	5.10	90154
	22	5.18	123166
	23	5.25	155175
10	24	5.32	185139
11	25	5.35	185120

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	92.790000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.40638929D-01

ELAPSED CPU TIME IS 1.98 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.853920+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.613050+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
164	1.51406D+01	1	1.78751D-04	1.05500D+00	0.0	0.0	0.0						
164	1.51406D+01	3	4.98357D-06	1.05500D+00	0.0	0.0	0.0	1	7.19646D-05				
164	1.51406D+01	2	5.70860D-06	1.05500D+00	0.0	0.0	0.0	2	8.05493D-06	25	1.86496D+00	25	1.00698D+00
164	1.51327D+01	1	3.17988D-05	1.05500D+00	0.0	0.0	0.0						
164	1.51327D+01	2	5.06911D-06	1.05500D+00	0.0	0.0	0.0	1	4.42464D-06				
164	1.51327D+01	1	5.28853D-06	1.05500D+00	0.0	0.0	0.0	2	6.04508D-07	25	1.76985D+00	25	9.55629D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
164	1.51330D+01	1 7.61305D+01	3 8.10061D+01	5 8.28415D+01	11 8.57278D+01	13 8.68105D+01
		15 8.76829D+01	17 8.82967D+01	19 8.90313D+01	21 9.05727D+01	24 1.83726D+02
		25 1.83433D+02				
165	1.52654D+01	1 7.40163D-05	1.05500D+00	0.0	0.0	
165	1.52654D+01	2 9.54720D-06	1.05500D+00	0.0	0.0	1 5.12505D-05
165	1.52654D+01	2 2.44705D-06	1.05500D+00	0.0	0.0	2 2.43347D-06 25 1.79987D+00 25 9.81216D-01
165	1.52650+01	1 7.61304D+01	3 8.10055D+01	5 8.28402D+01	11 8.57248D+01	13 8.68035D+01
		15 8.76736D+01	17 8.83000D+01	19 8.90587D+01	21 9.06029D+01	24 1.82006D+02
		25 1.81633D+02				
166	1.53980D+01	1 8.54841D-05	1.05500D+00	0.0	0.0	
166	1.53980D+01	3 2.15763D-06	1.05500D+00	0.0	0.0	1 4.51190D-05
166	1.53980D+01	2 2.53822D-06	1.05500D+00	0.0	0.0	2 1.97294D-06 25 1.83154D+00 25 1.00838D+00
166	1.53904D+01	1 2.82294D-05	1.05500D+00	0.0	0.0	
166	1.53904D+01	2 4.28229D-06	1.05500D+00	0.0	0.0	1 3.93119D-06
166	1.53904D+01	1 4.42363D-06	1.05500D+00	0.0	0.0	2 5.39617D-07 25 1.73525D+00 25 9.55360D-01
166	1.53900+01	1 7.61302D+01	3 8.10047D+01	5 8.28388D+01	11 8.57218D+01	13 8.67970D+01
		15 8.76654D+01	17 8.83035D+01	19 8.90839D+01	21 9.06288D+01	24 1.80345D+02
		25 1.79897D+02				
167	1.55154D+01	1 3.90636D-05	1.05500D+00	0.0	0.0	
167	1.55154D+01	2 4.80480D-06	1.05500D+00	0.0	0.0	1 3.31366D-05
167	1.55154D+01	1 8.04790D-06	1.05500D+00	0.0	0.0	2 1.01943D-06 25 1.75230D+00 25 9.74056D-01
167	1.55150+01	1 7.61299D+01	3 8.10037D+01	5 8.28371D+01	11 8.57186D+01	13 8.67905D+01
		15 8.76576D+01	17 8.83074D+01	19 8.91084D+01	21 9.06524D+01	24 1.78653D+02
		25 1.78145D+02				
168	1.56404D+01	1 6.10153D-04	1.05500D+00	0.0	0.0	
168	1.56404D+01	4 1.67932D-06	1.05500D+00	0.0	0.0	1 9.92892D-05
168	1.56404D+01	3 2.50251D-06	1.05500D+00	0.0	0.0	2 1.20256D-05
168	1.56404D+01	2 2.27635D-06	1.05500D+00	0.0	0.0	3 1.92734D-06 25 1.96780D+00 25 1.10460D+00
168	1.56229D+01	1 2.61505D-05	1.05500D+00	0.0	0.0	
168	1.56229D+01	2 3.85426D-06	1.05500D+00	0.0	0.0	1 4.53602D-06
168	1.56229D+01	1 3.35526D-06	1.05500D+00	0.0	0.0	2 5.19592D-07 25 1.70178D+00 25 9.55274D-01
168	1.56230+01	1 7.61296D+01	3 8.10027D+01	5 8.28355D+01	11 8.57157D+01	13 8.67850D+01
		15 8.76512D+01	17 8.83110D+01	19 8.91291D+01	21 9.06709D+01	24 1.77129D+02
		25 1.76443D+02				
169	1.57304D+01	1 3.26716D-04	1.05500D+00	0.0	0.0	
169	1.57304D+01	3 5.72332D-06	1.05500D+00	0.0	0.0	1 8.66386D-05
169	1.57304D+01	2 6.80903D-06	1.05500D+00	0.0	0.0	2 7.10815D-06 25 1.84320D+00 25 1.04464D+00
169	1.57206D+01	1 2.93594D-05	1.05500D+00	0.0	0.0	
169	1.57206D+01	2 3.84862D-06	1.05500D+00	0.0	0.0	1 4.37741D-06
169	1.57206D+01	1 3.77876D-06	1.05500D+00	0.0	0.0	2 6.04244D-07 25 1.68825D+00 25 9.56820D-01
169	1.57210+01	1 7.61292D+01	3 8.10017D+01	5 8.28339D+01	11 8.57129D+01	13 8.67800D+01
		15 8.76457D+01	17 8.83144D+01	19 8.91474D+01	21 9.06863D+01	24 1.75633D+02
		25 1.74755D+02				
170	1.58184D+01	1 1.11273D-04	1.05500D+00	0.0	0.0	
170	1.58184D+01	3 1.43122D-06	1.05500D+00	0.0	0.0	1 6.03726D-05
170	1.58184D+01	2 2.37775D-06	1.05500D+00	0.0	0.0	2 2.82718D-06 25 1.75054D+00 25 1.00171D+00
170	1.58133D+01	1 1.50582D-05	1.05500D+00	0.0	0.0	
170	1.58133D+01	2 1.86998D-06	1.05500D+00	0.0	0.0	1 2.46274D-06
170	1.58133D+01	1 1.91410D-06	1.05500D+00	0.0	0.0	2 3.17734D-07 25 1.66663D+00 25 9.53728D-01
170	1.58130+01	1 7.61289D+01	3 8.10006D+01	5 8.28323D+01	11 8.57102D+01	13 8.67753D+01
		15 8.76407D+01	17 8.83179D+01	19 8.91644D+01	21 9.06996D+01	24 1.74119D+02
		25 1.73088D+02				

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171 1.59061D+01     1 7.753690D-05 1.05500D+00 0.0          0.0          0.0
171 1.59061D+01     2 7.050920D-06 1.05500D+00 0.0          0.0          0.0
171 1.59061D+01     2 1.477620D-06 1.05500D+00 0.0          0.0          0.0
  171      1.5906D+01     1 7.612850D+01     3 8.099940D+01     5 8.283070D+01    11 8.570740D+01    13 8.677070D+01
                          15 8.763590D+01    17 8.832140D+01    19 8.918110D+01    21 9.071170D+01    24 1.725330D+02
                          25 1.713760D+02
172 1.60000D+01     1 7.413820D-05 1.05500D+00 0.0          0.0          0.0
172 1.60000D+01     2 7.314770D-06 1.05500D+00 0.0          0.0          0.0
172 1.60000D+01     2 1.380350D-06 1.05500D+00 0.0          0.0          0.0
172 1.59922D+01     1 2.089630D-05 1.05500D+00 0.0          0.0          0.0
172 1.59922D+01     2 2.414400D-06 1.05500D+00 0.0          0.0          0.0
172 1.59922D+01     1 2.425040D-06 1.05500D+00 0.0          0.0          0.0
  172      1.5992D+01     1 7.612810D+01     3 8.099830D+01     5 8.282900D+01    11 8.570470D+01    13 8.676640D+01
                          15 8.763160D+01    17 8.832490D+01    19 8.919620D+01    21 9.072180D+01    24 1.710060D+02
                          25 1.697380D+02
173 1.60022D+01     1 7.008610D-06 1.05500D+00 0.0          0.0          0.0
173 1.60022D+01     1 7.008610D-06 1.05500D+00 0.0          0.0          0.0
173 1.60022D+01     1 5.391640D-07 1.05500D+00 0.0          0.0          0.0
  173      1.6002D+01     1 7.612810D+01     3 8.099810D+01     5 8.282880D+01    11 8.570440D+01    13 8.676590D+01
                          15 8.763110D+01    17 8.832530D+01    19 8.919790D+01    21 9.072290D+01    24 1.708250D+02
                          25 1.695280D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IRM3033/ 0
WSXMP110 20 57 59 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 173 TIME STEPS, TIME = 1.60022D+01

GROSS GRID			1
			I
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	76113
	2	0.03	78156
2	3	0.06	81100
	4	0.08	81191
3	5	0.10	82183
	6	0.57	83131
	7	1.04	83180
	8	1.51	84128
	9	1.98	84176
	10	2.45	85123
4	11	2.92	85170
	12	3.14	86125
5	13	3.35	86177
	14	3.57	87123
6	15	3.79	87163
	16	4.01	87199
7	17	4.23	88133
	18	4.45	88171
8	19	4.67	89120
	20	4.89	89187
9	21	5.10	90172
	22	5.18	119178
	23	5.25	147115
10	24	5.32	170182
11	25	5.35	169153

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690670
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 2.16 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.70825D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.61281D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
174	1.60122D+01	1	9.57028D-07	1.05500D+00	0.0	0.0	0.0					
174	1.60122D+01	1	9.57028D-07	1.05500D+00	0.0	0.0	0.0	1	1.11033D-06			
174	1.60122D+01	1	7.88593D-08	1.05500D+00	0.0	0.0	0.0	2	7.22331D-08	25 2.08570D-01	25	1.23030D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	********** NODE NUMBERS AND TEMPERATURES **********					
174	1.6012D+01	1 7.61280D+01	3 8.09980D+01	5 8.28286D+01	11 8.57041D+01	13 8.67654D+01	
		15 8.76307D+01	17 8.83257D+01	19 8.91997D+01	21 9.07240D+01	24 1.70642D+02	
		25 1.69319D+02					
175	1.60221D+01	1 8.55084D-07	1.05500D+00	0.0	0.0	0.0	
175	1.60221D+01	1 8.55084D-07	1.05500D+00	0.0	0.0	0.0	1 1.01467D-06
175	1.60221D+01	1 7.03586D-08	1.05500D+00	0.0	0.0	0.0	2 6.54083D-08 25 2.07120D-01 25 1.22325D-01
175	1.6022D+01	1 7.61279D+01	3 8.09978D+01	5 8.28284D+01	11 8.57038D+01	13 8.67649D+01	
		15 8.76302D+01	17 8.83261D+01	19 8.92014D+01	21 9.07250D+01	24 1.70458D+02	
		25 1.69112D+02					
176	1.60322D+01	1 7.15643D-07	1.05500D+00	0.0	0.0	0.0	
176	1.60322D+01	1 7.15643D-07	1.05500D+00	0.0	0.0	0.0	1 8.91323D-07
176	1.60322D+01	1 5.74160D-08	1.05500D+00	0.0	0.0	0.0	2 5.73723D-08 25 2.05967D-01 25 1.21793D-01
176	1.6032D+01	1 7.61279D+01	3 8.09977D+01	5 8.28282D+01	11 8.57035D+01	13 8.67644D+01	
		15 8.76297D+01	17 8.83265D+01	19 8.92031D+01	21 9.07261D+01	24 1.70272D+02	
		25 1.68906D+02					
177	1.60432D+01	1 7.83656D-07	1.05500D+00	0.0	0.0	0.0	
177	1.60432D+01	1 7.83655D-07	1.05500D+00	0.0	0.0	0.0	1 9.76241D-07
177	1.60432D+01	1 6.74401D-08	1.05500D+00	0.0	0.0	0.0	2 6.31758D-08 25 2.25264D-01 25 1.33366D-01
177	1.6043D+01	1 7.61278D+01	3 8.09975D+01	5 8.28280D+01	11 8.57031D+01	13 8.67638D+01	
		15 8.76292D+01	17 8.83270D+01	19 8.92050D+01	21 9.07272D+01	24 1.70067D+02	
		25 1.68[illegible]1D+02					
178	1.60553D+01	1 8.07663D-07	1.05500D+00	0.0	0.0	0.0	
178	1.60553D+01	1 8.07663D-07	1.05500D+00	0.0	0.0	0.0	1 1.03103D-06
178	1.60553D+01	1 6.94909D-08	1.05500D+00	0.0	0.0	0.0	2 6.40542D-08 25 2.46585D-01 25 1.46185D-01
178	1.6055D+01	1 7.61278D+01	3 8.09974D+01	5 8.28278D+01	11 8.57027D+01	13 8.67632D+01	
		15 8.76286D+01	17 8.83275D+01	19 8.92071D+01	21 9.07285D+01	24 1.69839D+02	
		25 1.68434D+02					
179	1.60686D+01	1 8.33854D-07	1.05500D+00	0.0	0.0	0.0	
179	1.60686D+01	1 8.33854D-07	1.05500D+00	0.0	0.0	0.0	1 1.10210D-06
179	1.60686D+01	1 6.99085D-08	1.05500D+00	0.0	0.0	0.0	2 6.39018D-08 25 2.70104D-01 25 1.60362D-01
179	1.6069D+01	1 7.61277D+01	3 8.09972D+01	5 8.28275D+01	11 8.57023D+01	13 8.67626D+01	
		15 8.76280D+01	17 8.83280D+01	19 8.92093D+01	21 9.07298D+01	24 1.69558D+02	
		25 1.68164D+02					
180	1.60832D+01	1 8.04930D-07	1.05500D+00	0.0	0.0	0.0	
180	1.60832D+01	1 8.04930D-07	1.05500D+00	0.0	0.0	0.0	1 1.14665D-06
180	1.60832D+01	1 6.84925D-08	1.05500D+00	0.0	0.0	0.0	2 6.30700D-08 25 2.96203D-01 25 1.76139D-01
180	1.6083D+01	1 7.61276D+01	3 8.09970D+01	5 8.28272D+01	11 8.57018D+01	13 8.67619D+01	
		15 8.76273D+01	17 8.83286D+01	19 8.92118D+01	21 9.07312D+01	24 1.69310D+02	
		25 1.67868D+02					
181	1.60993D+01	1 7.74980D-07	1.05500D+00	0.0	0.0	0.0	
181	1.60993D+01	1 7.74980D-07	1.05500D+00	0.0	0.0	0.0	1 1.21435D-06
181	1.60993D+01	1 6.03911D-08	1.05500D+00	0.0	0.0	0.0	2 5.79918D-08 25 3.25096D-01 25 1.93661D-01
181	1.6099D+01	1 7.61275D+01	3 8.09967D+01	5 8.28269D+01	11 8.57013D+01	13 8.67611D+01	
		15 8.76266D+01	17 8.83293D+01	19 8.92145D+01	21 9.07328D+01	24 1.69003D+02	
		25 1.67543D+02					
182	1.61170D+01	1 7.06671D-07	1.05500D+00	0.0	0.0	0.0	
182	1.61170D+01	1 7.06671D-07	1.05500D+00	0.0	0.0	0.0	1 1.28312D-06
182	1.61170D+01	1 5.34228D-08	1.05500D+00	0.0	0.0	0.0	2 5.45625D-08 25 3.57143D-01 25 2.13165D-01
182	1.6117D+01	1 7.61274D+01	3 8.09965D+01	5 8.28265D+01	11 8.57007D+01	13 8.67602D+01	
		15 8.76257D+01	17 8.83300D+01	19 8.92175D+01	21 9.07344D+01	24 1.68664D+02	
		25 1.67186D+02					
183	1.61365D+01	1 6.36039D-07	1.05500D+00	0.0	0.0	0.0	
183	1.61365D+01	1 6.36039D-07	1.05500D+00	0.0	0.0	0.0	1 1.38181D-06
183	1.61365D+01	1 3.76871D-08	1.05500D+00	0.0	0.0	0.0	2 4.79298D-08 25 3.92613D-01 25 2.34837D-01
183	1.6137D+01	1 7.61273D+01	3 8.09962D+01	5 8.28261D+01	11 8.57001D+01	13 8.67592D+01	

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                    15 8.76249D+01   17 8.83309D+01   19 8.92208D+01   21 9.07362D+01   24 1.68289D+02
                    25 1.66793D+02
184 1.61580D+01   1 5.16265D-07 1.05500D+00 0.0          0.0          0.0
184 1.61580D+01   1 5.16265D-07 1.05500D+00 0.0          0.0          0.0          1 1.53122D-06
184 1.61580D+01   1 2.19448D-08 1.05500D+00 0.0          0.0          0.0          2 4.91203D-08   25 4.31972D-01   25 2.58987D-01
  184      1.6158D+01    1 7.61272D+01   3 8.09958D+01   5 8.28256D+01   11 8.56994D+01   13 8.67582D+01
                    15 8.76239D+01   17 8.83318D+01   19 8.92243D+01   21 9.07381D+01   24 1.67875D+02
                    25 1.66361D+02
185 1.61815D+01   1 6.03288D-07 1.05500D+00 0.0          0.0          0.0
185 1.61815D+01   1 6.03288D-07 1.05500D+00 0.0          0.0          0.0          1 1.83496D-06
185 1.61815D+01   1 2.97855D-08 1.05500D+00 0.0          0.0          0.0          2 5.71395D-08   25 4.75597D-01   25 2.85882D-01
  185      1.6182D+01    1 7.61271D+01   3 8.09955D+01   5 8.28251D+01   11 8.56986D+01   13 8.67570D+01
                    15 8.76228D+01   17 8.83328D+01   19 8.92282D+01   21 9.07401D+01   24 1.67418D+02
                    25 1.65886D+02
186 1.62075D+01   1 6.89714D-07 1.05500D+00 0.0          0.0          0.0
186 1.62075D+01   1 6.89714D-07 1.05500D+00 0.0          0.0          0.0          1 2.16790D-06
186 1.62075D+01   1 3.93112D-08 1.05500D+00 0.0          0.0          0.0          2 6.13392D-08   25 5.23905D-01   25 3.15823D-01
  186      1.6207D+01    1 7.61270D+01   3 8.09951D+01   5 8.28246D+01   11 8.56978D+01   13 8.67558D+01
                    15 8.76217D+01   17 8.83339D+01   19 8.92325D+01   21 9.07421D+01   24 1.66914D+02
                    25 1.65362D+02
187 1.62360D+01   1 7.70943D-07 1.05500D+00 0.0          0.0          0.0
187 1.62360D+01   1 7.70943D-07 1.05500D+00 0.0          0.0          0.0          1 2.57122D-06
187 1.62360D+01   1 9.52885D-08 1.05500D+00 0.0          0.0          0.0          2 8.51721D-08   25 5.77433D-01   25 3.49194D-01
  187      1.6236D+01    1 7.61268D+01   3 8.09946D+01   5 8.28240D+01   11 8.56968D+01   13 8.67544D+01
                    15 8.76205D+01   17 8.83351D+01   19 8.92371D+01   21 9.07443D+01   24 1.66357D+02
                    25 1.64784D+02
188 1.62674D+01   1 8.42002D-07 1.05500D+00 0.0          0.0          0.0
188 1.62674D+01   1 8.42002D-07 1.05500D+00 0.0          0.0          0.0          1 3.03396D-06
188 1.62674D+01   1 1.65102D-07 1.05500D+00 0.0          0.0          0.0          2 1.21519D-07   25 6.36783D-01   25 3.86424D-01
  188      1.6267D+01    1 7.61267D+01   3 8.09941D+01   5 8.28233D+01   11 8.56958D+01   13 8.67529D+01
                    15 8.76191D+01   17 8.83365D+01   19 8.92422D+01   21 9.07465D+01   24 1.65743D+02
                    25 1.64147D+02
189 1.63019D+01   1 8.88280D-07 1.05500D+00 0.0          0.0          0.0
189 1.63019D+01   1 8.88280D-07 1.05500D+00 0.0          0.0          0.0          1 3.51308D-06
189 1.63019D+01   1 2.25123D-07 1.05500D+00 0.0          0.0          0.0          2 1.51029D-07   25 7.02404D-01   25 4.27911D-01
  189      1.6302D+01    1 7.61265D+01   3 8.09935D+01   5 8.28225D+01   11 8.56946D+01   13 8.67512D+01
                    15 8.76177D+01   17 8.83380D+01   19 8.92477D+01   21 9.07488D+01   24 1.65064D+02
                    25 1.63445D+02
190 1.63399D+01   1 1.40825D-06 1.05500D+00 0.0          0.0          0.0
190 1.63399D+01   1 1.40825D-06 1.05500D+00 0.0          0.0          0.0          1 4.11787D-06
190 1.63399D+01   1 3.45101D-07 1.05500D+00 0.0          0.0          0.0          2 2.03411D-07   25 7.75197D-01   25 4.74286D-01
  190      1.6340D+01    1 7.61263D+01   3 8.09929D+01   5 8.28217D+01   11 8.56933D+01   13 8.67494D+01
                    15 8.76161D+01   17 8.83397D+01   19 8.92537D+01   21 9.07511D+01   24 1.64315D+02
                    25 1.62670D+02
191 1.63817D+01   1 1.89489D-06 1.05500D+00 0.0          0.0          0.0
191 1.63817D+01   1 1.89489D-06 1.05500D+00 0.0          0.0          0.0          1 4.72560D-06
191 1.63817D+01   1 4.51195D-07 1.05500D+00 0.0          0.0          0.0          2 2.45539D-07   25 8.55651D-01   25 5.26004D-01
  191      1.6382D+01    1 7.61260D+01   3 8.09922D+01   5 8.28207D+01   11 8.56919D+01   13 8.67473D+01
                    15 8.76144D+01   17 8.83416D+01   19 8.92602D+01   21 9.07533D+01   24 1.63487D+02
                    25 1.61814D+02
192 1.64276D+01   1 2.76120D-06 1.05500D+00 0.0          0.0          0.0
192 1.64276D+01   1 2.76120D-06 1.05500D+00 0.0          0.0          0.0          1 5.45518D-06
192 1.64276D+01   1 6.02248D-07 1.05500D+00 0.0          0.0          0.0          2 3.05228D-07   25 9.44802D-01   25 5.83881D-01
  192      1.6428D+01    1 7.61258D+01   3 8.09914D+01   5 8.28197D+01   11 8.56903D+01   13 8.67452D+01
                    15 8.76126D+01   17 8.83437D+01   19 8.92673D+01   21 9.07555D+01   24 1.62572D+02
                    25 1.60869D+02
193 1.64782D+01   1 4.07224D-06 1.05500D+00 0.0          0.0          0.0
193 1.64782D+01   1 4.07224D-06 1.05500D+00 0.0          0.0          0.0          1 6.31909D-06
193 1.64782D+01   1 8.55675D-07 1.05500D+00 0.0          0.0          0.0          2 3.94553D-07   25 1.04373D+00   25 6.48805D-01
  193      1.6478D+01    1 7.61255D+01   3 8.09906D+01   5 8.28185D+01   11 8.56886D+01   13 8.67428D+01
                    15 8.76107D+01   17 8.83460D+01   19 8.92749D+01   21 9.07575D+01   24 1.61561D+02
                    25 1.59826D+02
194 1.65338D+01   1 7.54720D-06 1.05500D+00 0.0          0.0          0.0
194 1.65338D+01   1 7.54720D-06 1.05500D+00 0.0          0.0          0.0          1 7.65326D-06
194 1.65338D+01   1 1.48691D-06 1.05500D+00 0.0          0.0          0.0          2 6.04422D-07   25 1.15476D+00   25 7.22515D-01
  194      1.6534D+01    1 7.61251D+01   3 8.09896D+01   5 8.28172D+01   11 8.56866D+01   13 8.67401D+01
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PCC

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                    15 8.76086D+01   17 8.83486D+01   19 8.92832D+01   21 9.07592D+01   24 1.60442D+02
                    25 1.58671D+02
195 1.65949D+01   1 2.88951D-05 1.05500D+00 0.0          0.0          0.0
195 1.65949D+01   2 2.44284D-06 1.05500D+00 0.0          0.0          0.0          1 1.33335D-05
195 1.65949D+01   1 2.60280D-06 1.05500D+00 0.0          0.0          0.0          2 6.70738D-07   25 1.29017D+00   25 8.13113D-01
  195     1.6595D+01    1 7.61248D+01   3 8.09885D+01   5 8.28157D+01   11 8.56845D+01   13 8.67372D+01
                    15 8.76064D+01   17 8.83514D+01   19 8.92921D+01   21 9.07605D+01   24 1.59203D+02
                    25 1.57381D+02
196 1.66622D+01   1 2.42849D-05 1.05500D+00 0.0          0.0          0.0
196 1.66622D+01   2 2.01075D-06 1.05500D+00 0.0          0.0          0.0          1 1.45918D-05
196 1.66622D+01   1 2.53837D-06 1.05500D+00 0.0          0.0          0.0          2 5.84774D-07   25 1.43580D+00   25 9.12310D-01
  196     1.6662D+01    1 7.61244D+01   3 8.09872D+01   5 8.28140D+01   11 8.56821D+01   13 8.67341D+01
                    15 8.76040D+01   17 8.83546D+01   19 8.93017D+01   21 9.07613D+01   24 1.57824D+02
                    25 1.55945D+02
197 1.67322D+01   1 3.04086D-05 1.05500D+00 0.0          0.0          0.0
197 1.67322D+01   2 2.57844D-06 1.05500D+00 0.0          0.0          0.0          1 1.68966D-05
197 1.67322D+01   1 3.21331D-06 1.05500D+00 0.0          0.0          0.0          2 7.31248D-07   25 1.51474D+00   25 9.71332D-01
  197     1.6732D+01    1 7.61239D+01   3 8.09859D+01   5 8.28123D+01   11 8.56796D+01   13 8.67309D+01
                    15 8.76017D+01   17 8.83579D+01   19 8.93114D+01   21 9.07614D+01   24 1.56372D+02
                    25 1.54430D+02
198 1.68023D+01   1 3.02521D-05 1.05500D+00 0.0          0.0          0.0
198 1.68023D+01   2 2.51931D-06 1.05500D+00 0.0          0.0          0.0          1 1.73794D-05
198 1.68023D+01   1 3.23373D-06 1.05500D+00 0.0          0.0          0.0          2 7.19338D-07   25 1.53443D+00   25 9.93610D-01
  198     1.6802D+01    1 7.61234D+01   3 8.09846D+01   5 8.28105D+01   11 8.56771D+01   13 8.67277D+01
                    15 8.75994D+01   17 8.83612D+01   19 8.93208D+01   21 9.07607D+01   24 1.54901D+02
                    25 1.52896D+02
199 1.68723D+01   1 2.35927D-05 1.05500D+00 0.0          0.0          0.0
199 1.68723D+01   2 1.95769D-06 1.05500D+00 0.0          0.0          0.0          1 1.63335D-05
199 1.68723D+01   1 2.67415D-06 1.05500D+00 0.0          0.0          0.0          2 5.90097D-07   25 1.55048D+00   25 1.01408D+00
199 1.68679D+01   1 9.62572D-06 1.05500D+00 0.0          0.0          0.0
199 1.68679D+01   1 9.62572D-06 1.05500D+00 0.0          0.0          0.0          1 1.97623D-06
199 1.68679D+01   1 1.48605D-06 1.05500D+00 0.0          0.0          0.0          2 5.10227D-07   25 1.45787D+00   25 9.53507D-01
  199     1.6868D+01    1 7.61230D+01   3 8.09833D+01   5 8.28088D+01   11 8.56747D+01   13 8.67247D+01
                    15 8.75974D+01   17 8.83644D+01   19 8.93294D+01   21 9.07594D+01   24 1.53506D+02
                    25 1.51438D+02
200 1.69335D+01   1 1.11984D-05 1.05500D+00 0.0          0.0          0.0
200 1.69335D+01   2 1.15113D-06 1.05500D+00 0.0          0.0          0.0          1 1.33395D-05
200 1.69335D+01   1 1.44004D-06 1.05500D+00 0.0          0.0          0.0          2 3.32654D-07   25 1.45773D+00   25 9.69196D-01
  200     1.6934D+01    1 7.61225D+01   3 8.09820D+01   5 8.28071D+01   11 8.56723D+01   13 8.67217D+01
                    15 8.75954D+01   17 8.83675D+01   19 8.93378D+01   21 9.07575D+01   24 1.52095D+02
                    25 1.49970D+02
201 1.70000D+01   1 1.30714D-05 1.05500D+00 0.0          0.0          0.0
201 1.70000D+01   2 1.22237D-06 1.05500D+00 0.0          0.0          0.0          1 1.29391D-05
201 1.70000D+01   1 1.55016D-06 1.05500D+00 0.0          0.0          0.0          2 3.54279D-07   25 1.49628D+00   25 9.97722D-01
  201     1.7000D+01    1 7.61221D+01   3 8.09806D+01   5 8.28054D+01   11 8.56698D+01   13 8.67187D+01
                    15 8.75935D+01   17 8.83708D+01   19 8.93460D+01   21 9.07549D+01   24 1.50652D+02
                    25 1.48474D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.57.59 11 4-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 201 TIME STEPS, TIME = 1.700000+01

GROSS GRID			1
			1
	FINE GRID		1
		DISTANCE	0.0
1	1	0.0	76112
	2	0.03	78155
2	3	0.06	80198
	4	0.08	81189
3	5	0.10	82181
	6	0.57	83130
	7	1.04	83178
	8	1.51	84126
	9	1.98	84174
	10	2.45	85121
4	11	2.92	85167
	12	3.14	86121
5	13	3.35	86172
	14	3.57	87118
6	15	3.79	87159
	16	4.01	87198
7	17	4.23	88137
	18	4.45	88181
8	19	4.67	89135
	20	4.89	90100
9	21	5.10	90175
	22	5.18	113189
	23	5.25	134169
10	24	5.32	150165
11	25	5.35	148147

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	94.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 6.645047720-02

ELAPSED CPU TIME IS 2.44 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.50652D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.61221D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PGC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
202	1.70665D+01	1	2.50076D-05	1.05500D+00	0.0	0.0	0.0					
202	1.70665D+01	2	2.04908D-06	1.05500D+00	0.0	0.0	0.0	1	1.47348D-05			
202	1.70665D+01	1	2.52240D-06	1.05500D+00	0.0	0.0	0.0	2	5.88579D-07	25 1.51261D+00	25	1.01877D+00
202	1.70620D+01	1	9.18545D-06	1.05500D+00	0.0	0.0	0.0					
202	1.70620D+01	1	9.18545D-06	1.05500D+00	0.0	0.0	0.0	1	1.97012D-06			
202	1.70620D+01	1	1.41338D-06	1.05500D+00	0.0	0.0	0.0	2	4.96767D-07	25 1.41578D+00	25	9.53558D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
202	1.70620D+01	1 7.61216D+01	3 8.09794D+01	5 8.28038D+01	11 8.56675D+01	13 8.67160D+01	
		15 8.75917D+01	17 8.83738D+01	19 8.93534D+01	21 9.07518D+01	24 1.49293D+02	
		25 1.47058D+02					
203	1.71239D+01	1 1.00790D-05	1.05500D+00	0.0	0.0	0.0	
203	1.71239D+01	2 1.04815D-06	1.05500D+00	0.0	0.0	0.0	1 1.17110D-05
203	1.71239D+01	1 1.18719D-06	1.05500D+00	0.0	0.0	0.0	2 2.91251D-07 25 1.42475D+00 25 9.68834D-01
203	1.7124D+01	1 7.61212D+01	3 8.09781D+01	5 8.28021D+01	11 8.56652D+01	13 8.67133D+01	
		15 8.75901D+01	17 8.83768D+01	19 8.93606D+01	21 9.07483D+01	24 1.47921D+02	
		25 1.45633D+02					
204	1.71859D+01	1 1.22136D-05	1.05500D+00	0.0	0.0	0.0	
204	1.71859D+01	2 1.16790D-06	1.05500D+00	0.0	0.0	0.0	1 1.15047D-05
204	1.71859D+01	1 1.31035D-06	1.05500D+00	0.0	0.0	0.0	2 3.23455D-07 25 1.43446D+00 25 9.84980D-01
204	1.7186D+01	1 7.61207D+01	3 8.09768D+01	5 8.28004D+01	11 8.56629D+01	13 8.67105D+01	
		15 8.75885D+01	17 8.83798D+01	19 8.93676D+01	21 9.07441D+01	24 1.46537D+02	
		25 1.44139D+02					
205	1.72479D+01	1 1.25875D-05	1.05500D+00	0.0	0.0	0.0	
205	1.72479D+01	2 1.17608D-06	1.05500D+00	0.0	0.0	0.0	1 1.12069D-05
205	1.72479D+01	1 1.26912D-06	1.05500D+00	0.0	0.0	0.0	2 3.16849D-07 25 1.44412D+00 25 1.00148D+00
205	1.72447D+01	1 6.08158D-06	1.05500D+00	0.0	0.0	0.0	
205	1.72447D+01	1 6.08158D-06	1.05500D+00	0.0	0.0	0.0	1 1.35172D-06
205	1.72447D+01	1 9.85942D-07	1.05500D+00	0.0	0.0	0.0	2 3.44012D-07 25 1.37346D+00 25 9.52478D-01
205	1.7245D+01	1 7.61203D+01	3 8.09755D+01	5 8.27988D+01	11 8.56607D+01	13 8.67080D+01	
		15 8.75870D+01	17 8.83827D+01	19 8.93740D+01	21 9.07397D+01	24 1.45213D+02	
		25 1.42825D+02					
206	1.73035D+01	1 7.34739D-06	1.05500D+00	0.0	0.0	0.0	
206	1.73035D+01	1 7.34739D-06	1.05500D+00	0.0	0.0	0.0	1 9.22949D-06
206	1.73035D+01	1 1.71437D-06	1.05500D+00	0.0	0.0	0.0	2 7.53430D-07 25 1.38031D+00 25 9.66435D-01
206	1.7303D+01	1 7.61198D+01	3 8.09743D+01	5 8.27972D+01	11 8.56585D+01	13 8.67055D+01	
		15 8.75856D+01	17 8.83855D+01	19 8.93803D+01	21 9.07347D+01	24 1.43879D+02	
		25 1.41445D+02					
207	1.73622D+01	1 9.24221D-06	1.05500D+00	0.0	0.0	0.0	
207	1.73622D+01	1 9.24221D-06	1.05500D+00	0.0	0.0	0.0	1 9.05162D-06
207	1.73622D+01	1 1.94432D-06	1.05500D+00	0.0	0.0	0.0	2 8.09188D-07 25 1.38789D+00 25 9.81219D-01
207	1.7362D+01	1 7.61194D+01	3 8.09730D+01	5 8.27956D+01	11 8.56563D+01	13 8.67030D+01	
		15 8.75842D+01	17 8.83884D+01	19 8.93863D+01	21 9.07293D+01	24 1.42536D+02	
		25 1.40057D+02					
208	1.74210D+01	1 9.98262D-06	1.05500D+00	0.0	0.0	0.0	
208	1.74210D+01	1 9.98262D-06	1.05500D+00	0.0	0.0	0.0	1 8.89586D-06
208	1.74210D+01	1 1.99509D-06	1.05500D+00	0.0	0.0	0.0	2 8.21304D-07 25 1.39571D+00 25 9.96525D-01
208	1.7421D+01	1 7.61189D+01	3 8.09717D+01	5 8.27940D+01	11 8.56541D+01	13 8.67005D+01	
		15 8.75829D+01	17 8.83912D+01	19 8.93921D+01	21 9.07233D+01	24 1.41184D+02	
		25 1.38662D+02					
209	1.74798D+01	1 1.01190D-05	1.05500D+00	0.0	0.0	0.0	
209	1.74798D+01	2 9.61473D-07	1.05500D+00	0.0	0.0	0.0	1 9.16518D-06
209	1.74798D+01	1 9.88103D-07	1.05500D+00	0.0	0.0	0.0	2 2.60227D-07 25 1.40347D+00 25 1.01215D+00
209	1.74762D+01	1 6.86268D-06	1.05500D+00	0.0	0.0	0.0	
209	1.74762D+01	1 6.86268D-06	1.05500D+00	0.0	0.0	0.0	1 1.57655D-06
209	1.74762D+01	1 1.01487D-06	1.05500D+00	0.0	0.0	0.0	2 3.77215D-07 25 1.32152D+00 25 9.53055D-01
209	1.7476D+01	1 7.61185D+01	3 8.09705D+01	5 8.27924D+01	11 8.56520D+01	13 8.66982D+01	
		15 8.75817D+01	17 8.83939D+01	19 8.93973D+01	21 9.07173D+01	24 1.39907D+02	
		25 1.37340D+02					
210	1.75314D+01	1 2.43239D-06	1.05500D+00	0.0	0.0	0.0	

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 210 1.75314D+01     1 2.43239D-06 1.05500D+00 0.0          0.0          0.0          1 6.74390D-06
 210 1.75314D+01     1 6.47285D-07 1.05500D+00 0.0          0.0          0.0          2 3.42939D-07   25 1.32432D+00   25 9.64265D-01
   210      1.7531D+01     1 7.61181D+01     3 8.09693D+01   5 8.27909D+01   11 8.56499D+01   13 8.66959D+01
                           15 8.75806D+01    17 8.83965D+01  19 8.94024D+01  21 9.07109D+01   24 1.38622D+02
                           25 1.36016D+02

 211 1.75865D+01     1 3.72025D-05 1.05500D+00 0.0          0.0          0.0          1 1.09112D-05
 211 1.75865D+01     2 2.85228D-06 1.05500D+00 0.0          0.0          0.0          2 7.19770D-07   25 1.30298D+00   25 9.57965D-01
 211 1.75865D+01     1 2.37453D-06 1.05500D+00 0.0          0.0          0.0
   211      1.7587D+01     1 7.61176D+01     3 8.09681D+01   5 8.27893D+01   11 8.56478D+01   13 8.66936D+01
                           15 8.75735D+01    17 8.83992D+01  19 8.94073D+01  21 9.07040D+01   24 1.37336D+02
                           25 1.34713D+02

 212 1.76417D+01     1 1.43993D-05 1.05500D+00 0.0          0.0          0.0          1 7.24182D-06
 212 1.76417D+01     2 1.20848D-06 1.05500D+00 0.0          0.0          0.0          2 3.12933D-07   25 1.29367D+00   25 9.60319D-01
 212 1.76417D+01     1 1.02777D-06 1.05500D+00 0.0          0.0          0.0
   212      1.7642D+01     1 7.61172D+01     3 8.09668D+01   5 8.27878D+01   11 8.56457D+01   13 8.66913D+01
                           15 8.75784D+01    17 8.84018D+01  19 8.94120D+01  21 9.06967D+01   24 1.36053D+02
                           25 1.33419D+02

 213 1.76969D+01     1 5.37518D-06 1.05500D+00 0.0          0.0          0.0          1 5.39074D-06
 213 1.76969D+01     1 5.37518D-06 1.05500D+00 0.0          0.0          0.0          2 5.53451D-07   25 1.28935D+00   25 9.66389D-01
 213 1.76969D+01     1 1.07384D-06 1.05500D+00 0.0          0.0          0.0
   213      1.7697D+01     1 7.61167D+01     3 8.09656D+01   5 8.27862D+01   11 8.56436D+01   13 8.66891D+01
                           15 8.75774D+01    17 8.84044D+01  19 8.94165D+01  21 9.06890D+01   24 1.34775D+02
                           25 1.32130D+02

 214 1.77520D+01     1 3.52266D-06 1.05500D+00 0.0          0.0          0.0          1 3.99688D-06
 214 1.77520D+01     1 3.52266D-06 1.05500D+00 0.0          0.0          0.0          2 2.77141D-07   25 1.28747D+00   25 9.74396D-01
 214 1.77520D+01     1 4.13121D-07 1.05500D+00 0.0          0.0          0.0
   214      1.7752D+01     1 7.61163D+01     3 8.09644D+01   5 8.27846D+01   11 8.56416D+01   13 8.66869D+01
                           15 8.75764D+01    17 8.84070D+01  19 8.94209D+01  21 9.06809D+01   24 1.33501D+02
                           25 1.30842D+02

 215 1.78072D+01     1 2.70616D-06 1.05500D+00 0.0          0.0          0.0          1 2.99061D-06
 215 1.78072D+01     1 2.70616D-06 1.05500D+00 0.0          0.0          0.0          2 1.64046D-07   25 1.28685D+00   25 9.83511D-01
 215 1.78072D+01     1 2.20825D-07 1.05500D+00 0.0          0.0          0.0
   215      1.7807D+01     1 7.61159D+01     3 8.09631D+01   5 8.27830D+01   11 8.56395D+01   13 8.66847D+01
                           15 8.75755D+01    17 8.84096D+01  19 8.94250D+01  21 9.06724D+01   24 1.32229D+02
                           25 1.29555D+02

 216 1.78624D+01     1 1.91196D-06 1.05500D+00 0.0          0.0          0.0          1 2.29531D-06
 216 1.78624D+01     1 1.91196D-06 1.05500D+00 0.0          0.0          0.0          2 1.52775D-07   25 1.28709D+00   25 9.93470D-01
 216 1.78624D+01     1 2.10824D-07 1.05500D+00 0.0          0.0          0.0
   216      1.7862D+01     1 7.61154D+01     3 8.09619D+01   5 8.27815D+01   11 8.56374D+01   13 8.66825D+01
                           15 8.75745D+01    17 8.84122D+01  19 8.94289D+01  21 9.06634D+01   24 1.30960D+02
                           25 1.28268D+02

 217 1.79175D+01     1 2.38051D-06 1.05500D+00 0.0          0.0          0.0          1 2.11096D-06
 217 1.79175D+01     1 2.38051D-06 1.05500D+00 0.0          0.0          0.0          2 1.83357D-07   25 1.28813D+00   25 1.00425D+00
 217 1.79175D+01     1 2.58749D-07 1.05500D+00 0.0          0.0          0.0
 217 1.79146D+01     1 5.24367D-06 1.05500D+00 0.0          0.0          0.0          1 1.16523D-06
 217 1.79146D+01     1 5.24367D-06 1.05500D+00 0.0          0.0          0.0          2 3.00587D-07   25 1.22177D+00   25 9.52508D-01
 217 1.79146D+01     1 8.15863D-07 1.05500D+00 0.0          0.0          0.0
   217      1.7915D+01     1 7.61150D+01     3 8.09607D+01   5 8.27800D+01   11 8.56354D+01   13 8.66804D+01
                           15 8.75737D+01    17 8.84146D+01  19 8.94325D+01  21 9.06546D+01   24 1.29759D+02
                           25 1.27046D+02

 218 1.79573D+01     1 1.21261D-05 1.05500D+00 0.0          0.0          0.0          1 4.42336D-06
 218 1.79573D+01     2 1.10255D-06 1.05500D+00 0.0          0.0          0.0          2 2.44060D-07   25 1.00921D+00   25 7.94361D-01
 218 1.79573D+01     1 6.10168D-07 1.05500D+00 0.0          0.0          0.0
   218      1.7957D+01     1 7.61146D+01     3 8.09597D+01   5 8.27787D+01   11 8.56338D+01   13 8.66788D+01
                           15 8.75730D+01    17 8.84165D+01  19 8.94353D+01  21 9.06471D+01   24 1.28775D+02
                           25 1.26037D+02

 219 1.80000D+01     1 4.66102D-06 1.05500D+00 0.0          0.0          0.0          1 2.42525D-06
 219 1.80000D+01     1 4.66102D-06 1.05500D+00 0.0          0.0          0.0          2 2.97730D-07   25 1.00654D+00   25 7.98603D-01
 219 1.80000D+01     1 5.53467D-07 1.05500D+00 0.0          0.0          0.0
   219      1.8000D+01     1 7.61143D+01     3 8.09587D+01   5 8.27775D+01   11 8.56321D+01   13 8.66771D+01
                           15 8.75724D+01    17 8.84184D+01  19 8.94380D+01  21 9.06394D+01   24 1.27789D+02
                           25 1.25031D+02
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PCC

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM4033/ 0
20.58.00 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 219 TIME STEPS, TIME = 1.80000D+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	76111
	2	0.03	78154
2	3	0.06	80196
	4	0.08	81187
3	5	0.10	82178
	6	0.57	83127
	7	1.04	83173
	8	1.51	84124
	9	1.98	84171
	10	2.45	85118
4	11	2.92	85163
	12	3.14	86117
5	13	3.35	86168
	14	3.57	87114
6	15	3.79	87157
	16	4.01	87199
7	17	4.23	88142
	18	4.45	88189
8	19	4.67	89144
	20	4.89	90104
9	21	5.10	90164
	22	5.18	106159
	23	5.25	119187
10	24	5.32	127179
11	25	5.35	125103

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 4.27173945D-02

ELAPSED CPU TIME IS 2.66 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.27789D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.61143D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

000

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
220	1.80427D+01	1	1.43794D-06	1.05500D+00	0.0	0.0	0.0				
220	1.80427D+01	1	1.43794D-06	1.05500D+00	0.0	0.0	0.0	1	1.67689D-06		
220	1.80427D+01	1	2.65018D-07	1.05500D+00	0.0	0.0	0.0	2	1.25647D-07	25 1.00802D+00	25 8.06222D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
220	1.8043D+01	1 7.61139D+01	3 8.09577D+01	5 8.27763D+01	11 8.56305D+01	13 8.66755D+01	
		15 8.75718D+01	17 8.84204D+01	19 8.94405D+01	21 9.06315D+01	24 1.26802D+02	
		25 1.24023D+02					
221	1.80854D+01	1 2.02386D-06	1.05500D+00	0.0	0.0	0.0	
221	1.80854D+01	1 2.02386D-06	1.05500D+00	0.0	0.0	1 1.82600D-06	
221	1.80854D+01	1 3.50185D-07	1.05500D+00	0.0	0.0	2 1.60875D-07	25 1.00991D+00 25 8.14293D-01
221	1.8085D+01	1 7.61136D+01	3 8.09567D+01	5 8.27750D+01	11 8.56289D+01	13 8.66738D+01	
		15 8.75712D+01	17 8.84223D+01	19 8.94429D+01	21 9.06233D+01	24 1.25814D+02	
		25 1.23013D+02					
222	1.81324D+01	1 3.73167D-06	1.05500D+00	0.0	0.0	0.0	
222	1.81324D+01	1 3.73167D-06	1.05500D+00	0.0	0.0	1 2.10736D-06	
222	1.81324D+01	1 4.37750D-07	1.05500D+00	0.0	0.0	2 2.24983D-07	25 1.10886D+00 25 9.01421D-01
222	1.8132D+01	1 7.61132D+01	3 8.09557D+01	5 8.27737D+01	11 8.56271D+01	13 8.66721D+01	
		15 8.75705D+01	17 8.84243D+01	19 8.94455D+01	21 9.06140D+01	24 1.24725D+02	
		25 1.21904D+02					
223	1.81819D+01	1 3.02778D-06	1.05500D+00	0.0	0.0	0.0	
223	1.81819D+01	1 3.02778D-06	1.05500D+00	0.0	0.0	1 2.00582D-06	
223	1.81819D+01	1 5.04523D-07	1.05500D+00	0.0	0.0	2 2.09443D-07	25 1.17071D+00 25 9.60353D-01
223	1.8182D+01	1 7.61128D+01	3 8.09545D+01	5 8.27723D+01	11 8.56253D+01	13 8.66702D+01	
		15 8.75699D+01	17 8.84265D+01	19 8.94480D+01	21 9.06040D+01	24 1.23577D+02	
		25 1.20733D+02					
224	1.82315D+01	1 7.80067D-06	1.05500D+00	0.0	0.0	0.0	
224	1.82315D+01	1 7.80067D-06	1.05500D+00	0.0	0.0	1 3.22944D-06	
224	1.82315D+01	1 1.18191D-06	1.05500D+00	0.0	0.0	2 4.76951D-07	25 1.17582D+00 25 9.73901D-01
224	1.8231D+01	1 7.61124D+01	3 8.09534D+01	5 8.27708D+01	11 8.56233D+01	13 8.66683D+01	
		15 8.75692D+01	17 8.84286D+01	19 8.94504D+01	21 9.05937D+01	24 1.22427D+02	
		25 1.19557D+02					
225	1.82810D+01	1 6.20325D-06	1.05500D+00	0.0	0.0	0.0	
225	1.82810D+01	1 6.20325D-06	1.05500D+00	0.0	0.0	1 3.33219D-06	
225	1.82810D+01	1 1.03144D-06	1.05500D+00	0.0	0.0	2 4.29332D-07	25 1.18019D+00 25 9.87136D-01
225	1.8281D+01	1 7.61120D+01	3 8.09522D+01	5 8.27694D+01	11 8.56215D+01	13 8.66665D+01	
		15 8.75686D+01	17 8.84307D+01	19 8.94526D+01	21 9.05831D+01	24 1.21274D+02	
		25 1.18377D+02					
226	1.83305D+01	1 5.34006D-06	1.05500D+00	0.0	0.0	0.0	
226	1.83305D+01	1 5.34006D-06	1.05500D+00	0.0	0.0	1 3.44073D-06	
226	1.83305D+01	1 9.31520D-07	1.05500D+00	0.0	0.0	2 4.00316D-07	25 1.18418D+00 25 1.00035D+00
226	1.83280D+01	1 3.88976D-06	1.05500D+00	0.0	0.0	0.0	
226	1.83280D+01	1 3.88976D-06	1.05500D+00	0.0	0.0	1 9.83554D-07	
226	1.83280D+01	1 5.34752D-07	1.05500D+00	0.0	0.0	2 2.20684D-07	25 1.12703D+00 25 9.52067D-01
226	1.8328D+01	1 7.61116D+01	3 8.09511D+01	5 8.27680D+01	11 8.56198D+01	13 8.66648D+01	
		15 8.75681D+01	17 8.84327D+01	19 8.94546D+01	21 9.05727D+01	24 1.20177D+02	
		25 1.17250D+02					
227	1.83750D+01	1 2.40684D-06	1.05500D+00	0.0	0.0	0.0	
227	1.83750D+01	1 2.40684D-06	1.05500D+00	0.0	0.0	1 3.12065D-06	
227	1.83750D+01	1 5.46975D-07	1.05500D+00	0.0	0.0	2 2.63410D-07	25 1.12957D+00 25 9.63385D-01
227	1.83750D+01	1 7.61112D+01	3 8.09500D+01	5 8.27667D+01	11 8.56180D+01	13 8.66631D+01	
		15 8.75675D+01	17 8.84347D+01	19 8.94564D+01	21 9.05621D+01	24 1.19076D+02	
		25 1.16121D+02					
228	1.84221D+01	1 3.65657D-06	1.05500D+00	0.0	0.0	0.0	
228	1.84221D+01	1 3.65657D-06	1.05500D+00	0.0	0.0	1 3.35671D-06	
228	1.84221D+01	1 6.91490D-07	1.05500D+00	0.0	0.0	2 3.19349D-07	25 1.13279D+00 25 9.75530D-01
228	1.8422D+01	1 7.61108D+01	3 8.09489D+01	5 8.27653D+01	11 8.56163D+01	13 8.66614D+01	
		15 8.75670D+01	17 8.84366D+01	19 8.94580D+01	21 9.05513D+01	24 1.17971D+02	
		25 1.14988D+02					
229	1.84691D+01	1 3.97032D-06	1.05500D+00	0.0	0.0	0.0	

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229 1.84691D+01   1 3.97032D-06 1.05500D+00 0.0                0.0          0.0              1 3.47976D-06
229 1.84691D+01   1 7.64799D-07 1.05500D+00 0.0                0.0          0.0              2 3.42889D-07   25 1.13615D+00   25 9.88058D-01
  229   1.8469D+01     1 7.61104D+01    3 8.09478D+01    5 8.27639D+01   11 8.56145D+01   13 8.66591D+01
                       15 8.75665D+01   17 8.84385D+01   19 8.94596D+01   21 9.05302D+01   24 1.16863D+02
                       25 1.13852D+02
230 1.85161D+01   1 4.33613D-06 1.05500D+00 0.0                0.0          0.0              1 3.63393D-06
230 1.85161D+01   1 4.33613D-06 1.05500D+00 0.0                0.0          0.0              2 3.56432D-07   25 1.13972D+00   25 1.00106D+00
230 1.85161D+01   1 7.87221D-07 1.05500D+00 0.0                0.0          0.0
230 1.85137D+01   1 3.67499D-06 1.05500D+00 0.0                0.0          0.0              1 9.85728D-07
230 1.85137D+01   1 3.67499D-06 1.05500D+00 0.0                0.0          0.0              2 2.14688D-07   25 1.08393D+00   25 9.52057D-01
230 1.85137D+01   1 5.12267D-07 1.05500D+00 0.0                0.0          0.0
  230   1.8514D+01     1 7.61100D+01    3 8.09468D+01    5 8.27627D+01   11 8.56128D+01   13 8.66581D+01
                       15 8.75660D+01   17 8.84403D+01   19 8.94609D+01   21 9.05294D+01   24 1.15809D+02
                       25 1.12768D+02
231 1.85584D+01   1 4.85804D-05 1.05500D+00 0.0                0.0          0.0              1 1.33112D-05
231 1.85584D+01   2 4.23036D-06 1.05500D+00 0.0                0.0          0.0              2 8.99060D-07   25 1.05372D+00   25 9.34412D-01
231 1.85584D+01   1 2.27625D-06 1.05500D+00 0.0                0.0          0.0
  231   1.8558D+01     1 7.61096D+01    3 8.09458D+01    5 8.27614D+01   11 8.56112D+01   13 8.66565D+01
                       15 8.75656D+01   17 8.84420D+01   19 8.94621D+01   21 9.05185D+01   24 1.14755D+02
                       25 1.11714D+02
232 1.86030D+01   1 3.69399D-05 1.05500D+00 0.0                0.0          0.0              1 1.36460D-05
232 1.86030D+01   2 3.43944D-06 1.05500D+00 0.0                0.0          0.0              2 7.39427D-07   24 1.04493D+00   25 9.20598D-01
232 1.86030D+01   1 1.90729D-06 1.05500D+00 0.0                0.0          0.0
  232   1.8603D+01     1 7.61093D+01    3 8.09447D+01    5 8.27601D+01   11 8.56095D+01   13 8.66549D+01
                       15 8.75651D+01   17 8.84438D+01   19 8.94631D+01   21 9.05073D+01   24 1.13710D+02
                       25 1.10686D+02
233 1.86476D+01   1 2.02168D-05 1.05500D+00 0.0                0.0          0.0              1 1.11334D-05
233 1.86476D+01   2 2.09204D-06 1.05500D+00 0.0                0.0          0.0              2 4.60494D-07   24 1.03329D+00   25 9.14626D-01
233 1.86476D+01   1 1.21902D-06 1.05500D+00 0.0                0.0          0.0
  233   1.8648D+01     1 7.61089D+01    3 8.09437D+01    5 8.27588D+01   11 8.56079D+01   13 8.66534D+01
                       15 8.75647D+01   17 8.84455D+01   19 8.94641D+01   21 9.04958D+01   24 1.12677D+02
                       25 1.09673D+02
234 1.86923D+01   1 1.21179D-05 1.05500D+00 0.0                0.0          0.0              1 9.85809D-06
234 1.86923D+01   2 1.41017D-06 1.05500D+00 0.0                0.0          0.0              2 3.10259D-07   24 1.02120D+00   25 9.12757D-01
234 1.86923D+01   1 8.36511D-07 1.05500D+00 0.0                0.0          0.0
  234   1.8692D+01     1 7.61085D+01    3 8.09426D+01    5 8.27575D+01   11 8.56062D+01   13 8.66518D+01
                       15 8.75643D+01   17 8.84471D+01   19 8.94649D+01   21 9.04842D+01   24 1.11656D+02
                       25 1.08672D+02
235 1.87387D+01   1 1.23054D-05 1.05500D+00 0.0                0.0          0.0              1 1.02381D-05
235 1.87387D+01   2 1.42252D-06 1.05500D+00 0.0                0.0          0.0              2 3.20337D-07   24 1.05051D+00   25 9.48638D-01
235 1.87387D+01   1 9.12869D-07 1.05500D+00 0.0                0.0          0.0
  235   1.8739D+01     1 7.61081D+01    3 8.09416D+01    5 8.27562D+01   11 8.56045D+01   13 8.66502D+01
                       15 8.75639D+01   17 8.84485D+01   19 8.94656D+01   21 9.04719D+01   24 1.10605D+02
                       25 1.07641D+02
236 1.87852D+01   1 5.81751D-06 1.05500D+00 0.0                0.0          0.0              1 8.43875D-06
236 1.87852D+01   1 5.81751D-06 1.05500D+00 0.0                0.0          0.0              2 7.79586D-07   24 1.04049D+00   25 9.52636D-01
236 1.87852D+01   1 1.50737D-06 1.05500D+00 0.0                0.0          0.0
  236   1.8785D+01     1 7.61077D+01    3 8.09405D+01    5 8.27548D+01   11 8.56028D+01   13 8.66487D+01
                       15 8.75635D+01   17 8.84505D+01   19 8.94662D+01   21 9.04593D+01   24 1.09565D+02
                       25 1.06616D+02
237 1.88317D+01   1 4.89997D-06 1.05500D+00 0.0                0.0          0.0              1 7.86132D-06
237 1.88317D+01   1 4.89997D-06 1.05500D+00 0.0                0.0          0.0              2 6.63246D-07   24 1.03061D+00   25 9.56274D-01
237 1.88317D+01   1 1.27788D-06 1.05500D+00 0.0                0.0          0.0
  237   1.8832D+01     1 7.61074D+01    3 8.09394D+01    5 8.27535D+01   11 8.56011D+01   13 8.66471D+01
                       15 8.75631D+01   17 8.84522D+01   19 8.94666D+01   21 9.04465D+01   24 1.08534D+02
                       25 1.05596D+02
238 1.88783D+01   1 4.04758D-06 1.05500D+00 0.0                0.0          0.0              1 7.29515D-06
238 1.88783D+01   1 4.04758D-06 1.05500D+00 0.0                0.0          0.0              2 5.57777D-07   24 1.02210D+00   25 9.60800D-01
238 1.88783D+01   1 1.06251D-06 1.05500D+00 0.0                0.0          0.0
  238   1.8878D+01     1 7.61070D+01    3 8.09383D+01    5 8.27522D+01   11 8.55993D+01   13 8.66455D+01
                       15 8.75627D+01   17 8.84538D+01   19 8.94669D+01   21 9.04335D+01   24 1.07512D+02
                       25 1.04582D+02
239 1.89248D+01   1 3.11132D-06 1.05500D+00 0.0                0.0          0.0              1 6.68965D-06
239 1.89248D+01   1 3.11132D-06 1.05500D+00 0.0                0.0          0.0              2 4.70918D-07   24 1.01480D+00   25 9.66281D-01
239 1.89248D+01   1 9.18304D-07 1.05500D+00 0.0                0.0          0.0
                                                 3 8.09372D+01    5 8.27508D+01   11 8.55977D+01   13 8.66440D+01
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                        15 8.75624D+01    17 8.84553D+01    19 8.94670D+01    21 9.04203D+01    24 1.06497D+02
                        25 1.03571D+02
 240 1.89624D+01     1 8.65236D-06 1.05500D+00 0.0          0.0          0.0
 240 1.89624D+01     1 8.65236D-06 1.05500D+00 0.0          0.0          0.0          1 5.34269D-06
 240 1.89624D+01     1 9.60729D-07 1.05500D+00 0.0          0.0          0.0          2 5.45007D-07    25 8.21398D-01    25 7.93076D-01
   240       1.8962D+01     1 7.61063D+01     3 8.09364D+01     5 8.27498D+01    11 8.55964D+01    13 8.66427D+01
                        15 8.75621D+01    17 8.84566D+01    19 8.94670D+01    21 9.04094D+01    24 1.05681D+02
                        25 1.02750D+02
 241 1.90000D+01     1 4.81542D-06 1.05500D+00 0.0          0.0          0.0
 241 1.90000D+01     1 4.81542D-06 1.05500D+00 0.0          0.0          0.0          1 4.19516D-06
 241 1.90000D+01     1 8.16712D-07 1.05500D+00 0.0          0.0          0.0          2 3.96062D-07    25 8.17209D-01    25 7.95339D-01
   241       1.9000D+01     1 7.61059D+01     3 8.09355D+01     5 8.27487D+01    11 8.55950D+01    13 8.66415D+01
                        15 8.75618D+01    17 8.84578D+01    19 8.94670D+01    21 9.03985D+01    24 1.04866D+02
                        25 1.01933D+02
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PCC

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.01 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 241 TIME STEPS. TIME = 1.900000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
	1	0.0	76111
1	2	0.03	78152
	3	0.06	80194
2	4	0.08	81184
	5	0.10	82175
3	6	0.57	83124
	7	1.04	83173
	8	1.51	84121
	9	1.98	84168
	10	2.45	85114
4	11	2.92	85160
	12	3.14	86114
5	13	3.35	86164
	14	3.57	87111
6	15	3.79	87156
	16	4.01	88100
7	17	4.23	88146
	18	4.45	88195
8	19	4.67	89147
	20	4.89	89199
9	21	5.10	90140
	22	5.18	98177
	23	5.25	104143
10	24	5.32	104187
11	25	5.35	101193

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	92.790000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.761032090-02

ELAPSED CPU TIME IS 2.90 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.04866D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.61059D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
242	1.90414D+01	1	5.80578D-06	1.05500D+00	0.0	0.0	0.0				
242	1.90414D+01	1	5.80578D-06	1.05500D+00	0.0	0.0	0.0	1	4.84289D-06		
242	1.90414D+01	1	9.97734D-07	1.05500D+00	0.0	0.0	0.0	2	4.48325D-07	25 8.94313D-01	25 8.17357D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
242	1.9041D+01	1 7.61056D+01	3 8.09346D+01	5 8.27475D+01	11 8.55935D+01	13 8.66402D+01	
		15 8.75615D+01	17 8.84591D+01	19 8.94668D+01	21 9.03862D+01	24 1.03974D+02	
		25 1.01038D+02					
243	1.90862D+01	1 3.26506D-06	1.05500D+00	0.0	0.0	0.0	
243	1.90862D+01	1 3.28506D-06	1.05500D+00	0.0	0.0	0.0	1 4.80861D-06
243	1.90862D+01	1 6.98398D-07	1.05500D+00	0.0	0.0	0.0	2 3.28211D-07 25 9.65281D-01 25 9.55362D-01
243	1.9086D+01	1 7.61052D+01	3 8.09335D+01	5 8.27462D+01	11 8.55919D+01	13 8.66387D+01	
		15 8.75612D+01	17 8.84605D+01	19 8.94665D+01	21 9.03728D+01	24 1.03012D+02	
		25 1.00073D+02					
244	1.91310D+01	1 3.68209D-06	1.05500D+00	0.0	0.0	0.0	
244	1.91310D+01	1 3.68209D-06	1.05500D+00	0.0	0.0	0.0	1 3.87826D-06
244	1.91310D+01	1 2.72935D-07	1.05500D+00	0.0	0.0	0.0	2 2.26858D-07 25 9.66235D-01 25 9.65530D-01
244	1.9131D+01	1 7.61049D+01	3 8.09325D+01	5 8.27450D+01	11 8.55903D+01	13 8.66373D+01	
		15 8.75609D+01	17 8.84619D+01	19 8.94660D+01	21 9.03593D+01	24 1.02052D+02	
		25 9.91068D+01					
245	1.91758D+01	1 2.02732D-06	1.05500D+00	0.0	0.0	0.0	
245	1.91758D+01	1 2.02732D-06	1.05500D+00	0.0	0.0	0.0	1 3.10319D-06
245	1.91758D+01	1 1.46234D-07	1.05500D+00	0.0	0.0	0.0	2 1.39002D-07 25 9.56583D-01 25 9.75295D-01
245	1.9176D+01	1 7.61045D+01	3 8.09315D+01	5 8.27437D+01	11 8.55887D+01	13 8.66359D+01	
		15 8.75606D+01	17 8.84632D+01	19 8.94654D+01	21 9.03455D+01	24 1.01095D+02	
		25 9.81402D+01					
246	1.92206D+01	1 1.68069D-06	1.05500D+00	0.0	0.0	0.0	
246	1.92206D+01	1 1.68069D-06	1.05500D+00	0.0	0.0	0.0	1 2.73341D-06
246	1.92206D+01	1 1.42688D-07	1.05500D+00	0.0	0.0	0.0	2 1.38270D-07 25 9.66979D-01 25 9.85303D-01
246	1.9221D+01	1 7.61041D+01	3 8.09304D+01	5 8.27425D+01	11 8.55871D+01	13 8.66344D+01	
		15 8.75603D+01	17 8.84645D+01	19 8.94647D+01	21 9.03316D+01	24 1.00140D+02	
		25 9.71732D+01					
247	1.92654D+01	1 1.44251D-05	1.05500D+00	0.0	0.0	0.0	
247	1.92654D+01	2 1.24612D-06	1.05500D+00	0.0	0.0	0.0	1 5.22711D-06
247	1.92654D+01	1 6.31819D-07	1.05500D+00	0.0	0.0	0.0	2 2.55400D-07 25 9.74647D-01 25 1.00300D+00
247	1.92630D+01	1 3.04225D-06	1.05500D+00	0.0	0.0	0.0	
247	1.92630D+01	1 3.04225D-06	1.05500D+00	0.0	0.0	0.0	1 8.72233D-07
247	1.92630D+01	1 4.18717D-07	1.05500D+00	0.0	0.0	0.0	2 1.81270D-07 25 9.24906D-01 25 9.51812D-01
247	1.9263D+01	1 7.61038D+01	3 8.09295D+01	5 8.27413D+01	11 8.55856D+01	13 8.66331D+01	
		15 8.75601D+01	17 8.84657D+01	19 8.94639D+01	21 9.03183D+01	24 9.92342D+01	
		25 9.62483D+01					
248	1.93054D+01	1 1.67499D-05	1.05500D+00	0.0	0.0	0.0	
248	1.93054D+01	2 1.56783D-06	1.05500D+00	0.0	0.0	0.0	1 7.09676D-06
248	1.93054D+01	1 7.35139D-07	1.05500D+00	0.0	0.0	0.0	2 3.12689D-07 25 9.35191D-01 25 9.71644D-01
248	1.93050D+01	1 7.61034D+01	3 8.09285D+01	5 8.27401D+01	11 8.55841D+01	13 8.66318D+01	
		15 8.75598D+01	17 8.84668D+01	19 8.94631D+01	21 9.03049D+01	24 9.83261D+01	
		25 9.53131D+01					
249	1.93478D+01	1 1.06229D-05	1.05500D+00	0.0	0.0	0.0	
249	1.93478D+01	2 1.08180D-06	1.05500D+00	0.0	0.0	0.0	1 6.16030D-06
249	1.93478D+01	1 5.51472D-07	1.05500D+00	0.0	0.0	0.0	2 2.26097D-07 25 9.42510D-01 25 9.88888D-01
249	1.9348D+01	1 7.61031D+01	3 8.09275D+01	5 8.27389D+01	11 8.55826D+01	13 8.66305D+01	
		15 8.75596D+01	17 8.84680D+01	19 8.94620D+01	21 9.02913D+01	24 9.74136D+01	
		25 9.43706D+01					
250	1.93903D+01	1 7.73275D-06	1.05500D+00	0.0	0.0	0.0	
250	1.93903D+01	1 7.73275D-06	1.05500D+00	0.0	0.0	0.0	1 5.43086D-06
250	1.93903D+01	1 1.33763D-06	1.05500D+00	0.0	0.0	0.0	2 6.54967D-07 25 9.48464D-01 25 1.00504D+00
250	1.93880D+01	1 3.20386D-06	1.05500D+00	0.0	0.0	0.0	
250	1.93880D+01	1 3.20386D-06	1.05500D+00	0.0	0.0	0.0	1 9.93945D-07
250	1.93880D+01	1 4.21486D-07	1.05500D+00	0.0	0.0	0.0	2 1.93210D-07 25 8.98382D-01 25 9.51973D-01
250	1.9388D+01	1 7.61027D+01	3 8.09266D+01	5 8.27378D+01	11 8.55812D+01	13 8.66293D+01	

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                    15 8.755930D+01   17 8.846900D+01   19 8.946100D+01   21 9.027830D+01   24 9.654640D+01
                    25 9.347220D+01
251 1.942810+01   1 3.918630-06 1.055000+00 0.0          0.0          0.0
251 1.942810+01   1 3.918630-06 1.055000+00 0.0          0.0          0.0          1 4.312780-06
251 1.942810+01   1 8.277130-07 1.055000+00 0.0          0.0          0.0          2 1.424610-07   25 9.023990-01   25 9.654200-01
  251     1.9428D+01    1 7.610240+01   3 8.092570+01   5 8.273670+01   11 8.557380+01   13 8.662800+01
                    15 8.755910+01   17 8.847000+01   19 8.945980+01   21 9.026520+01   24 9.567440+01
                    25 9.256980+01
252 1.946820+01   1 4.623950-05 1.055000+00 0.0          0.0          0.0
252 1.946820+01   2 4.127510-06 1.055000+00 0.0          0.0          0.0          1 1.260250-05
252 1.946820+01   1 1.666850-06 1.055000+00 0.0          0.0          0.0          2 7.857080-07   25 8.763490-01   25 9.466910-01
  252     1.9468D+01    1 7.610210+01   3 8.092480+01   5 8.273550+01   11 8.557850+01   13 8.662680+01
                    15 8.755390+01   17 8.847100+01   19 8.945860+01   21 9.025200+01   24 9.480180+01
                    25 9.169340+01
253 1.950830+01   1 2.246430-04 1.055000+00 0.0          0.0          0.0
253 1.950830+01   3 1.684420-06 1.055000+00 0.0          0.0          0.0          1 7.104200-05
253 1.950830+01   1 9.894780-06 1.055000+00 0.0          0.0          0.0          2 2.912480-06   24 8.521640-01   24 8.988900-01
  253     1.9508D+01    1 7.610170+01   3 8.092390+01   5 8.273440+01   11 8.557710+01   13 8.662560+01
                    15 8.755870+01   17 8.847190+01   19 8.945720+01   21 9.023870+01   24 9.394960+01
                    25 9.095100+01
254 1.954840+01   1 1.299050-04 1.055000+00 0.0          0.0          0.0
254 1.954840+01   3 9.782310-07 1.055000+00 0.0          0.0          0.0          1 6.108040-05
254 1.954840+01   1 6.539900-06 1.055000+00 0.0          0.0          0.0          2 1.911390-06   24 8.098960-01   24 8.620530-01
  254     1.9548D+01    1 7.610140+01   3 8.092300+01   5 8.273330+01   11 8.557570+01   13 8.662440+01
                    15 8.755840+01   17 8.847280+01   19 8.945580+01   21 9.022520+01   24 9.313970+01
                    25 9.029670+01
255 1.959250+01   1 1.095170-04 1.055000+00 0.0          0.0          0.0
255 1.959250+01   3 8.862710-07 1.055000+00 0.0          0.0          0.0          1 6.536550-05
255 1.959250+01   1 6.629900-06 1.055000+00 0.0          0.0          0.0          2 1.755300-06   24 8.320840-01   24 8.933720-01
  255     1.9592D+01    1 7.610110+01   3 8.092200+01   5 8.273210+01   11 8.557420+01   13 8.662310+01
                    15 8.755820+01   17 8.847380+01   19 8.945410+01   21 9.021030+01   24 9.230760+01
                    25 8.965210+01
256 1.963940+01   1 9.201860-05 1.055000+00 0.0          0.0          0.0
256 1.963940+01   3 7.863180-07 1.055000+00 0.0          0.0          0.0          1 6.918190-05
256 1.963940+01   1 6.442280-06 1.055000+00 0.0          0.0          0.0          2 1.597670-06   24 8.159770-01   24 8.839760-01
  256     1.9639D+01    1 7.610070+01   3 8.092100+01   5 8.273080+01   11 8.557260+01   13 8.662170+01
                    15 8.755800+01   17 8.847470+01   19 8.945210+01   21 9.019430+01   24 9.149170+01
                    25 8.903190+01
257 1.968980+01   1 9.025170-05 1.055000+00 0.0          0.0          0.0
257 1.968980+01   3 8.155910-07 1.055000+00 0.0          0.0          0.0          1 7.503020-05
257 1.968980+01   1 7.071080-06 1.055000+00 0.0          0.0          0.0          2 1.628050-06   24 8.018250-01   24 8.763920-01
  257     1.9690D+01    1 7.610030+01   3 8.091980+01   5 8.272950+01   11 8.557090+01   13 8.662030+01
                    15 8.755770+01   17 8.847570+01   19 8.944990+01   21 9.017690+01   24 9.068980+01
                    25 8.842710+01
258 1.974450+01   1 9.796590-05 1.055000+00 0.0          0.0          0.0
258 1.974450+01   3 9.319600-07 1.055000+00 0.0          0.0          0.0          1 8.292100-05
258 1.974450+01   1 8.104430-06 1.055000+00 0.0          0.0          0.0          2 1.721070-06   24 7.887720-01   24 8.697470-01
  258     1.9744D+01    1 7.609990+01   3 8.091860+01   5 8.272800+01   11 8.556900+01   13 8.661870+01
                    15 8.755740+01   17 8.847670+01   19 8.944730+01   21 9.015790+01   24 8.990110+01
                    25 8.783290+01
259 1.980420+01   1 1.128320-04 1.055000+00 0.0          0.0          0.0
259 1.980420+01   3 1.122280-06 1.055000+00 0.0          0.0          0.0          1 9.258780-05
259 1.980420+01   1 9.718020-06 1.055000+00 0.0          0.0          0.0          2 1.890460-06   24 7.760900-01   24 8.632720-01
  259     1.9804D+01    1 7.609940+01   3 8.091730+01   5 8.272640+01   11 8.556700+01   13 8.661700+01
                    15 8.755710+01   17 8.847780+01   19 8.944420+01   21 9.013700+01   24 8.912500+01
                    25 8.724660+01
260 1.986980+01   1 1.344200-04 1.055000+00 0.0          0.0          0.0
260 1.986980+01   3 1.386960-06 1.055000+00 0.0          0.0          0.0          1 1.039500-04
260 1.986980+01   2 9.153610-07 1.055000+00 0.0          0.0          0.0          2 2.449580-06   24 7.640470-01   24 8.572760-01
  260     1.9870D+01    1 7.609890+01   3 8.091590+01   5 8.272460+01   11 8.556480+01   13 8.661510+01
                    15 8.755680+01   17 8.847880+01   19 8.944060+01   21 9.011390+01   24 8.836090+01
                    25 8.666700+01
261 1.993490+01   1 1.091370-04 1.055000+00 0.0          0.0          0.0
261 1.993490+01   3 1.142870-06 1.055000+00 0.0          0.0          0.0          1 9.780620-05
261 1.993490+01   2 7.667980-07 1.055000+00 0.0          0.0          0.0          2 2.076050-06   23 6.863750-01   24 7.650220-01
  261     1.9935D+01    1 7.609840+01   3 8.091440+01   5 8.272230+01   11 8.556270+01   13 8.661330+01
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                                15 8.75565D+01   17 8.84798D+01   19 8.94368D+01   21 9.00908D+01   24 8.76849D+01
                                25 8.61478D+01
 262 2.00000D+01     1 1.00049D-04 1.05500D+00 0.0          0.0          0.0
 262 2.00000D+01     2 9.82302D-06 1.05500D+00 0.0          0.0          0.0          1 8.98570D-05
 262 2.00000D+01     1 8.63511D-06 1.05500D+00 0.0          0.0          0.0          2 2.14152D-06   23 6.34548D-01   23 6.93007D-01
   262      2.00000D+01     1 7.60979D+01   3 8.09130D+01   5 8.27211D+01   11 8.55605D+01   13 8.66115D+01
                                15 8.75561D+01   17 8.84806D+01   19 8.94327D+01   21 9.00677D+01   24 8.70790D+01
                                25 8.56777D+01
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PCC

HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.01 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 262 TIME STEPS, TIME = 2.000000+01

GROSS GRID			1
			I
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	76110
	2	0.03	78151
2	3	0.06	80191
	4	0.08	81182
3	5	0.10	82172
	6	0.57	83121
	7	1.04	83170
	8	1.51	84118
	9	1.98	84165
	10	2.45	85111
4	11	2.92	85156
	12	3.14	86110
5	13	3.35	86161
	14	3.57	87109
6	15	3.79	87156
	16	4.01	88101
7	17	4.23	88148
	18	4.45	88196
8	19	4.67	89143
	20	4.89	89184
9	21	5.10	90107
	22	5.18	91152
	23	5.25	90193
10	24	5.32	87108
11	25	5.35	85168

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 6.50833827D-02

ELAPSED CPU TIME IS 3.14 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.151550+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 22

THE MINIMUM TEMPERATURE IS - 7.60979D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
263	2.00716D+01	1	1.12146D-04	1.05500D+00	0.0	0.0	0.0				
263	2.00716D+01	3	1.20637D-06	1.05500D+00	0.0	0.0	0.0	1	9.32919D-05		
263	2.00716D+01	2	8.46467D-07	1.05500D+00	0.0	0.0	0.0	2	1.97869D-06	23 6.41302D-01	23 7.05271D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
263	2.00720D+01	1 7.60973D+01	3 8.09115D+01	5 8.27193D+01	11 8.55582D+01	13 8.66096D+01	
		15 8.75558D+01	17 8.84815D+01	19 8.94280D+01	21 9.00423D+01	24 8.64801D+01	
		25 8.52086D+01					
264	2.01503D+01	1 1.30382D-04	1.05500D+00	0.0	0.0	0.0	
264	2.01503D+01	3 1.42339D-06	1.05500D+00	0.0	0.0	0.0	1 1.01926D-04
264	2.01503D+01	2 1.10441D-06	1.05500D+00	0.0	0.0	0.0	2 2.23211D-06 23 6.41586D-01 23 7.10595D-01
264	2.01500D+01	1 7.60967D+01	3 8.09098D+01	5 8.27172D+01	11 8.55556D+01	13 8.66074D+01	
		15 8.75554D+01	17 8.84823D+01	19 8.94225D+01	21 9.00145D+01	24 8.58922D+01	
		25 8.47416D+01					
265	2.02370D+01	1 1.54493D-04	1.05500D+00	0.0	0.0	0.0	
265	2.02370D+01	3 1.68641D-06	1.05500D+00	0.0	0.0	0.0	1 1.09843D-04
265	2.02370D+01	2 1.44577D-06	1.05500D+00	0.0	0.0	0.0	2 2.53466D-06 23 6.35247D-01 23 7.08609D-01
265	2.0237D+01	1 7.60961D+01	3 8.09079D+01	5 8.27149D+01	11 8.55529D+01	13 8.66051D+01	
		15 8.75550D+01	17 8.84830D+01	19 8.94160D+01	21 8.99842D+01	24 8.53174D+01	
		25 8.42786D+01					
266	2.03323D+01	1 1.74944D-04	1.05500D+00	0.0	0.0	0.0	
266	2.03323D+01	3 1.88826D-06	1.05500D+00	0.0	0.0	0.0	1 1.16076D-04
266	2.03323D+01	2 1.82960D-06	1.05500D+00	0.0	0.0	0.0	2 2.78747D-06 23 6.22541D-01 23 6.99391D-01
266	2.0332D+01	1 7.60954D+01	3 8.09059D+01	5 8.27125D+01	11 8.55498D+01	13 8.66026D+01	
		15 8.75545D+01	17 8.84835D+01	19 8.94084D+01	21 8.99513D+01	24 8.47572D+01	
		25 8.38198D+01					
267	2.04371D+01	1 1.95296D-04	1.05500D+00	0.0	0.0	0.0	
267	2.04371D+01	3 2.10289D-06	1.05500D+00	0.0	0.0	0.0	1 1.20612D-04
267	2.04371D+01	2 2.27280D-06	1.05500D+00	0.0	0.0	0.0	2 3.01663D-06 22 6.04123D-01 23 6.83480D-01
267	2.04370D+01	1 7.60946D+01	3 8.09037D+01	5 8.27098D+01	11 8.55466D+01	13 8.65999D+01	
		15 8.75539D+01	17 8.84839D+01	19 8.93995D+01	21 8.99157D+01	24 8.42122D+01	
		25 8.33652D+01					
268	2.05524D+01	1 2.12452D-04	1.05500D+00	0.0	0.0	0.0	
268	2.05524D+01	3 2.66392D-06	1.05500D+00	0.0	0.0	0.0	1 1.22807D-04
268	2.05524D+01	2 2.76934D-06	1.05500D+00	0.0	0.0	0.0	2 3.20815D-06 23 5.81104D-01 23 6.61962D-01
268	2.0552D+01	1 7.60938D+01	3 8.09014D+01	5 8.27069D+01	11 8.55430D+01	13 8.65970D+01	
		15 8.75[illegible]+01	17 8.84840D+01	19 8.93892D+01	21 8.98774D+01	24 8.36817D+01	
		25 8.2[illegible]+01					
269	2.06792D+01	1 2.24739D[illegible]	1.05500D+00	0.0	0.0	0.0	
269	2.06792D+01	3 3.25759D-06	1.05500D+00	0.0	0.0	0.0	1 1.22209D-04
269	2.06792D+01	2 3.23868D-06	1.05500D+00	0.0	0.0	0.0	2 3.28342D-06 23 5.55043D-01 23 6.36488D-01
269	2.06790D+01	1 7.60928D+01	3 8.08988D+01	5 8.27038D+01	11 8.55391D+01	13 8.65938D+01	
		15 8.75525D+01	17 8.84838D+01	19 8.93771D+01	21 8.98364D+01	24 8.31634D+01	
		25 8.24616D+01					
270	2.08187D+01	1 2.33532D-04	1.05500D+00	0.0	0.0	0.0	
270	2.08187D+01	3 3.89594D-06	1.05500D+00	0.0	0.0	0.0	1 1.18896D-04
270	2.08187D+01	2 3.73886D-06	1.05500D+00	0.0	0.0	0.0	2 3.32310D-06 23 5.27867D-01 24 6.12645D-01
270	2.08190D+01	1 7.60919D+01	3 8.08960D+01	5 8.27004D+01	11 8.55350D+01	13 8.65904D+01	
		15 8.75516D+01	17 8.84831D+01	19 8.93632D+01	21 8.97928D+01	24 8.26539D+01	
		25 8.[illegible]0700D+01					
271	2.09094D+01	1 3.92[illegible]050-05	1.05500D+00	0.0	0.0	0.0	
271	2.09094D+01	2 3.22259D-06	1.05500D+00	0.0	0.0	0.0	1 5.08186D-05
271	2.09094D+01	1 4.49215D-06	1.05500D+00	0.0	0.0	0.0	2 8.01742D-07 24 3.05100D-01 24 3.69130D-01
271	2.09090D+01	1 7.60911D+01	3 8.08942D+01	5 8.26982D+01	11 8.55323D+01	13 8.65882D+01	
		15 8.75510D+01	17 8.84824D+01	19 8.93537D+01	21 8.97652D+01	24 8.23488D+01	
		25 8.17250D+01					
272	2.10000D+01	1 5.09968D-05	1.05500D+00	0.0	0.0	0.0	
272	2.10000D+01	2 4.83887D-06	1.05500D+00	0.0	0.0	0.0	1 3.49888D-05
272	2.10000D+01	1 4.66950D-06	1.05500D+00	0.0	0.0	0.0	2 8.81294D-07 24 2.89987D-01 24 3.52145D-01
272	2.10000D+01	1 7.60905D+01	3 8.08924D+01	5 8.26960D+01	11 8.55296D+01	13 8.65861D+01	

PCC

15 8.75504D+01 17 8.84815D+01 19 8.93440D+01 21 8.97383D+01 24 8.20588D+01
25 8.1156.0+01

TRANSIENT TEMPERATURE DISTRIBUTION . TER 272 TIME STEPS, TIME = 2.10000D+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	76109
	2	0.03	78143
2	3	0.06	80185
	4	0.08	81180
3	5	0.10	82170
	6	0.57	83119
	7	1.04	83167
	8	1.51	84115
	9	1.98	84162
	10	2.45	85108
4	11	2.92	85153
	12	3.14	86107
5	13	3.35	86159
	14	3.57	87108
6	15	3.79	87155
	16	4.01	88102
7	17	4.23	88148
	18	4.45	88193
8	19	4.67	89134
	20	4.89	89164
9	21	5.10	89174
	22	5.18	87198
	23	5.25	85154
10	24	5.32	82106
11	25	5.35	81146

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	89.500000
2	0.0
3	73.400000

THE CURRENT TIME STE (DELTAT) = 9.064254470-02

ELAPSED CPU TIME IS 3.26 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.97383D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 21

THE MINIMUM TEMPERATURE IS - 7.60905D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
272	2.10997D+01	1	2.54214D-05	1.05500D+00	0.0	0.0	0.0	1	3.08647D-05		
273	2.10997D+01	2	2.13062D-06	1.05500D+00	0.0	0.0	0.0	2	4.68363D-07	24 3.04487D-01	24 3.71059D-01
273	2.10997D+01	1	2.85091D-06	1.05500D+00	0.0	0.0	0.0				

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
273	2.11000D+01	1 7.60898D+01	3 8.08904D+01	5 8.26937D+01	11 8.55268D+01	13 8.65837D+01
		15 8.75497D+01	17 8.84803D+01	19 8.93330D+01	21 8.97094D+01	24 6.17543D+01
		25 8.11693D+01				
274	2.12094D+01	1 3.32788D-05	1.05500D+00	0.0	0.0	
274	2.12094D+01	2 3.39271D-06	1.05500D+00	0.0	0.0	1 3.11006D-05
274	2.12094D+01	1 3.72233D-06	1.05500D+00	0.0	0.0	2 5.72630D-07 24 3.21687D-01 24 3.93[illegible]4D-01
274	2.12090D+01	1 7.60890D+01	3 8.08883D+01	5 8.26911D+01	11 8.55237D+01	13 8.65812D+01
		15 8.75488D+01	94787D+01	19 8.93207D+01	21 8.96784D+01	24 8.14326D+01
		25 8.08611D+01				
275	2.13300D+01	1 3.68642D-05	1.05500D	0	0.0	0.0
275	2.13300D+01	2 4.04496D-06	1.05500D+	0	0.0	0.0
275	2.13300D+01	1 4.36670D-06	1.05500D+00	0.0	0.0	0.0
275	2.13300D+01	1 7.60882D+01	3 8.08860D+01	5 8.26884D+01	11 8.55203D+01	1 3.04162D-05
	2.13300+01	15 8.75476D+01	17 8.84766D+01	19 8.93068D+01	21 8.96453D+01	2 6.05993D-07 24 3.41593D-01 19479D-01
		25 8.05299D+01				24 8.10910D 01
276	2.14627D+01	1 3.91442D-05	1.05500D+00	0.0	0.0	
276	2.14627D+01	2 4.57577D-06	1.05500D+00	0.0	0.0	1 2.91983D-05
276	2.14627D+01	1 4.85529D-06	1.05500D+00	0.0	0.0	2 6.09136D-07 24 3.64449D-01 24 4.49432D 01
276	2.14630+01	1 7.60873D-01	3 8.08836D+01	5 8.26854D+01	11 8.55166D+01	13 8.65755D+01
		15 8.75466D+01	17 8.84739D+01	19 8.92911D+01	21 8.96099D+01	24 8.07266D+01
		25 8.01730D+01				
277	2.16087D+01	1 3.56936D-05	1.05500D+00	0.0	0.0	
277	2.16087D+01	2 4.37392D-06	1.05500D+00	0.0	0.0	1 2.69912D-05
277	2.16087D+01	1 4.65645D-06	1.05500D+00	0.0	0.0	2 5.31940D-07 24 3.90875D-01 24 4.84196D-01
277	2.16090+01	1 7.60864D+01	3 8.08809D+01	5 8.26821D+01	11 8.55127D+01	13 8.65722D+01
		15 8.75451D+01	17 8.84705D+01	19 8.92736D+01	21 8.95721D+01	24 8.03357D+01
		25 7.97865D+01				
278	2.17693D+01	1 3.48632D-05	1.05500D+00	0.0	0.0	
278	2.17693D+01	2 4.07354D-06	1.05500D+00	0.0	0.0	1 2.42437D-05
278	2.17693D+01	1 4.56819D-06	1.05500D+00	0.0	0.0	2 4.79842D-07 24 4.21561D-01 25 5.26670D-01
278	2.17690+01	1 7.60853D+01	3 8.08780D+01	5 8.26786D+01	11 8.55084D+01	13 8.65687D+01
		15 8.75434D+01	17 8.84662D+01	19 8.92539D+01	21 8.95318D+01	24 7.99142D+01
		25 7.93663D+01				
279	2.18846D+01	1 1.13455D-05	1.05500D+00	0.0	0.0	
279	2.18846D+01	2 5.46906D-07	1.05500D+00	0.0	0.0	1 1.03778D-05
279	2.18846D+01	1 5.10849D-08	1.05500D+00	0.0	0.0	2 4.82636D-08 25 3.01900D-01 25 3.80388D-01
279	2.18850+01	1 7.60845D+01	3 8.08759D+01	5 8.26761D+01	11 8.55054D+01	13 8.65662D+01
		15 8.75421D+01	17 8.84628D+01	19 8.92396D+01	21 8.95036D+01	24 7.96143D+01
		25 7.90644D+01				
280	2.20000D+01	1 1.03276D-05	1.05500D+00	0.0	0.0	
280	2.20000D+01	2 1.25807D-06	1.05500D+00	0.0	0.0	1 7.55066D-06
280	2.20000D+01	1 8.97048D-07	1.05500D+00	0.0	0.0	2 1.60516D-07 25 2.99887D-01 25 3.79295D-01
280	2.20000+01	1 7.60838D+01	3 8.08739D+01	5 8.26737D+01	11 8.55024D+01	13 8.65638D+01
		15 8.75406D+01	17 8.84592D+01	19 8.92252D+01	21 8.94760D+01	24 7.93162D+01
		25 7.87645D+01				

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 280 TIME STEPS, TIME = 2.200000+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	76108
	2	0.03	78148
2	3	0.06	80187
	4	0.08	81177
3	5	0.10	82167
	6	0.57	83116
	7	1.04	83164
	8	1.51	84112
	9	1.98	84159
	10	2.45	85105
4	11	2.92	85150
	12	3.14	86105
5	13	3.35	86156
	14	3.57	87106
6	15	3.79	87154
	16	4.01	88101
7	17	4.23	88146
	18	4.45	88188
8	19	4.67	89123
	20	4.89	89145
9	21	5.10	89148
	22	5.18	86157
	23	3.25	83127
10	24	5.32	79132
11	25	5.35	78176

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.15350611D-01

ELAPSED CPU TIME IS 3.35 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.94760D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.60838D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
281	2.21269L+01	1	1.50448D-05	1.05500D+00	0.0	0.0	0.0				
281	2.21269D 01	2	1.86674D-06	1.05500D+00	0.0	0.0	0.0	1	6.77687D-06		
281	2.21269D+01	1	1.40070D-06	1.05500D+00	0.0	0.0	0.0	2	2.07136D-07	25 3.32065D-01	25 4.25920-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
281	2.2127D+01	1 7.60830D+01	3 8.08717D+01	5 8.26711D+01	11 8.54992D+01	13 8.65611D+01
		15 8.75390D+01	17 8.84549D+01	19 8.92092D+01	21 8.94462D+01	24 7.89889D+01
		25 7.84324D+01				
282	2.22665D+01	1 9.18838D-06	1.05500D+00	0.0	0.0	0.0
282	2.22665D+01	1 9.18838D-06	1.05500D+00	0.0	0.0	0.0
282	2.22665D+01	1 1.06138D-06	1.05500D+00	0.0	0.0	0.0
						1 5.40918D-06
						2 6.51342D-07 25 3.66651D-01 25 4.67474D-01
282	2.2266D+01	1 7.60821D+01	3 8.08694D+01	5 8.26682D+01	11 8.54958D+01	13 8.65581D+01
		15 8.75370+01	17 8.84498D+01	19 8.91915D+01	21 8.94141D+01	24 7.86283D+01
		25 7.80658D+01				
283	2.24200D+01	1 6.86713D-06	1.05500D+00	0.0	0.0	0.0
283	2.24200D+01	1 6.86713D-06	1.05500D+00	0.0	0.0	0.0
283	2.24200D+01	1 8.12415D-07	1.05500D+00	0.0	0.0	0.0
						1 4.97012D-06
						2 5.86927D-07 25 4.04317D-01 25 5.17918D-01
283	2.2420D+01	1 7.60812D+01	3 8.08668D+01	5 8.26651D+01	11 8.54920D+01	13 8.65549D+01
		15 8.75347D+01	17 8.84437D+01	19 8.91719D+01	21 8.93794D+01	24 7.82306D+01
		25 7.76615D+01				
284	2.25889D+01	1 7.78231D-06	1.05500D+00	0.0	0.0	0.0
284	2.25889D+01	1 7.78231D-06	1.05500D+00	0.0	0.0	0.0
284	2.25889D+01	1 9.79957D-07	1.05500D+00	0.0	0.0	0.0
						1 4.53331D-06
						2 5.81226D-07 25 4.45777D-01 25 5.74000D-01
284	2.2589D+01	1 7.60803D+01	3 8.08640D+01	5 8.26618D+01	11 8.54879D+01	13 8.65514D+01
		15 8.75319D+01	17 8.84367D+01	19 8.91502D+01	21 8.93421D+01	24 7.77922D+01
		25 7.72157D+01				
285	2.27746D+01	1 1.39759D-05	1.05500D+00	0.0	0.0	0.0
285	2.27746D+01	2 2.01603D-06	1.05500D+00	0.0	0.0	0.0
285	2.27746D+01	1 1.86483D-06	1.05500D+00	0.0	0.0	0.0
						1 4.99949D-06
						2 2.38761D-07 25 4.91964D-01 25 6.37129D-01
285	2.2775D+01	1 7.60792D+01	3 8.08611D+01	5 8.26582D+01	11 8.54836D+01	13 8.65476D+01
		15 8.75287D+01	17 8.84283D+01	19 8.91263D+01	21 8.93019D+01	24 7.73086D+01
		25 7.67237D+01				
286	2.28873D+01	1 1.49222D-05	1.05500D+00	0.0	0.0	0.0
286	2.28873D+01	2 1.61223D-06	1.05500D+00	0.0	0.0	0.0
286	2.28873D+01	1 1.28606D-06	1.05500D+00	0.0	0.0	0.0
						1 3.61842D-06
						2 2.08140D-07 25 3.01083D-01 25 3.92425D-01
286	2.2887D+01	1 7.60785D+01	3 8.08593D+01	5 8.26561D+01	11 8.54800D+01	13 8.65453D+01
		15 8.75266D+01	17 8.84231D+01	19 8.91118D+01	21 8.92779D+01	24 7.70140D+01
		25 7.64226D+01				
287	2.30000D+01	1 5.16254D-06	1.05500D+00	0.0	0.0	0.0
287	2.30000D+01	1 5.16254D-06	1.05500D+00	0.0	0.0	0.0
287	2.30000D+01	1 7.00724D-07	1.05500D+00	0.0	0.0	0.0
						1 1.79706D-06
						2 3.03179D-07 25 3.00380D-01 25 3.93051D-01
287	2.3000D+01	1 7.60778D+01	3 8.08576D+01	5 8.26540D+01	11 8.54784D+01	13 8.65430D+01
		15 8.75243D+01	17 8.84176D+01	19 8.90972D+01	21 8.92541D+01	24 7.67186D+01
		25 7.61223D+01				

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.02 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 287 TIME STEPS, TIME = 2.30000D+01

GROSS GRID			1
			I
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	76108
	2	0.03	78147
2	3	0.06	80186
	4	0.08	81176
3	5	0.10	82165
	6	0.57	83114
	7	1.04	83162
	8	1.51	84109
	9	1.98	84156
	10	2.45	85102
4	11	2.92	P5148
	12	3.14	6102
5	13	3.35	86154
	14	3.57	87104
6	15	3.79	87152
	16	4.01	87199
7	17	4.23	88142
	18	4.45	88180
8	19	4.67	89110
	20	4.89	89126
9	21	5.10	89125
	22	5.18	85152
	23	5.25	81144
10	24	5.32	76172
11	25	5.35	76112

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	85.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.126751400-01

ELAPSED CPU TIME IS 3.44 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.92642D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.60778D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
288	2.31239D+01	1	1.77803D-06	1.05500D+00	0.0	0.0	0.0				
288	2.31239D+01	1	1.77803D-06	1.05500D+00	0.0	0.0	0.0	1	1.08692D-06		
288	2.31239D+01	1	2.48945D-07	1.05500D+00	0.0	0.0	0.0	2	1.46748D-07	25 3.30157D-01	25 4.33719D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
288	2.3124D+01	1 7.60771D+01	3 8.08557D+01	5 8.26517D+01	11 8.54756D+01	13 8.65404D+01
		15 8.75218D+01	17 8.84113D+01	19 8.90812D+01	21 8.92282D+01	24 7.63934D+01
		25 7.57921D+01				
289	2.32603D+01	1 1.38337D-06	1.05500D+00	0.0	0.0	
289	2.32603D+01	1 1.38337D-06	1.05500D+00	0.0	0.0	1 1.00723D-06
289	2.32603D+01	1 2.74097D-07	1.05500D+00	0.0	0.0	2 1.32857D-07 25 3.62987D-01 25 4.78925D-01
289	2.3260D+01	1 7.60764D+01	3 8.08536D+01	5 8.26492D+01	11 8.54725D+01	13 8.65376D+01
		15 8.75189D+01	17 8.84043D+01	19 8.90636D+01	21 8.92000D+01	24 7.60359D+01
		25 7.54291D+01				
290	2.34103D+01	1 2.88163D-06	1.05500D+00	0.0	0.0	
290	2.34103D+01	1 2.88163D-06	1.05500D+00	0.0	0.0	1 1.25060D-06
290	2.34103D+01	1 3.81664D-07	1.05500D+00	0.0	0.0	2 1.76716D-07 25 3.98895D-01 25 5.28834D-01
290	2.3410D+01	1 7.60756D+01	3 8.08514D+01	5 8.26465D+01	11 8.54692D+01	13 8.65345D+01
		15 8.75155D+01	17 8.83962D+01	19 8.90441D+01	21 8.91693D+01	24 7.56427D+01
		25 7.50302D+01				
291	2.35752D+01	1 5.98297D-06	1.05500D+00	0.0	0.0	
291	2.35752D+01	1 5.98297D-06	1.05500D+00	0.0	0.0	1 1.72085D-06
291	2.35752D+01	1 8.28194D-07	1.05500D+00	0.0	0.0	2 2.81857D-07 25 4.37996D-01 25 5.83759D-01
291	2.3575D+01	1 7.60748D+01	3 8.08490D+01	5 8.26435D+01	11 8.54656D+01	13 8.65311D+01
		15 8.75116D+01	17 8.83870D+01	19 8.90228D+01	21 8.91359D+01	24 7.52108D+01
		25 7.45922D+01				
292	2.37567D+01	1 8.82386D-06	1.05500D+00	0.0	0.0	
292	2.37567D+01	1 8.82386D-06	1.05500D+00	0.0	0.0	1 2.27206D-06
292	2.37567D+01	1 1.26259D-06	1.05500D+00	0.0	0.0	2 4.19429D-07 25 4.80765D-01 25 6.44525D-01
292	2.3757D+01	1 7.60738D+01	3 8.08464D+01	5 8.26404D+01	11 8.54617D+01	13 8.65273D+01
		15 8.75071D+01	17 8.83766D+01	19 8.89993D+01	21 8.90995D+01	24 7.47366D+01
		25 7.41115D+01				
293	2.38783D+01	1 6.41879D-06	1.05500D+00	0.0	0.0	
293	2.38783D+01	1 6.41879D-06	1.05500D+00	0.0	0.0	1 1.70348D-06
293	2.38783D+01	1 7.81248D-07	1.05500D+00	0.0	0.0	2 2.86880D-07 25 3.23296D-01 25 4.36229D-01
293	2.3878D+01	1 7.60731D+01	3 8.08447D+01	5 8.26383D+01	11 8.54591D+01	13 8.65247D+01
		15 8.75040D+01	17 8.83694D+01	19 8.89836D+01	21 8.90754D+01	24 7.44187D+01
		25 7.37882D+01				
294	2.40000D+01	1 1.16983D-05	1.05500D+00	0.0	0.0	
294	2.40000D+01	2 1.40203D-06	1.05500D+00	0.0	0.0	1 1.88281D-06
294	2.40000D+01	1 9.34554D-07	1.05500D+00	0.0	0.0	2 1.42868D-07 25 3.21480D-01 25 1.35680D-01
294	2.4000D+01	1 7.60725D+01	3 8.08429D+01	5 8.26362D+01	11 8.54565D+01	13 8.65221D+01
		15 8.75007D+01	17 8.83621D+01	19 8.89678D+01	21 8.90514D+01	24 7.41012D+01
		25 7.34667D+01				

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.02 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 294 TIME STEPS, TIME = 2.40000D+01

GROSS GRID	FINE GRID	DISTANCE	C.O
1	1	0.0	76107
	2	0.03	78146
2	3	0.06	80184
	4	0.08	81174
3	5	0.10	82164
	6	0.57	83112
	7	1.04	83160
	8	1.51	84107
	9	1.98	84154
	10	2.45	85100
4	11	2.92	85146
	12	3.14	86100
5	13	3.35	86152
	14	3.57	87102
6	15	3.79	87150
	16	4.01	87195
7	17	4.23	88136
	18	4.45	88171
8	19	4.67	88197
	20	4.89	89109
9	21	5.10	89105
	22	5.18	84151
	23	5.25	79162
10	24	5.32	74110
11	25	5.35	73147

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.21658851D-01

ELAPSED CPU TIME IS 3.52 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.90936D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.34667D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
295	2.41338D+01	1	3.885720-05	1.055000+00	0.0	0.0	0.0	1	5.658130-06		
295	2.41338D+01	2	4.754400-06	1.055000+00	0.0	0.0	0.0	2	5.032070-07	25 3.48007D-01	25 4.73694D-01
295	2.41338D+01	1	4.058330-06	1.055000+00	0.0	0.0	0.0				

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
295	2.4134D+01	1 7.60718D+01	3 8.08417D+01	5 8.26339D+01	11 8.54537D+01	13 8.65193D+01	
		15 8.74970D+01	17 8.83538D+01	19 8.89505D+01	21 8.90257D+01	24 7.37545D+01	
		25 7.31187D+01					
296	2.42810D+01	1 2.83073D-05	1.055000+00	0.0	0.0		
296	2.42810D+01	2 3.37186D-06	1.055000+00	0.0	0.0	1 6.23510D-06	
296	2.42810D+01	1 3.14062D-06	1.055000+00	0.0	0.0	2 3.77859D-07	25 3.78742D-01 25 5.17983D-01
296	2.4281D+01	1 7.60711D+01	3 8.08391D+01	5 8.26315D+01	11 8.54506D+01	13 8.65161D+01	
		15 8.74928D+01	17 8.83446D+01	19 8.89315D+01	21 8.89964D+01	24 7.33774D+01	
		25 7.27399D+01					
297	2.44430D+01	1 3.11705D-05	1.055000+00	0.0	0.0		
297	2.44430D+01	2 3.92686D-06	1.055000+00	0.0	0.0	1 7.26015D-06	
297	2.44430D+01	1 3.63113D-06	1.055000+00	0.0	0.0	2 4.18094D-07	25 4.12513D-01 25 5.67106D-01
297	2.4443D+01	1 7.60704D+01	3 8.08369D+01	5 8.26288D+01	11 8.54472D+01	13 8.65126D+01	
		15 8.74880D+01	17 8.83342D+01	19 8.89105D+01	21 8.89650D+01	24 7.29672D+01	
		25 7.23274D+01					
298	2.46211D+01	1 4.36707D-05	1.055000+00	0.0	0.0		
298	2.46211D+01	2 5.99897D-06	1.055000+00	0.0	0.0	1 8.87249D-06	
298	2.46211D+01	1 5.42794D-06	1.055000+00	0.0	0.0	2 5.83542D-07	25 4.48677D-01 2. 6.20342D-01
298	2.4621D+01	1 7.60695D+01	3 8.08345D+01	5 8.26258D+01	11 8.54435D+01	13 8.65087D+01	
		15 8.74825D+01	17 8.83225D+01	19 8.88875D+01	21 8.89308D+01	24 7.25211D+01	
		25 7.18787D+01					
299	2.48105D+01	1 4.97236D-05	1.055000+00	0.0	0.0		
299	2.48105D+01	2 7.09421D-06	1.055000+00	0.0	0.0	1 9.87304D-06	
299	2.48105D+01	1 6.62508D-06	1.055000+00	0.0	0.0	2 6.79221D-07	25 4.71843D-01 25 6.56443D-01
299	2.4811D+01	1 7.60686D+01	3 8.08320D+01	5 8.26227D+01	11 8.54396D+01	13 8.65044D+01	
		15 8.74764D+01	17 8.83039D+01	19 8.88630D+01	21 8.88946D+01	24 7.20523D+01	
		25 7.14069D+01					
300	2.50000D+01	1 5.09677D-05	1.055000+00	0.0	0.0		
300	2.50000D+01	2 7.29577D-06	1.055000+00	0.0	0.0	1 9.99843D-06	
300	2.50000D+01	1 6.21376D-06	1.055000+00	0.0	0.0	2 6.56214D-07	25 4.66314D-01 25 6.53038D-01
300	2.5000D+01	1 7.60677D+01	3 8.08295D+01	5 8.26197D+01	11 8.54357D+01	13 8.65001D+01	
		15 8.74701D+01	17 8.82969D+01	19 8.88386D+01	21 8.88587D+01	24 7.15889D+01	
		25 7.09406D+01					

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.02 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 300 TIME STEPS, TIME = 2.500000D+01

GROSS GRID		1
		I
FINE GRID		1
	DISTANCE	0.0
1 1	0.0	76107
2	0.03	78145
2 3	0.06	80183
4	0.08	81173
3 5	0.10	82162
6	0.57	83110
7	1.04	83158
8	1.51	84105
9	1.98	84152
10	2.45	84198
4 11	2.92	85144
12	3.14	85198
5 13	3.35	86150
14	3.57	87100
6 15	3.79	87147
16	4.01	87191
7 17	4.23	88130
18	4.45	88162
8 19	4.67	88184
20	4.89	88193
9 21	5.10	88186
22	5.18	83152
23	5.25	77186
10 24	5.32	71159
11 25	5.35	70194

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	80.500000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.894597010-01

ELAPSED CPU TIME IS 3.59 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.893000+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.094060+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
301	2.52084D+01	1	2.47502D-04	1.05500D+00	0.0	0.0	0.0	1	2.80335D-05		
301	2.52084D+01	3	7.16903D-06	1.05500D+00	0.0	0.0	0.0	2	2.78581D-06	24 4.96588D-01	24 6.93666D-01
301	2.52084D+01	2	4.98331D-06	1.05500D+00	0.0	0.0	0.0				

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
301	2.5208D+01	1 7.60668D+01	3 8.08268D+01	5 8.26163D+01	11 8.54314D+01	13 8.64953D+01
		15 8.74629D+01	17 8.82824D+01	19 8.88116D+01	21 8.88195D+01	24 7.10923D+01
		25 7.04506D+01				
302	2.54377D+01	1 1.60708D-04	1.05500D+00	0.0	0.0	0.0
302	2.54377D+01	3 4.89388D-06	1.05500D+00	0.0	0.0	0.0
302	2.54377D+01	2 4.09024D-06	1.05500D+00	0.0	0.0	0.0
					1 2.97185D-05	
					2 2.02143D-06	24 5.26286D-01 25 7.43272D-01
302	2.5438D+01	1 7.60657D+01	3 8.08238D+01	5 8.26126D+01	11 8.54267D+01	13 8.64899D+01
		15 8.74547D+01	17 8.82661D+01	19 8.87820D+01	21 8.87767D+01	24 7.05660D+01
		25 6.99269D+01				
303	2.56898D+01	1 2.18551D-04	1.05500D+00	0.0	0.0	0.0
303	2.56898D+01	3 7.40328D-06	1.05500D+00	0.0	0.0	0.0
303	2.56898D+01	2 5.60528D-06	1.05500D+00	0.0	0.0	0.0
					1 3.34733D-05	
					2 2.50926D-06	24 5.60488D-01 25 7.98660D-01
303	2.5690D+01	1 7.60646D+01	3 8.08205D+01	5 8.26086D+01	11 8.54215D+01	13 8.64838D+01
		15 8.74453D+01	17 8.82479D+01	19 8.87495D+01	21 8.87300D+01	24 7.00055D+01
		25 6.93685D+01				
304	2.58449D+01	1 4.48875D-05	1.05500D+00	0.0	0.0	0.0
304	2.58449D+01	2 5.26281D-06	1.05500D+00	0.0	0.0	0.0
304	2.58449D+01	1 5.52983D-06	1.05500D+00	0.0	0.0	0.0
					1 1.37556D-05	
					2 6.11196D-07	25 3.37434D-01 25 4.86437D-01
304	2.5845D+01	1 7.60637D+01	3 8.08185D+01	5 8.26061D+01	11 8.54183D+01	13 8.64800D+01
		15 8.74393D+01	17 8.82365D+01	19 8.87295D+01	21 8.87014D+01	24 6.96689D+01
		25 6.90310D+01				
305	2.60000D+01	1 6.64133D-05	1.05500D+00	0.0	0.0	0.0
305	2.60000D+01	2 8.58144D-06	1.05500D+00	0.0	0.0	0.0
305	2.60000D+01	1 7.18945D-06	1.05500D+00	0.0	0.0	0.0
					1 1.23482D-05	
					2 7.99267D-07	24 3.30780D-01 25 4.76983D-01
305	2.6000D+01	1 7.60630D+01	3 8.08165D+01	5 8.26036D+01	11 8.54150D+01	13 8.64762D+01
		15 8.74333D+01	17 8.82249D+01	19 8.87094D+01	21 8.86731D+01	24 6.93381D+01
		25 6.87018D+01				

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 305 TIME STEPS, TIME = 2.600000D+01

GROSS GRID		1
		I
FINE GRID		!
	DISTANCE	0.0
1	1	0.0	76106
	2	0.03	78144
2	3	0.06	80182
	4	0.08	81171
3	5	0.10	82160
	6	0.57	83108
	7	1.04	83156
	8	1.51	84103
	9	1.98	84150
	10	2.45	84196
4	11	2.92	85142
	12	3.14	85196
5	13	3.35	86148
	14	3.57	86197
6	15	3.79	87143
	16	4.01	87186
7	17	4.23	88122
	18	4.45	88152
8	19	4.67	88171
	20	4.89	88177
9	21	5.10	88167
	22	5.18	82161
	23	5.25	76124
10	24	5.32	69134
11	25	5.35	68170

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.550886150-01

ELAPSED CPU TIME IS 3.66 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.87707D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.87018D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
306	2.61706D+01	1	2.17126D-04	1.05500D+00	0.0	0.0	0.0					
306	2.61706D+01	3	4.75997D-05	1.05500D+00	0.0	0.0	0.0	1	2.91787D-05			
306	2.61706D+01	2	3.47183D-06	1.05500D+00	0.0	0.0	0.0	2	2.49329D-06	24 3.50259D-01	24	5.05147D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
306	2.6171D+01	1 7.60622D+01	3 8.08143D+01	5 8.26008D+01	11 8.54114D+01	13 8.64718D+01	
		15 8.74264D+01	17 8.82121D+01	19 8.86874D+01	21 8.86421D+01	24 6.89879D+01	
		25 6.83632D+01					
307	2.63583D+01	1 1.52900D-04	1.05500D+00	0.0	0.0	0.0	
307	2.63583D+01	3 3.30565D-06	1.05500D+00	0.0	0.0	0.0	1 3.09576D-05
307	2.63583D+01	2 2.90838D-06	1.05500D+00	0.0	0.0	0.0	2 1.83436D-06 24 3.64766D-01 24 5.28740D-01
307	2.6358D+01	1 7.60614D+01	3 8.08118D+01	5 8.25977D+01	11 8.54074D+01	13 8.64670D+01	
		15 8.74187D+01	17 8.81978D+01	19 8.86632D+01	21 8.86082D+01	24 6.86231D+01	
		25 6.80072D+01					
308	2.65647D+01	1 1.81691D-04	1.05500D+00	0.0	0.0	0.0	
308	2.65647D+01	3 4.63412D-06	1.05500D+00	0.0	0.0	0.0	1 3.41107D-05
308	2.65647D+01	2 3.74832D-06	1.05500D+00	0.0	0.0	0.0	2 2.12352D-06 24 3.81737D-01 24 5.56281D-01
308	2.6565D+01	1 7.60604D+01	3 8.08091D+01	5 8.25943D+01	11 8.54030D+01	13 8.64616D+01	
		15 8.74101D+01	17 8.81819D+01	19 8.86366D+01	21 8.85712D+01	24 6.82414D+01	
		25 6.76330D+01					
309	2.67823D+01	1 1.97716D-04	1.05500D+00	0.0	0.0	0.0	
309	2.67823D+01	3 5.44729D-06	1.05500D+00	0.0	0.0	0.0	1 3.55275D-05
309	2.67823D+01	2 4.22508D-06	1.05500D+00	0.0	0.0	0.0	2 2.26124D-06 24 3.83494D-01 24 5.61967D-01
309	2.6782D+01	1 7.60594D+01	3 8.08062D+01	5 8.25907D+01	11 8.53983D+01	13 8.64557D+01	
		15 8.74007D+01	17 8.81650D+01	19 8.86086D+01	21 8.85325D+01	24 6.78579D+01	
		25 6.72562D+01					
310	2.70000D+01	1 1.87046D-04	1.05500D+00	0.0	0.0	0.0	
310	2.70000D+01	3 5.15582D-06	1.05500D+00	0.0	0.0	0.0	1 3.36446D-05
310	2.70000D+01	2 4.04982D-06	1.05500D+00	0.0	0.0	0.0	2 2.17089D-06 24 3.65991D-01 24 5.39349D-01
310	2.7000D+01	1 7.60584D+01	3 8.08033D+01	5 8.25871D+01	11 8.53935D+01	13 8.64497D+01	
		15 8.73911D+01	17 8.81478D+01	19 8.85806D+01	21 8.84942D+01	24 6.74919D+01	
		25 6.68960D+01					

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 310 TIME STEPS, TIME = 2.70000D+01

GROSS GRID			1
			1
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	76106
	2	0.03	78143
2	3	0.06	80180
	4	0.08	81170
3	5	0.10	82159
	6	0.57	83107
	7	1.04	83154
	8	1.51	84101
	9	1.98	84148
	10	2.45	84194
4	11	2.92	85139
	12	3.14	85193
5	13	3.35	86145
	14	3.57	86194
6	15	3.79	87139
	16	4.01	87180
7	17	4.23	88115
	18	4.45	88142
8	19	4.67	88158
	20	4.89	88162
9	21	5.10	88149
	22	5.18	81181
	23	5.25	74186
10	24	5.32	67149
11	25	5.35	66190

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	77.210000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.17661176D-01

ELAPSED CPU TIME IS 3.73 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.86150D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.68960D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
311	2.72394D+01	1	6.60649D-04	1.05500D+00	0.0	0.0	0.0					
311	2.72394D+01	4	3.58522D-07	1.05500D+00	0.0	0.0	0.0	1	7.24261D-05			
311	2.72394D+01	3	2.96882D-06	1.05500D+00	0.0	0.0	0.0	2	7.19893D-06	24 3.68869D-01	24	5.46538D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
311	2.7239D+01	1 7.60573D+01	3 8.08001D+01	5 8.25831D+01	11 8.53881D+01	13 8.64430D+01	
		15 8.73803D+01	17 8.81287D+01	19 8.85498D+01	21 8.84525D+01	24 6.71230D+01	
		25 6.65510D+01					
312	2.75028D+01	1 4.58182D-04	1.05500D+00	0.0	0.0	0.0	
312	2.75028D+01	4 6.03896D-07	1.05500D+00	0.0	0.0	0.0	
312	2.75028D+01	3 2.54779D-06	1.05500D+00	0.0	0.0	0.0	
					1 7.42516D-05		
					2 5.27076D-06	24 3.60296D-01	24 5.36770D-01
312	2.7503D+01	1 7.60560D+01	3 8.07965D+01	5 8.25785D+01	11 8.53822D+01	13 8.64354D+01	
		15 8.73681D+01	17 8.81075D+01	19 8.85159D+01	21 8.84071D+01	24 6.67627D+01	
		25 6.62061D+01					
313	2.77514D+01	1 3.87808D-04	1.05500D+00	0.0	0.0	0.0	
313	2.77514D+01	4 3.17277D-07	1.05500D+00	0.0	0.0	0.0	
313	2.77514D+01	2 9.45835D-06	1.05500D+00	0.0	0.0	0.0	
					1 6.24007D-05		
					2 3.97511D-06	24 3.08198D-01	24 4.61632D-01
313	2.7751D+01	1 7.60548D+01	3 8.07931D+01	5 8.25742D+01	11 8.53764D+01	13 8.64281D+01	
		15 8.73564D+01	17 8.80872D+01	19 8.84841D+01	21 8.83649D+01	24 6.64545D+01	
		25 6.59105D+01					
314	2.80000D+01	1 3.45937D-04	1.05500D+00	0.0	0.0	0.0	
314	2.80000D+01	4 2.82840D-07	1.05500D+00	0.0	0.0	0.0	
314	2.80000D+01	2 8.48967D-06	1.05500D+00	0.0	0.0	0.0	
					1 5.46641D-05		
					2 3.57330D-06	24 2.80750D-01	24 4.22469D-01
314	2.8000D+01	1 7.60535D+01	3 8.07896D+01	5 8.25698D+01	11 8.53705D+01	13 8.64206D+01	
		15 8.73443D+01	17 8.80668D+01	19 8.84523D+01	21 8.83232D+01	24 6.61738D+01	
		25 6.56414D+01					

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.03 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 314 TIME STEPS, TIME = 2.80000D+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	76105
	2	0.03	78142
2	3	0.06	80179
	4	0.08	81168
3	5	0.10	82157
	6	0.57	83105
	7	1.04	83152
	8	1.51	83199
	9	1.98	84146
	10	2.45	84192
4	11	2.92	85137
	12	3.14	85191
5	13	3.35	86142
	14	3.57	86190
6	15	3.79	87134
	16	4.01	87174
7	17	4.23	88107
	18	4.45	88131
8	19	4.67	88145
	20	4.89	88146
9	21	5.10	88132
	22	5.18	81117
	23	5.25	73182
10	24	5.32	66117
11	25	5.35	65164

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.310000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAI) = 2.48601342D-01

ELAPSED CPU TIME IS 3.79 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.84632D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.66414D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
315	2.82735D+01	1	1.07215D-03	1.05500D+00	0.0	0.0	0.0				
315	2.82735D+01	4	1.93870D-06	1.05500D+00	0.0	0.0	0.0	1	1.09089D-04		
315	2.82735D+01	3	5.89594D-06	1.05500D+00	0.0	0.0	0.0	2	1.15204D-05		
315	2.82735D+01	2	3.88398D-06	1.05500D+00	0.0	0.0	0.0	3	1.63318D-06	24 2.57457D-01	24 3.89063D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
315	2.8273D+01	1 7.60522D+01	3 8.07857D+01	5 8.25648D+01	11 8.53639D+01	13 8.64121D+01	
		15 8.73308D+01	17 8.80441D+01	19 8.84174D+01	21 8.82781D+01	24 6.59163D+01	
		25 6.54194D+01					
316	2.85743D+01	1 6.87195D-04	1.05500D+00	0.0	0.0	0.0	
316	2.85743D+01	4 1.93991D-06	1.05500D+00	0.0	0.0	0.0	1 1.07330D-04
316	2.85743D+01	3 4.65193D-06	1.05500D+00	0.0	0.0	0.0	2 7.79240D-06 24 2.18966D-01 24 3.32188D-01
316	2.8574D+01	1 7.60507D+01	3 8.07813D+01	5 8.25593D+01	11 8.53565D+01	13 8.64026D+01	
		15 8.73157D+01	17 8.80188D+01	19 8.83792D+01	21 8.82293D+01	24 6.56974D+01	
		25 6.52205D+01					
317	2.87871D+01	1 6.13330D-03	1.05500D+00	0.0	0.0	0.0	
317	2.87871D+01	4 1.66117D-06	1.05500D+00	0.0	0.0	0.0	1 5.63253D-04
317	2.87871D+01	4 2.02478D-07	1.05500D+00	0.0	0.0	0.0	2 6.55762D-05
317	2.87871D+01	3 2.63857D-06	1.05500D+00	0.0	0.0	0.0	3 7.91794D-06 25 3.75656D-01 25 5.75979D-01
317	2.8787D+01	1 7.60494D+01	3 8.07781D+01	5 8.25552D+01	11 8.53511D+01	13 8.63956D+01	
		15 8.73047D+01	17 8.80008D+01	19 8.83522D+01	21 8.81954D+01	24 6.57802D+01	
		25 6.55961D+01					
318	2.90000D+01	1 6.96476D-03	1.05500D+00	0.0	0.0	0.0	
318	2.90000D+01	4 2.07127D-06	1.05500D+00	0.0	0.0	0.0	1 8.59895D-04
318	2.90000D+01	4 2.41662D-07	1.05500D+00	0.0	0.0	0.0	2 7.72337D-05
318	2.90000D+01	3 3.14855D-06	1.05500D+00	0.0	0.0	0.0	3 9.32285D-06 25 9.89420D-01 25 1.50835D+00
318	2.89212D+01	1 1.02362D-04	1.05500D+00	0.0	0.0	0.0	
318	2.89212D+01	3 7.00954D-07	1.05500D+00	0.0	0.0	0.0	1 5.65319D-05
318	2.89212D+01	1 7.69413D-06	1.05500D+00	0.0	0.0	0.0	2 6.65248D-07 25 6.12873D-01 25 9.34313D-01
318	2.8921D+01	1 7.60486D+01	3 8.07760D+01	5 8.25527D+01	11 8.53477D+01	13 8.63912D+01	
		15 8.72977D+01	17 8.79895D+01	19 8.83353D+01	21 8.81745D+01	24 6.61052D+01	
		25 6.62090D+01					
319	2.90000D+01	1 3.28820D-04	1.05500D+00	0.0	0.0	0.0	
319	2.90000D+01	3 3.24273D-06	1.05500D+00	0.0	0.0	0.0	1 1.62752D-04
319	2.90000D+01	2 2.26375D-06	1.05500D+00	0.0	0.0	0.0	2 4.74746D-06 25 4.51683D-01 25 6.82207D-01
319	2.9000D+01	1 7.60481D+01	3 8.07748D+01	5 8.25511D+01	11 8.53456D+01	13 8.63886D+01	
		15 8.72936D+01	17 8.79827D+01	19 8.83254D+01	21 8.81623D+01	24 6.64130D+01	
		25 6.66607D+01					

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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.03 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 319 TIME STEPS, TIME = 2.900000+01

GROS	FINE GRID	DISTANCE	0.0
			1
			I
			1
1	1	0.0	76105
	2	0.03	78141
2	3	0.06	80177
	4	0.08	81166
3	5	0.10	82155
	6	0.57	83103
	7	1.04	83151
	8	1.51	83197
	9	1.98	84144
	10	2.45	84189
4	11	2.92	85135
	12	3.14	85188
5	13	3.35	86139
	14	3.57	86186
6	15	3.79	87129
	16	4.01	87167
7	17	4.23	87198
	18	4.45	88121
8	19	4.67	88133
	20	4.89	88132
9	21	5.10	88116
	22	5.18	80178
	23	5.25	73141
10	24	5.32	66141
11	25	5.35	66166

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 7.879707450-02

ELAPSED CPU TIME IS 3.89 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.83254D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.64130D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 24

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
320	2.90788D+01	1	1.55789D-04	1.05500D+00	0.0	0.0	0.0				
320	2.90788D+01	3	1.58080D-06	1.05500D+00	0.0	0.0	0.0				
320	2.90788D+01	2	1.14640D-06	1.05500D+00	0.0	0.0	0.0	1	1.00541D-04		
								2	2.38540D-06	25 4.98054D-01	25 7.47148D-01

NUMBER OF TIME STEPS	TIME	TABLE FOR SPECIAL MONITORING OF TEMPERATURES — NODE NUMBERS AND TEMPERATURES				
320	2.90790D+01	1 7.60476D+01	3 8.07736D+01	5 8.25496D+01	11 8.53436D+01	13 8.63859D+01
		15 8.72894D+01	17 8.79760D+01	19 8.83154D+01	21 8.81504D+01	24 6.67898D+01
		25 6.71588D+01				
321	2.91576D+01	1 1.44712D-04	1.05500D+00	0.0	0.0	
321	2.91576D+01	3 1.47320D-06	1.05500D+00	0.0	0.0	
321	2.91576D+01	2 1.03507D-06	1.05500D+00	0.0	0.0	
321	2.91580D+01	1 7.60471D+01	3 8.07723D+01	5 8.25480D+01	11 8.53415D+01	13 8.63833D+01
		15 8.72853D+01	17 8.79693D+01	19 8.83056D+01	21 8.81387D+01	24 6.72238D+01
		25 6.76986D+01				
322	2.92364D+01	1 1.26029D-04	1.05500D+00	0.0	0.0	
322	2.92364D+01	2 9.93538D-06	1.05500D+00	0.0	0.0	
322	2.92364D+01	2 8.27665D-07	1.05500D+00	0.0	0.0	
322	2.9236D+01	1 7.60467D+01	3 8.07711D+01	5 8.25465D+01	11 8.53394D+01	13 8.63806D+01
		15 8.72811D+01	17 8.79625D+01	19 8.82957D+01	21 8.81273D+01	24 6.77067D+01
		25 6.82749D+01				
323	2.93231D+01	1 1.17853D-04	1.05500D+00	0.0	0.0	
323	2.93231D+01	2 8.55552D-06	1.05500D+00	0.0	0.0	
323	2.93231D+01	2 9.30027D-07	1.05500D+00	0.0	0.0	
323	2.9323D+01	1 7.60462D+01	3 8.07697D+01	5 8.25447D+01	11 8.53371D+01	13 8.63776D+01
		15 8.72764D+01	17 8.79551D+01	19 8.82848D+01	21 8.81151D+01	24 6.82849D+01
		25 6.89402D+01				
324	2.94097D+01	1 1.34817D-04	1.05500D+00	0.0	0.0	
324	2.94097D+01	3 1.39615D-06	1.05500D+00	0.0	0.0	
324	2.94097D+01	2 1.07530D-06	1.05500D+00	0.0	0.0	
324	2.94042D+01	1 1.15856D-05	1.05500D+00	0.0	0.0	
324	2.94042D+01	2 1.03621D-06	1.05500D+00	0.0	0.0	
324	2.94042D+01	1 7.03764D-07	1.05500D+00	0.0	0.0	
324	2.9404D+01	1 7.60457D+01	3 8.07684D+01	5 8.25431D+01	11 8.53319D+01	13 8.63748D+01
		15 8.72721D+01	17 8.79481D+01	19 8.82747D+01	21 8.81041D+01	24 6.88653D+01
		25 6.95975D+01				
325	2.94854D+01	1 7.91340D-05	1.05500D+00	0.0	0.0	
325	2.94854D+01	2 6.16564D-06	1.05500D+00	0.0	0.0	
325	2.94854D+01	1 6.92510D-06	1.05500D+00	0.0	0.0	
325	2.9485D+01	1 7.60453D+01	3 8.07671D+01	5 8.25414D+01	11 8.53328D+01	13 8.63720D+01
		15 8.72677D+01	17 8.79411D+01	19 8.82647D+01	21 8.80936D+01	24 6.94792D+01
		25 7.02778D+01				
326	2.95666D+01	1 5.83738D-04	1.05500D+00	0.0	0.0	
326	2.95666D+01	3 5.75060D-06	1.05500D+00	0.0	0.0	
326	2.95666D+01	2 3.54140D-06	1.05500D+00	0.0	0.0	
326	2.95521D+01	1 5.30672D-05	1.05500D+00	0.0	0.0	
326	2.95521D+01	2 3.99344D-06	1.05500D+00	0.0	0.0	
326	2.95521D+01	1 3.17594D-06	1.05500D+00	0.0	0.0	
326	2.9552D+01	1 7.60449D+01	3 8.07660D+01	5 8.25401D+01	11 8.53309D+01	13 8.63697D+01
		15 8.72640D+01	17 8.79354D+01	19 8.82564D+01	21 8.80853D+01	24 7.00192D+01
		25 7.09303D+01				
327	2.96188D+01	1 8.12843D-04	1.05500D+00	0.0	0.0	
327	2.96188D+01	3 7.69337D-06	1.05500D+00	0.0	0.0	
327	2.96188D+01	2 3.73222D-06	1.05500D+00	0.0	0.0	
327	2.96032D+01	1 6.74528D-06	1.05500D+00	0.0	0.0	
327	2.96032D+01	1 6.74528D-06	1.05500D+00	0.0	0.0	
327	2.96032D+01	1 6.13881D-07	1.05500D+00	0.0	0.0	
327	2.9603D+01	1 7.60446D+01	3 8.07652D+01	5 8.25390D+01	11 8.53296D+01	13 8.63679D+01
		15 8.72613D+01	17 8.79309D+01	19 8.82501D+01	21 8.80792D+01	24 7.04875D+01
		25 7.16020D+01				
328	2.96543D+01	1 1.77668D-04	1.05500D+00	0.0	0.0	

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328 2.96543D+01    3 1.54359D-06 1.05500D+00 0.0          0.0          0.0          1 1.02479D-04
328 2.96543D+01    2 9.22183D-07 1.05500D+00 0.0          0.0          0.0          2 2.64265D-06   25 7.52869D-01   25 1.05146D+00
328 2.96494D+01    1 3.74688D-06 1.05500D+00 0.0          0.0          0.0
328 2.96494D+01    1 3.74688D-06 1.05500D+00 0.0          0.0          0.0          1 2.57715D-06
328 2.96494D+01    1 3.05053D-07 1.05500D+00 0.0          0.0          0.0          2 2.28375D-07   25 6.80744D-01   25 9.50734D-01
  328      2.9649D+01    1 7.60443D+01    3 8.07644D+01    5 8.25381D+01   11 8.53283D+01   13 8.63663D+01
                         15 8.72587D+01   17 8.79270D+01   19 8.82444D+01   21 8.80739D+01   24 7.09734D+01
                         25 7.22827D+01

329 2.96956D+01    1 8.61468D-05 1.05500D+00 0.0          0.0          0.0          1 7.71160D-05
329 2.96956D+01    3 7.33905D-07 1.05500D+00 0.0          0.0          0.0          2 1.39232D-06   25 7.32338D-01   25 1.01316D+00
329 2.96956D+01    1 5.83210D-06 1.05500D+00 0.0          0.0          0.0
329 2.96927D+01    1 3.37537D-06 1.05500D+00 0.0          0.0          0.0          1 1.91321D-06
329 2.96927D+01    1 3.37537D-06 1.05500D+00 0.0          0.0          0.0          2 2.08478D-07   25 6.87419D-01   25 9.51014D-01
329 2.96927D+01    1 3.22471D-07 1.05500D+00 0.0          0.0          0.0
  329      2.9693D+01    1 7.60440D+01    3 8.07637D+01    5 8.25372D+01   11 8.53271D+01   13 8.63647D+01
                         15 8.72564D+01   17 8.79232D+01   19 8.82391D+01   21 8.80690D+01   24 7.14835D+01
                         25 7.29702D+01

330 2.97360D+01    1 5.34535D-05 1.05500D+00 0.0          0.0          0.0          1 6.36974D-05
330 2.97360D+01    2 6.99777D-06 1.05500D+00 0.0          0.0          0.0          2 1.27915D-06   25 7.26008D-01   25 9.94938D-01
330 2.97360D+01    1 3.43301D-06 1.05500D+00 0.0          0.0          0.0
  330      2.9736D+01    1 7.60438D+01    3 8.07630D+01    5 8.25363D+01   11 8.53259D+01   13 8.63632D+01
                         15 8.72540D+01   17 8.79195D+01   19 8.82338D+01   21 8.80643D+01   24 7.20434D+01
                         25 7.36962D+01

331 2.97793D+01    1 4.68326D-05 1.05500D+00 0.0          0.0          0.0          1 5.99260D-05
331 2.97793D+01    2 6.20644D-06 1.05500D+00 0.0          0.0          0.0          2 1.12109D-06   25 7.60681D-01   25 1.03218D+00
331 2.97793D+01    1 3.01791D-06 1.05500D+00 0.0          0.0          0.0
331 2.97759D+01    1 4.24642D-06 1.05500D+00 0.0          0.0          0.0          1 2.24720D-06
331 2.97759D+01    1 4.24642D-06 1.05500D+00 0.0          0.0          0.0          2 2.43642D-07   25 7.01445D-01   25 9.51806D-01
331 2.97759D+01    1 4.21876D-07 1.05500D+00 0.0          0.0          0.0
  331      2.9776D+01    1 7.60435D+01    3 8.07623D+01    5 8.25355D+01   11 8.53248D+01   13 8.63618D+01
                         15 8.72518D+01   17 8.79160D+01   19 8.82289D+01   21 8.80602D+01   24 7.25992D+01
                         25 7.43976D+01

332 2.98158D+01    1 2.74968D-05 1.05500D+00 0.0          0.0          0.0          1 4.77894D-05
332 2.98158D+01    2 4.12282D-06 1.05500D+00 0.0          0.0          0.0          2 7.45528D-07   25 7.27137D-01   25 9.77366D-01
332 2.98158D+01    1 1.88325D-06 1.05500D+00 0.0          0.0          0.0
  332      2.9816D+01    1 7.60433D+01    3 8.07617D+01    5 8.25346D+01   11 8.53237D+01   13 8.63604D+01
                         15 8.72496D+01   17 8.79125D+01   19 8.82241D+01   21 8.80562D+01   24 7.31913D+01
                         25 7.51247D+01

333 2.98556D+01    1 2.54569D-05 1.05500D+00 0.0          0.0          0.0          1 4.50186D-05
333 2.98556D+01    2 3.77895D-06 1.05500D+00 0.0          0.0          0.0          2 6.79477D-07   25 7.50812D-01   25 9.99421D-01
333 2.98556D+01    1 1.71688D-06 1.05500D+00 0.0          0.0          0.0
  333      2.9856D+01    1 7.60430D+01    3 8.07610D+01    5 8.25338D+01   11 8.53226D+01   13 8.63589D+01
                         15 8.72474D+01   17 8.79091D+01   19 8.82193D+01   21 8.80523D+01   24 7.38164D+01
                         25 7.58756D+01

334 2.98955D+01    1 2.37280D-05 1.05500D+00 0.0          0.0          0.0          1 4.25334D-05
334 2.98955D+01    2 3.48745D-06 1.05500D+00 0.0          0.0          0.0          2 6.38750D-07   25 7.72763D-01   25 1.01846D+00
334 2.98955D+01    1 1.61692D-06 1.05500D+00 0.0          0.0          0.0
334 2.98928D+01    1 3.40692D-06 1.05500D+00 0.0          0.0          0.0          1 1.70482D-06
334 2.98928D+01    1 3.40692D-06 1.05500D+00 0.0          0.0          0.0          2 1.98547D-07   25 7.22152D-01   25 9.51758D-01
334 2.98928D+01    1 3.86169D-07 1.05500D+00 0.0          0.0          0.0
  334      2.9893D+01    1 7.60428D+01    3 8.07604D+01    5 8.25330D+01   11 8.53215D+01   13 8.63576D+01
                         15 8.72453D+01   17 8.79059D+01   19 8.82148D+01   21 8.80489D+01   24 7.44270D+01
                         25 7.65977D+01

335 2.99300D+01    1 1.53470D-05 1.05500D+00 0.0          0.0          0.0          1 3.47800D-05
335 2.99300D+01    2 2.41817D-06 1.05500D+00 0.0          0.0          0.0          2 4.53351D-07   25 7.39029D-01   25 9.64818D-01
335 2.99300D+01    1 1.07293D-06 1.05500D+00 0.0          0.0          0.0
  335      2.9930D+01    1 7.60426D+01    3 8.07598D+01    5 8.25322D+01   11 8.53205D+01   13 8.63562D+01
                         15 8.72433D+01   17 8.79026D+01   19 8.82103D+01   21 8.80456D+01   24 7.50623D+01
                         25 7.73367D+01

336 2.99650D+01    1 1.42485D-05 1.05500D+00 0.0          0.0          0.0          1 3.09501D-05
336 2.99650D+01    2 2.20647D-06 1.05500D+00 0.0          0.0          0.0          2 4.09735D-07   25 7.11910D-01   25 9.20533D-01
336 2.99650D+01    1 8.79745D-07 1.05500D+00 0.0          0.0          0.0
  336      2.9965D+01    1 7.60424D+01    3 8.07592D+01    5 8.25315D+01   11 8.53195D+01   13 8.63550D+01
                         15 8.72413D+01   17 8.78996D+01   19 8.82061D+01   21 8.80427D+01   24 7.56814D+01
                         25 7.80487D+01

337 3.00000D+01    1 1.10616D-05 1.05500D+00 0.0          0.0          0.0
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PCC

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337 3.000000D+01    2 1.63596D-06 1.05500D+00 0.0          0.0          0.0          1 2.73576D-05
337 3.000000D+01    1 6.70520D-07 1.05500D+00 0.0          0.0          0.0          2 3.08799D-07   25 7.24486D-01   25 9.28249D-01
  337      3.00000D+01     1 7.60423D+01     3 8.07586D+01     5 8.25308D+01    11 8.53180D+01    13 8.63537D+01
                          15 8.72394D+01    17 8.78966D+01    19 8.82019D+01    21 8.80399D+01    24 7.63191D+01
                          25 7.87731D+01
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.04 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 337 TIME STEPS, TIME = 3.000000D+01

GROSS GRID			1
			i
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	76104
	2	0.03	78140
2	3	0.06	80176
	4	0.08	81165
3	5	0.10	82153
	6	0.57	83101
	7	1.04	83148
	8	1.51	83195
	9	1.98	84141
	10	2.45	84187
4	11	2.92	85132
	12	3.14	85185
5	13	3.35	86135
	14	3.57	86182
6	15	3.79	87124
	16	4.01	87160
7	17	4.23	87190
	18	4.45	88110
8	19	4.67	88120
	20	4.89	88118
9	21	5.10	88104
	22	5.18	82129
	23	5.25	77174
10	24	5.32	76132
11	25	5.35	78177

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.310000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.50105052D-02

ELAPSED CPU TIME IS 4.15 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.82019D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 7.60422D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
338	3.00350D+01	1	1.15445D-05	1.05500D+00	0.0	0.0	0.0				
338	3.00350D+01	2	1.78907D-06	1.05500D+00	0.0	0.0	0.0	1	2.66970D-05		
338	3.00350D+01	1	7.24118D-07	1.05500D+00	0.0	0.0	0.0	2	3.33350D-07	25 7.37744D-01	25 9.36543D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
338	3.0035D+01	1 7.60420D+01	3 8.07580D+01	5 8.25300D+01	11 8.53175D+01	13 8.63524D+01
		15 8.72374D+01	17 8.78935D+01	19 8.81978D+01	21 8.80373D+01	24 7.69743D+01
		25 7.95109D+01				
339	3.00705D+01	1 1.03400D-05	1.05500D+00	0.0	0.0	
339	3.00705D+01	2 1.59811D-06	1.05500D+00	0.0	0.0	1 2.54585D-05
339	3.00705D+01	1 6.57512D-07	1.05500D+00	0.0	0.0	2 3.03878D-07 25 7.60312D-01 25 9.56236D-01
339	3.0071D+01	1 7.60418D+01	3 8.07574D+01	5 8.25292D+01	11 8.53165D+01	13 8.63511D+01
		15 8.72354D+01	17 8.78904D+01	19 8.81936D+01	21 8.80348D+01	24 7.76555D+01
		25 8.02712D+01				
340	3.01060D+01	1 9.81378D-06	1.05500D+00	0.0	0.0	
340	3.01060D+01	1 9.81378D-06	1.05500D+00	0.0	0.0	1 2.41640D-05
340	3.01060D+01	1 2.34501D-06	1.05500D+00	0.0	0.0	2 1.03417D-06 25 7.71728D-01 25 9.61401D-01
340	3.0106D+01	1 7.60415D+01	3 8.07568D+01	5 8.25285D+01	11 8.53155D+01	13 8.63498D+01
		15 8.72334D+01	17 8.78873D+01	19 8.81894D+01	21 8.80325D+01	24 7.83523D+01
		25 8.10429D+01				
341	3.01416D+01	1 8.76240D-06	1.05500D+00	0.0	0.0	
341	3.01416D+01	1 8.76240D-06	1.05500D+00	0.0	0.0	1 2.25845D-05
341	3.01416D+01	1 2.08683D-06	1.05500D+00	0.0	0.0	2 9.42726D-07 25 7.82027D-01 25 9.64954D-01
341	3.0142D+01	1 7.60413D+01	3 8.07562D+01	5 8.25277D+01	11 8.53145D+01	13 8.63485D+01
		15 8.72314D+01	17 8.78842D+01	19 8.81852D+01	21 8.80304D+01	24 7.90635D+01
		25 8.18249D+01				
342	3.01771D+01	1 8.03918D-06	1.05500D+00	0.0	0.0	
342	3.01771D+01	1 8.03918D-06	1.05500D+00	0.0	0.0	1 2.12643D-05
342	3.01771D+01	1 1.92961D-06	1.05500D+00	0.0	0.0	2 8.83525D-07 25 7.91567D-01 25 9.67391D-01
342	3.0177D+01	1 7.60411D+01	3 8.07556D+01	5 8.25270D+01	11 8.53135D+01	13 8.63472D+01
		15 8.72294D+01	17 8.78812D+01	19 8.81811D+01	21 8.80285D+01	24 7.97881D+01
		25 8.26165D+01				
343	3.02126D+01	1 7.22229D-06	1.05500D+00	0.0	0.0	
343	3.02126D+01	1 7.22229D-06	1.05500D+00	0.0	0.0	1 1.99071D-05
343	3.02126D+01	1 1.69997D-06	1.05500D+00	0.0	0.0	2 7.95951D-07 25 8.00244D-01 25 9.68625D-01
343	3.0213D+01	1 7.60409D+01	3 8.07550D+01	5 8.25262D+01	11 8.53124D+01	13 8.63459D+01
		15 8.72274D+01	17 8.78781D+01	19 8.81769D+01	21 8.80268D+01	24 8.05250D+01
		25 8.34168D+01				
344	3.02481D+01	1 6.56307D-06	1.05500D+00	0.0	0.0	
344	3.02481D+01	1 6.56307D-06	1.05500D+00	0.0	0.0	1 1.86615D-05
344	3.02481D+01	1 1.57772D-06	1.05500D+00	0.0	0.0	2 7.45241D-07 25 8.08190D-01 25 9.68859D-01
344	3.0248D+01	1 7.60407D+01	3 8.07544D+01	5 8.25254D+01	11 8.53114D+01	13 8.63446D+01
		15 8.72254D+01	17 8.78750D+01	19 8.81728D+01	21 8.80253D+01	24 8.12734D+01
		25 8.42250D+01				
345	3.02836D+01	1 5.95128D-06	1.05500D+00	0.0	0.0	
345	3.02836D+01	1 5.95128D-06	1.05500D+00	0.0	0.0	1 1.74648D-05
345	3.02836D+01	1 1.41314D-06	1.05500D+00	0.0	0.0	2 6.82414D-07 25 8.15482D-01 25 9.68218D-01
345	3.0284D+01	1 7.60405D+01	3 8.07538D+01	5 8.25247D+01	11 8.53104D+01	13 8.63433D+01
		15 8.72234D+01	17 8.78719D+01	19 8.81688D+01	21 8.80240D+01	24 8.20324D+01
		25 8.50404D+01				
346	3.03191D+01	1 5.33524D-06	1.05500D+00	0.0	0.0	
346	3.03191D+01	1 5.33524D-06	1.05500D+00	0.0	0.0	1 1.62954D-05
346	3.03191D+01	1 1.28443D-06	1.05500D+00	0.0	0.0	2 6.27681D-07 25 8.22071D-01 25 9.66683D-01
346	3.0319D+01	1 7.60402D+01	3 8.07532D+01	5 8.25239D+01	11 8.53094D+01	13 8.63420D+01
		15 8.72214D+01	17 8.78688D+01	19 8.81647D+01	21 8.80230D+01	24 8.28011D+01
		25 8.58625D+01				
347	3.03546D+01	1 4.89299D-06	1.05500D+00	0.0	0.0	
347	3.03546D+01	1 4.89299D-06	1.05500D+00	0.0	0.0	1 1.52537D-05
347	3.03546D+01	1 1.17691D-06	1.05500D+00	0.0	0.0	2 5.85897D-07 25 8.28181D-01 25 9.64543D-01
	3.0355D+01	1 7.60400D+01	3 8.07	5 8.25231D+01	11 8.53	13 8.63

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                    15 8.72194D+01   17 8.78657D+01   19 8.81607D+01   21 8.80221D+01   24 8.35788D+01
                    25 8.66907D+01
348 3.03901D+01   1 4.36949D-06 1.05500D+00 0.0        0.0        0.0
348 3.03901D+01   1 4.36949D-06 1.05500D+00 0.0        0.0        0.0          1 1.42010D-05
348 3.03901D+01   1 1.02643D-06 1.05500D+00 0.0        0.0        0.0          2 5.25479D-07   25 8.33706D-01   25 9.61701D-01
  348      3.0390D+01    1 7.60398D+01    3 8.07519D+01    5 8.25223D+01   11 8.53073D+01   13 8.63393D+01
                    15 8.72174D+01   17 8.78626D+01   19 8.81567D+01   21 8.80215D+01   24 8.43648D+01
                    25 8.75244D+01
349 3.04257D+01   1 3.95183D-06 1.05500D+00 0.0        0.0        0.0
349 3.04257D+01   1 3.95183D-06 1.05500D+00 0.0        0.0        0.0          1 1.32408D-05
349 3.04257D+01   1 9.34272D-07 1.05500D+00 0.0        0.0        0.0          2 4.85881D-07   25 8.38749D-01   25 9.58303D-01
  349      3.0426D+01    1 7.60396D+01    3 8.07513D+01    5 8.25216D+01   11 8.53062D+01   13 8.63380D+01
                    15 8.72153D+01   17 8.78595D+01   19 8.81527D+01   21 8.80210D+01   24 8.51583D+01
                    25 8.83631D+01
350 3.04612D+01   1 3.57328D-06 1.05500D+00 0.0        0.0        0.0
350 3.04612D+01   1 3.57328D-06 1.05500D+00 0.0        0.0        0.0          1 1.23355D-05
350 3.04612D+01   1 8.47063D-07 1.05500D+00 0.0        0.0        0.0          2 4.48404D-07   25 8.43354D-01   25 9.54419D-01
  350      3.0461D+01    1 7.60394D+01    3 8.07507D+01    5 8.25208D+01   11 8.53052D+01   13 8.63367D+01
                    15 8.72133D+01   17 8.78564D+01   19 8.81488D+01   21 8.80209D+01   24 8.59589D+01
                    25 8.92065D+01
351 3.04967D+01   1 3.10786D-06 1.05500D+00 0.0        0.0        0.0
351 3.04967D+01   1 3.10786D-06 1.05500D+00 0.0        0.0        0.0          1 1.14076D-05
351 3.04967D+01   1 7.55318D-07 1.05500D+00 0.0        0.0        0.0          2 4.04533D-07   25 8.47382D-01   25 9.49911D-01
  351      3.0497D+01    1 7.60391D+01    3 8.07501D+01    5 8.25200D+01   11 8.53042D+01   13 8.63353D+01
                    15 8.72113D+01   17 8.78533D+01   19 8.81449D+01   21 8.80209D+01   24 8.67658D+01
                    25 9.00539D+01
352 3.05322D+01   1 1.65563D-05 1.05500D+00 0.0        0.0        0.0
352 3.05322D+01   2 1.79447D-06 1.05500D+00 0.0        0.0        0.0          1 1.51656D-05
352 3.05322D+01   1 6.67072D-07 1.05500D+00 0.0        0.0        0.0          2 3.33455D-07   25 8.60042D-01   25 9.55031D-01
  352      3.0532D+01    1 7.60389D+01    3 8.07495D+01    5 8.25192D+01   11 8.53031D+01   13 8.63340D+01
                    15 8.72092D+01   17 8.78502D+01   19 8.81410D+01   21 8.80212D+01   24 8.75796D+01
                    25 9.09139D+01
353 3.05677D+01   1 3.06095D-05 1.05500D+00 0.0        0.0        0.0
353 3.05677D+01   2 3.18896D-06 1.05500D+00 0.0        0.0        0.0          1 2.02673D-05
353 3.05677D+01   1 1.16248D-06 1.05500D+00 0.0        0.0        0.0          2 5.75757D-07   25 8.82067D-01   25 9.70222D-01
  353      3.0568D+01    1 7.60387D+01    3 8.07488D+01    5 8.25184D+01   11 8.53021D+01   13 8.63326D+01
                    15 8.72072D+01   17 8.78472D+01   19 8.81372D+01   21 8.80217D+01   24 8.84028D+01
                    25 9.17960D+01
354 3.06032D+01   1 1.87801D-05 1.05500D+00 0.0        0.0        0.0
354 3.06032D+01   2 2.16572D-06 1.05500D+00 0.0        0.0        0.0          1 1.82589D-05
354 3.06032D+01   1 8.34442D-07 1.05500D+00 0.0        0.0        0.0          2 3.95282D-07   25 8.98069D-01   25 9.78332D-01
  354      3.0603D+01    1 7.60385D+01    3 8.07482D+01    5 8.25176D+01   11 8.53010D+01   13 8.63313D+01
                    15 8.72052D+01   17 8.78441D+01   19 8.81334D+01   21 8.80224D+01   24 8.92373D+01
                    25 9.26941D+01
355 3.06388D+01   1 1.24756D-05 1.05500D+00 0.0        0.0        0.0
355 3.06388D+01   2 1.59863D-06 1.05500D+00 0.0        0.0        0.0          1 1.68404D-05
355 3.06388D+01   1 6.53318D-07 1.05500D+00 0.0        0.0        0.0          2 2.98238D-07   25 9.10621D-01   25 9.82394D-01
  355      3.0639D+01    1 7.60383D+01    3 8.07476D+01    5 8.25168D+01   11 8.52999D+01   13 8.63299D+01
                    15 8.72031D+01   17 8.78410D+01   19 8.81296D+01   21 8.80233D+01   24 9.00839D+01
                    25 9.36047D+01
356 3.06743D+01   1 8.77183D-06 1.05500D+00 0.0        0.0        0.0
356 3.06743D+01   1 8.77183D-06 1.05500D+00 0.0        0.0        0.0          1 1.54032D-05
356 3.06743D+01   1 1.91079D-06 1.05500D+00 0.0        0.0        0.0          2 8.77343D-07   25 9.20857D-01   25 9.83772D-01
  356      3.0674D+01    1 7.60380D+01    3 8.07470D+01    5 8.25160D+01   11 8.52989D+01   13 8.63286D+01
                    15 8.72011D+01   17 8.78379D+01   19 8.81279D+01   21 8.80245D+01   24 9.09425D+01
                    25 9.45255D+01
357 3.07098D+01   1 6.82128D-06 1.05500D+00 0.0        0.0        0.0
357 3.07098D+01   1 6.82128D-06 1.05500D+00 0.0        0.0        0.0          1 1.43942D-05
357 3.07098D+01   1 1.61436D-06 1.05500D+00 0.0        0.0        0.0          2 7.38182D-07   25 9.29641D-01   25 9.83482D-01
  357      3.0710D+01    1 7.60378D+01    3 8.07463D+01    5 8.25152D+01   11 8.52978D+01   13 8.63272D+01
                    15 8.71990D+01   17 8.78348D+01   19 8.81222D+01   21 8.80260D+01   24 9.18122D+01
                    25 9.54552D+01
358 3.07453D+01   1 5.43439D-06 1.05500D+00 0.0        0.0        0.0
358 3.07453D+01   1 5.43439D-06 1.05500D+00 0.0        0.0        0.0          1 1.34491D-05
358 3.07453D+01   1 1.34928D-06 1.05500D+00 0.0        0.0        0.0          2 6.16449D-07   25 9.37246D-01   25 9.81871D-01
  358      3.0745D+01    1 7.60376D+01    3 8.07457D+01    5 8.25144D+01   11 8.52967D+01   13 8.63259D+01
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                    15 8.71970D+01   17 8.78317D+01   19 8.81185D+01   21 8.80276D+01   24 9.26925D+01
                    25 9.63924D+01
359 3.07808D+01   1 4.67911D-06 1.05500D+00 0.0          0.0          0.0
359 3.07808D+01   1 4.67911D-06 1.05500D+00 0.0          0.0          0.0              1 1.25380D-05
359 3.07808D+01   1 1.16597D-06 1.05500D+00 0.0          0.0          0.0              2 5.24720D-07   25 9.43846D-01   25 9.79170D-01
  359     3.0781D+01    1 7.60374D+01    3 8.07451D+01   5 8.25136D+01   11 8.52957D+01   13 8.63245D+01
                    15 8.71949D+01   17 8.78287D+01   19 8.81149D+01   21 8.80295D+01   24 9.35825D+01
                    25 9.73363D+01
360 3.08163D+01   1 4.25309D-06 1.05500D+00 0.0          0.0          0.0
360 3.08163D+01   1 4.25309D-06 1.05500D+00 0.0          0.0          0.0              1 1.17956D-05
360 3.08163D+01   1 1.06074D-06 1.05500D+00 0.0          0.0          0.0              2 4.70380D-07   25 9.49907D-01   25 9.75902D-01
  360     3.0816D+01    1 7.60371D+01    3 8.07444D+01   5 8.25128D+01   11 8.52946D+01   13 8.63231D+01
                    15 8.71928D+01   17 8.78256D+01   19 8.81114D+01   21 8.80316D+01   24 9.44814D+01
                    25 9.82862D+01
361 3.08519D+01   1 3.71686D-06 1.05500D+00 0.0          0.0          0.0
361 3.08519D+01   1 3.71686D-06 1.05500D+00 0.0          0.0          0.0              1 1.09917D-05
361 3.08519D+01   1 9.11345D-07 1.05500D+00 0.0          0.0          0.0              2 4.07104D-07   25 9.55263D-01   25 9.71920D-01
  361     3.0852D+01    1 7.60369D+01    3 8.07438D+01   5 8.25120D+01   11 8.52935D+01   13 8.63217D+01
                    15 8.71908D+01   17 8.78225D+01   19 8.81079D+01   21 8.80340D+01   24 9.53884D+01
                    25 9.92414D+01
362 3.08874D+01   1 3.24955D-06 1.05500D+00 0.0          0.0          0.0
362 3.08874D+01   1 3.24955D-06 1.05500D+00 0.0          0.0          0.0              1 1.02260D-05
362 3.08874D+01   1 7.76248D-07 1.05500D+00 0.0          0.0          0.0              2 3.61806D-07   25 9.60003D-01   25 9.67341D-01
  362     3.0887D+01    1 7.60367D+01    3 8.07431D+01   5 8.25112D+01   11 8.52924D+01   13 8.63204D+01
                    15 8.71887D+01   17 8.78195D+01   19 8.81044D+01   21 8.80365D+01   24 9.63029D+01
                    25 1.00201D+02
363 3.09229D+01   1 2.77575D-06 1.05500D+00 0.0          0.0          0.0
363 3.09229D+01   1 2.77575D-06 1.05500D+00 0.0          0.0          0.0              1 9.45766D-06
363 3.09229D+01   1 6.72125D-07 1.05500D+00 0.0          0.0          0.0              2 3.22897D-07   25 9.64079D-01   25 9.62141D-01
  363     3.0923D+01    1 7.60364D+01    3 8.07425D+01   5 8.25104D+01   11 8.52914D+01   13 8.63190D+01
                    15 8.71866D+01   17 8.78164D+01   19 8.81010D+01   21 8.80394D+01   24 9.72241D+01
                    25 1.01156D+02
364 3.09584D+01   1 2.56499D-06 1.05500D+00 0.0          0.0          0.0
364 3.09584D+01   1 2.56499D-06 1.05500D+00 0.0          0.0          0.0              1 8.85338D-06
364 3.09584D+01   1 6.11167D-07 1.05500D+00 0.0          0.0          0.0              2 3.07135D-07   25 9.67897D-01   25 9.56746D-01
  364     3.0958D+01    1 7.60362D+01    3 8.07418D+01   5 8.25096D+01   11 8.52903D+01   13 8.63176D+01
                    15 8.71846D+01   17 8.78133D+01   19 8.80976D+01   21 8.80424D+01   24 9.81514D+01
                    25 1.02133D+02
365 3.10000D+01   1 8.26457D-06 1.05500D+00 0.0          0.0          0.0
365 3.10000D+01   1 8.26457D-06 1.05500D+00 0.0          0.0          0.0              1 9.52624D-06
365 3.10000D+01   1 7.10855D-07 1.05500D+00 0.0          0.0          0.0              2 4.75525D-07   25 1.13096D+00   24 1.11249D+00
365 3.09939D+01   1 7.92130D-06 1.05500D+00 0.0          0.0          0.0
365 3.09939D+01   1 7.92130D-06 1.05500D+00 0.0          0.0          0.0              1 2.79002D-06
365 3.09939D+01   1 1.08731D-06 1.05500D+00 0.0          0.0          0.0              2 4.96393D-07   25 9.71171D-01   25 9.50884D-01
  365     3.0994D+01    1 7.60360D+01    3 8.07412D+01   5 8.25088D+01   11 8.52892D+01   13 8.63162D+01
                    15 8.71825D+01   17 8.78103D+01   19 8.80943D+01   21 8.80457D+01   24 9.90843D+01
                    25 1.03105D+02
366 3.10039D+01   1 4.98758D-06 1.05500D+00 0.0          0.0          0.0
366 3.10039D+01   1 4.98758D-06 1.05500D+00 0.0          0.0          0.0              1 4.84861D-06
366 3.10039D+01   1 3.96537D-07 1.05500D+00 0.0          0.0          0.0              2 3.98934D-07   25 2.82155D-01   25 2.73659D-01
  366     3.1004D+01    1 7.60359D+01    3 8.07410D+01   5 8.25085D+01   11 8.52889D+01   13 8.63158D+01
                    15 8.71819D+01   17 8.78094D+01   19 8.80934D+01   21 8.80467D+01   24 9.93482D+01
                    25 1.03387D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ O
W9XNP110 20.58.05 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 366 TIME STEPS, TIME = 3.100390D+01

GROS			1
			1
			1
			0.0
1			76104
			78139
2	3		80174
	4	0.05	81163
3	5	0.10	82151
	6	0.57	82197
	7	1.04	83140
	8	1.51	83135
	9	1.98	84129
	10	2.45	84184
4	11	2.92	85129
	12	3.14	85182
5	13	3.35	86132
	14	3.57	86177
6	15	3.79	87118
	16	4.01	87153
7	17	4.23	87181
	18	4.45	88100
8	19	4.67	88109
	20	4.89	88109
9	21	5.10	88105
	22	5.18	88114
	23	5.25	90192
10	24	5.32	99135
11	25	5.35	103139

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	77.2156+2
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 4.45 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.03387D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.60359D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
367	3.10139D+01	1	7.30550D-07	1.05500D+00	0.0	0.0	0.0				
367	3.10139D+01	1	7.30550D-07	1.05500D+00	0.0	0.0	0.0	1	9.76628D-07		
367	3.10139D+01	1	5.31348D-08	1.05500D+00	0.0	0.0	0.0	2	5.41592D-08	25 2.81591D-01	25 2.72367D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
367	3.1014D+01	1 7.60358D+01	3 8.07408D+01	5 8.25083D+01	11 8.52886D+01	13 8.63154D+01	
		15 8.71830D+01	17 8.78086D+01	19 8.80924D+01	21 8.80477D+01	24 9.96129D+01	
		25 1.03638D+02					
368	3.10239D+01	1 5.73969D-07	1.05500D+00	0.0	0.0		
368	3.10239D+01	1 5.73969D-07	1.05500D+00	0.0	0.0	1 9.24874D-07	
368	3.10239D+01	1 4.29206D-08	1.05500D+00	0.0	0.0	2 5.19862D-08	25 2.81084D-01 25 2.71138D-01
368	3.1024D+01	1 7.60358D+01	3 8.07407D+01	5 8.25081D+01	11 8.52883D+01	13 8.63150D+01	
		15 8.71807D+01	17 8.78077D+01	19 8.80915D+01	21 8.80487D+01	24 9.98785D+01	
		25 1.03949D+02					
369	3.10339D+01	1 5.70105D-07	1.05500D+00	0.0	0.0		
369	3.10339D+01	1 5.70105D-07	1.05500D+00	0.0	0.0	1 8.32763D-07	
369	3.10339D+01	1 4.16748D-08	1.05500D+00	0.0	0.0	2 4.56999D-08	25 2.80703D-01 25 2.70038D-01
369	3.1034D+01	1 7.60357D+01	3 8.07405D+01	5 8.25079D+01	11 8.52879D+01	13 8.63147D+01	
		15 8.71802D+01	17 8.78068D+01	19 8.80906D+01	21 8.80497D+01	24 1.00145D+02	
		25 1.04230D+02					
370	3.10449D+01	1 7.24960D-07	1.05500D+00	0.0	0.0		
370	3.10449D+01	1 7.24960D-07	1.05500D+00	0.0	0.0	1 1.01713D-06	
370	3.10449D+01	1 5.82124D-08	1.05500D+00	0.0	0.0	2 6.00282D-08	25 3.08088D-01 25 2.95585D-01
370	3.1045D+01	1 7.60356D+01	3 8.07403D+01	5 8.25076D+01	11 8.52876D+01	13 8.63142D+01	
		15 8.71795D+01	17 8.78059D+01	19 8.80896D+01	21 8.80508D+01	24 1.00438D+02	
		25 1.04538D+02					
371	3.10570D+01	1 7.75465D-07	1.05500D+00	0.0	0.0		
371	3.10570D+01	1 7.75465D-07	1.05500D+00	0.0	0.0	1 1.11529D-06	
371	3.10570D+01	1 6.16883D-08	1.05500D+00	0.0	0.0	2 6.34013D-08	25 3.38200D-01 25 3.23518D-01
371	3.1057D+01	1 7.60355D+01	3 8.07400D+01	5 8.25073D+01	11 8.52872D+01	13 8.63137D+01	
		15 8.71788D+01	17 8.78049D+01	19 8.80885D+01	21 8.80521D+01	24 1.00762D+02	
		25 1.04876D+02					
372	3.10703D+01	1 7.92796D-07	1.05500D+00	0.0	0.0		
372	3.10703D+01	1 7.92796D-07	1.05500D+00	0.0	0.0	1 1.19894D-06	
372	3.10703D+01	1 6.48941D-08	1.05500D+00	0.0	0.0	2 6.70810D-08	25 3.71376D-01 24 3.54176D-01
372	3.1070D+01	1 7.60354D+01	3 8.07398D+01	5 8.25070D+01	11 8.52868D+01	13 8.63132D+01	
		15 8.71780D+01	17 8.78037D+01	19 8.80873D+01	21 8.80536D+01	24 1.01119D+02	
		25 1.05248D+02					
373	3.10850D+01	1 8.06081D-07	1.05500D+00	0.0	0.0		
373	3.10850D+01	1 8.06081D-07	1.05500D+00	0.0	0.0	1 1.29669D-06	
373	3.10850D+01	1 6.64739D-08	1.05500D+00	0.0	0.0	2 6.97517D-08	25 4.07917D-01 24 3.88992D-01
373	3.1085D+01	1 7.60354D+01	3 8.07395D+01	5 8.25067D+01	11 8.52864D+01	13 8.63126D+01	
		15 8.71772D+01	17 8.78025D+01	19 8.80860D+01	21 8.80552D+01	24 1.01512D+02	
		25 1.05656D+02					
374	3.11011D+01	1 7.92766D-07	1.05500D+00	0.0	0.0		
374	3.11011D+01	1 7.92766D-07	1.05500D+00	0.0	0.0	1 1.39540D-06	
374	3.11011D+01	1 6.30648D-08	1.05500D+00	0.0	0.0	2 6.94535D-08	25 4.48191D-01 24 4.27011D-01
374	3.1101D+01	1 7.60352D+01	3 8.07392D+01	5 8.25063D+01	11 8.52859D+01	13 8.63120D+01	
		15 8.71762D+01	17 8.78011D+01	19 8.80846D+01	21 8.80570D+01	24 1.01946D+02	
		25 1.06104D+02					
375	3.11188D+01	1 8.38939D-07	1.05500D+00	0.0	0.0		
375	3.11188D+01	1 8.38939D-07	1.05500D+00	0.0	0.0	1 1.55162D-06	
375	3.11188D+01	1 6.86757D-08	1.05500D+00	0.0	0.0	2 7.56563D-08	25 4.92470D-01 24 4.68485D-01
375	3.1119D+01	1 7.60351D+01	3 8.07389D+01	5 8.25059D+01	11 8.52853D+01	13 8.63113D+01	
		15 8.71752D+01	17 8.77996D+01	19 8.80830D+01	21 8.80531D+01	24 1.02423D+02	
		25 1.06596D+02					
376	3.11383D+01	1 7.26247D-07	1.05500D+00	0.0	0.0		
376	3.11383D+01	1 7.26247D-07	1.05500D+00	0.0	0.0	1 1.63726D-06	
376	3.11383D+01	1 5.77529D-08	1.05500D+00	0.0	0.0	2 7.15539D-08	25 5.41369D-01 24 5.13694D-01
376	3.1138D+01	1 7.60350D+01	3 8.07386D+01	5 8.25054D+01	11 8.52847D+01	13 8.63105D+01	

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                    15 8.71740D+01   17 8.77979D+01   19 8.80813D+01   21 8.80614D+01   24 1.02950D+02
                    25 1.07138D+02
377 3.11597D+01   1 7.89585D-07 1.05500D+00 0.0          0.0          0.0
377 3.11597D+01   1 7.89585D-07 1.05500D+00 0.0          0.0          0.0          1 1.82619D-06
377 3.11597D+01   1 6.45591D-08 1.05500D+00 0.0          0.0          0.0          2 7.84263D-08   25 5.95153D-01   24 5.62927D-01
  377     3.1160D+01    1 7.60349D+01    3 8.07382D+01   5 8.25049D+01   11 8.52840D+01   13 8.63097D+01
                    15 8.71728D+01   17 8.77961D+01   19 8.80795D+01   21 8.80641D+01   24 1.03529D+02
                    25 1.07733D+02
378 3.11833D+01   1 9.25339D-07 1.05500D+00 0.0          0.0          0.0
378 3.11833D+01   1 9.25339D-07 1.05500D+00 0.0          0.0          0.0          1 2.00199D-06
378 3.11833D+01   1 4.87624D-08 1.05500D+00 0.0          0.0          0.0          2 7.39958D-08   25 6.54367D-01   24 6.16488D-01
  378     3.1183D+01    1 7.60347D+01    3 8.07377D+01   5 8.25044D+01   11 8.52833D+01   13 8.63088D+01
                    15 8.71714D+01   17 8.77941D+01   19 8.80755D+01   21 8.80671D+01   24 1.04167D+02
                    25 1.08387D+02
379 3.12092D+01   1 1.07519D-06 1.05500D+00 0.0          0.0          0.0
379 3.12092D+01   1 1.07519D-06 1.05500D+00 0.0          0.0          0.0          1 2.23300D-06
379 3.12092D+01   1 6.87415D-08 1.05500D+00 0.0          0.0          0.0          2 8.64594D-08   25 7.19488D-01   24 6.74680D-01
  379     3.1209D+01    1 7.60345D+01    3 8.07372D+01   5 8.25038D+01   11 8.52825D+01   13 8.63077D+01
                    15 8.71699D+01   17 8.77919D+01   19 8.80753D+01   21 8.80706D+01   24 1.04870D+02
                    25 1.09107D+02
380 3.12378D+01   1 1.23891D-06 1.05500D+00 0.0          0.0          0.0
380 3.12378D+01   1 1.23891D-06 1.05500D+00 0.0          0.0          0.0          1 2.44754D-06
380 3.12378D+01   1 6.83882D-08 1.05500D+00 0.0          0.0          0.0          2 9.34244D-08   25 7.91172D-01   24 7.37835D-01
  380     3.1238D+01    1 7.60344D+01    3 8.07367D+01   5 8.25031D+01   11 8.52816D+01   13 8.63066D+01
                    15 8.71682D+01   17 8.77894D+01   19 8.80730D+01   21 8.80745D+01   24 1.05644D+02
                    25 1.09898D+02
381 3.12692D+01   1 1.41304D-06 1.05500D+00 0.0          0.0          0.0
381 3.12692D+01   1 1.41304D-06 1.05500D+00 0.0          0.0          0.0          1 2.70416D-06
381 3.12692D+01   1 7.28818D-08 1.05500D+00 0.0          0.0          0.0          2 1.02473D-07   25 8.69998D-01   24 8.06283D-01
  381     3.1269D+01    1 7.60342D+01    3 8.07361D+01   5 8.25024D+01   11 8.52806D+01   13 8.63053D+01
                    15 8.71663D+01   17 8.77868D+01   19 8.80704D+01   21 8.80790D+01   24 1.06496D+02
                    25 1.10768D+02
382 3.13037D+01   1 1.60072D-06 1.05500D+00 0.0          0.0          0.0
382 3.13037D+01   1 1.60072D-06 1.05500D+00 0.0          0.0          0.0          1 2.99054D-06
382 3.13037D+01   1 9.43231D-08 1.05500D+00 0.0          0.0          0.0          2 1.19100D-07   25 9.56623D-01   24 8.80352D-01
  382     3.1304D+01    1 7.60339D+01    3 8.07355D+01   5 8.25016D+01   11 8.52795D+01   13 8.63040D+01
                    15 8.71643D+01   17 8.77838D+01   19 8.80677D+01   21 8.80841D+01   24 1.07433D+02
                    25 1.11725D+02
383 3.13409D+01   1 1.75680D-06 1.05500D+00 0.0          0.0          0.0
383 3.13409D+01   1 1.75680D-06 1.05500D+00 0.0          0.0          0.0          1 3.06220D-06
383 3.13409D+01   1 1.13597D-07 1.05500D+00 0.0          0.0          0.0          2 1.05337D-07   25 1.03240D+00   24 9.42205D-01
  383     3.1341D+01    1 7.60337D+01    3 8.07348D+01   5 8.25007D+01   11 8.52784D+01   13 8.63025D+01
                    15 8.71621D+01   17 8.77807D+01   19 8.80648D+01   21 8.80899D+01   24 1.08445D+02
                    25 1.12757D+02
384 3.13785D+01   1 2.80824D-06 1.05500D+00 0.0          0.0          0.0
384 3.13785D+01   1 2.80824D-06 1.05500D+00 0.0          0.0          0.0          1 3.75300D-06
384 3.13785D+01   1 4.27381D-07 1.05500D+00 0.0          0.0          0.0          2 2.61641D-07   25 1.04316D+00   24 9.41838D-01
  384     3.1378D+01    1 7.60334D+01    3 8.07341D+01   5 8.24998D+01   11 8.52772D+01   13 8.63010D+01
                    15 8.71598D+01   17 8.77775D+01   19 8.80619D+01   21 8.80960D+01   24 1.09467D+02
                    25 1.13800D+02
385 3.14164D+01   1 1.31350D-06 1.05500D+00 0.0          0.0          0.0
385 3.14164D+01   1 1.31350D-06 1.05500D+00 0.0          0.0          0.0          1 3.30209D-06
385 3.14164D+01   1 1.96671D-07 1.05500D+00 0.0          0.0          0.0          2 1.46792D-07   25 1.05337D+00   24 9.42020D-01
  385     3.1416D+01    1 7.60332D+01    3 8.07334D+01   5 8.24989D+01   11 8.52760D+01   13 8.62995D+01
                    15 8.71576D+01   17 8.77743D+01   19 8.80591D+01   21 8.81024D+01   24 1.10498D+02
                    25 1.14853D+02
386 3.14546D+01   1 1.10981D-06 1.05500D+00 0.0          0.0          0.0
386 3.14546D+01   1 1.10981D-06 1.05500D+00 0.0          0.0          0.0          1 2.97409D-06
386 3.14546D+01   1 8.10888D-08 1.05500D+00 0.0          0.0          0.0          2 8.88321D-08   25 1.06292D+00   24 9.42039D-01
  386     3.1455D+01    1 7.60329D+01    3 8.07326D+01   5 8.24980D+01   11 8.52747D+01   13 8.62979D+01
                    15 8.71553D+01   17 8.77711D+01   19 8.80564D+01   21 8.81091D+01   24 1.11539D+02
                    25 1.15916D+02
387 3.14931D+01   1 1.01453D-06 1.05500D+00 0.0          0.0          0.0
387 3.14931D+01   1 1.01453D-06 1.05500D+00 0.0          0.0          0.0          1 2.60744D-06
387 3.14931D+01   1 6.83197D-08 1.05500D+00 0.0          0.0          0.0          2 7.28743D-08   25 1.07196D+00   24 9.41922D-01
  387     3.1493D+01    1 7.60327D+01    3 8.07319D+01   5 8.24970D+01   11 8.52735D+01   13 8.62964D+01
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                    15 8.715300D+01   17 8.776790D+01   19 8.805370D+01   21 8.811610D+01   24 1.125900D+02
                    25 1.164880D+02
388 3.15320D+01   1 5.092110D-06 1.055000D+00 0.0          0.0          0.0
388 3.15320D+01   1 5.092110D-06 1.055000D+00 0.0          0.0          0.0          1 3.647510-06
388 3.15320D+01   1 7.021140-07 1.055000D+00 0.0          0.0          0.0          2 3.541140-07   25 1.077780+00   24 9.413340-01
      388    3.1532D+01    1 7.603240+01    3 8.073120+01    5 8.249610+01   11 8.527230+01   13 8.629480+01
                    15 8.715070+01   17 8.776470+01   19 8.805100+01   21 8.812350+01   24 1.136490+02
                    25 1.180660+02
389 3.15712D+01   1 1.285710-05 1.055000+00 0.0          0.0          0.0
389 3.15712D+01   2 1.199520-06 1.055000+00 0.0          0.0          0.0          5.727890-06
389 3.15712D+01   1 5.501280-07 1.055000+00 0.0          0.0          0.0          2 2.378020-07   25 1.078310+00   24 9.399840-01
      389    3.1571D+01    1 7.603220+01    3 8.073040+01    5 8.249520+01   11 8.527100+01   13 8.629320+01
                    15 8.714840+01   17 8.776140+01   19 8.804850+01   21 8.813110+01   24 1.147180+02
                    25 1.191440+02
390 3.16108D+01   1 8.302640-06 1.055000+00 0.0          0.0          0.0
390 3.16108D+01   1 8.302640-06 1.055000+00 0.0          0.0          0.0          1 5.055360-06
390 3.16108D+01   1 1.318520-06 1.055000+00 0.0          0.0          0.0          2 6.303620-07   25 1.082960+00   24 9.394490-01
      390    3.1611D+01    1 7.603190+01    3 8.072970+01    5 8.249420+01   11 8.526970+01   13 8.629160+01
                    15 8.714600+01   17 8.775820+01   19 8.804600+01   21 8.813910+01   24 1.157940+02
                    25 1.202270+02
391 3.16510D+01   1 5.966680-06 1.055000+00 0.0          0.0          0.0
391 3.16510D+01   1 5.966680-05 1.055000+00 0.0          0.0          0.0          1 4.575080-06
391 3.16510D+01   1 1.032090-06 1.055000+00 0.0          0.0          0.0          2 5.150370-07   25 1.090830+00   24 9.379060-01
      391    3.1651D+01    1 7.603160+01    3 8.072890+01    5 8.249320+01   11 8.526840+01   13 8.628990+01
                    15 8.714360+01   17 8.775490+01   19 8.804350+01   21 8.814750+01   24 1.168800+02
                    25 1.212[illegible]02
392 3.16916D+01   1 4.944200-06 1.055000+00 0.0          0.0          0.0
392 3.16916D+01   1 4.944200-06 1.055000+00 0.0          0.0          0.0          1 4.267270-06
392 3.16916D+01   1 9.307470-07 1.055000+00 0.0          0.0          0.0          2 4.718170-07   25 1.100030+00   24 9.376000-01
      392    3.1692D+01    1 7.603130+01    3 8.072810+01    5 8.249230+01   11 8.526710+01   13 8.628830+01
                    15 8.714120+01   17 8.775150+01   19 8.804110+01   21 8.815620+01   24 1.179760+02
                    25 1.224180+02
393 3.17328D+01   1 4.286520-06 1.055000+00 0.0          0.0          0.0
393 3.17328D+01   1 4.286620-06 1.055000+00 0.0          0.0          0.0          1 3.926310-06
393 3.17328D+01   1 8.465550-07 1.055000+00 0.0          0.0          0.0          2 4.355890-07   25 1.110130+00   24 9.374990-01
      393    3.1733D+01    1 7.603110+01    3 8.072730+01    5 8.249130+01   11 8.526580+01   13 8.628660+01
                    15 8.713870+01   17 8.774820+01   19 8.803880+01   21 8.816540+01   24 1.190820+02
                    25 1.235280+02
394 3.17745D+01   1 4.028630-06 1.055000+00 0.0          0.0          0.0
394 3.17745D+01   1 4.028630-06 1.055000+00 0.0          0.0          0.0          1 3.630920-06
394 3.17745D+01   1 8.152400-07 1.055000+00 0.0          0.0          0.0          2 4.187040-07   25 1.120610+00   24 9.374900-01
      394    3.1775D+01    1 7.603080+01    3 8.072650+01    5 8.249020+01   11 8.526440+01   13 8.628430+01
                    15 8.713620+01   17 8.774480+01   19 8.803650+01   21 8.817490+01   24 1.201990+02
                    25 1.246490+02
395 3.18168D+01   1 4.044630-06 1.055000+00 0.0          0.0          0.0
395 3.18168D+01   1 4.044630-06 1.055000+00 0.0          0.0          0.0          1 3.611060-06
395 3.18168D+01   1 8.317640-07 1.055000+00 0.0          0.0          0.0          2 4.185950-07   25 1.131390+00   24 9.375130-01
      395    3.1817D+01    1 7.603050+01    3 8.072570+01    5 8.248920+01   11 8.526300+01   13 8.628310+01
                    15 8.713370+01   17 8.774140+01   19 8.803430+01   21 8.818480+01   24 1.213250+02
                    25 1.257800+02
396 3.18597D+01   1 3.965060-06 1.055000+00 0.0          0.0          0.0
396 3.18597D+01   1 3.965060-06 1.055000+00 0.0          0.0          0.0          1 3.599350-06
396 3.18597D+01   1 7.781920-07 1.055000+00 0.0          0.0          0.0          2 3.986930-07   25 1.142280+00   24 9.375540-01
      396    3.1860D+01    1 7.603020+01    3 8.072490+01    5 8.248810+01   11 8.526160+01   13 8.628130+01
                    15 8.713110+01   17 8.773790+01   19 8.803220+01   21 8.819510+01   24 1.224630+02
                    25 1.269230+02
397 3.19031D+01   1 3.931510-06 1.055000+00 0.0          0.0          0.0
397 3.19031D+01   1 3.931510-06 1.055000+00 0.0          0.0          0.0          1 3.585080-06
397 3.19031D+01   1 7.897430-07 1.055000+00 0.0          0.0          0.0          2 3.964590-07   25 1.153330+00   24 9.375930-01
      397    3.1903D+01    1 7.602990+01    3 8.072400+01    5 8.248710+01   11 8.526020+01   13 8.627950+01
                    15 8.712850+01   17 8.773450+01   19 8.803020+01   21 8.820580+01   24 1.236110+02
                    25 1.280760+02
398 3.19471D+01   1 3.897170-06 1.055000+00 0.0          0.0          0.0
398 3.19471D+01   1 3.897170-06 1.055000+00 0.0          0.0          0.0          1 3.551830-06
398 3.19471D+01   1 7.879960-07 1.055000+00 0.0          0.0          0.0          2 3.905060-07   25 1.164540+00   24 9.376500-01
      398    3.1947D+01    1 7.602960+01    3 8.072320+01    5 8.248600+01   11 8.525870+01   13 8.627770+01
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                        15 8.712590+01   17 8.773100+01   19 8.802830+01   21 8.821700+01   24 1.247700+02
                        25 1.292410+02
399 3.200000+01    1 2.395280-05 1.055000+00 0.0          0.0          0.0
399 3.200000+01    2 2.111120-06 1.055000+00 0.0          0.0          0.0                1 8.690710-06
399 3.200000+01    1 1.655510-06 1.055000+00 0.0          0.0          0.0                2 4.926600-07   24 1.387310+00   24 1.111890+00
399 3.199230+01    1 1.162430-05 1.055000+00 0.0          0.0          0.0
399 3.199230+01    2 1.048110-06 1.055000+00 0.0          0.0          0.0                1 3.427250-06
399 3.199230+01    1 6.468340-07 1.055000+00 0.0          0.0          0.0                2 2.303330-07   25 1.192250+00   24 9.515010-01
  399     3.19920D+01    1 7.602930+01    3 8.012230+01    5 8.248490+01   11 8.525720+01   13 8.627580+01
                        15 8.712330+01   17 8.772740+01   19 8.802640+01   21 8.822870+01   24 1.259570+02
                        25 1.304330+02
400 3.200230+01    1 4.587520-06 1.055000+00 0.0          0.0          0.0
400 3.200230+01    1 4.587520-06 1.055000+00 0.0          0.0          0.0                1 3.701470-06
400 3.200230+01    1 4.123140-07 1.055000+00 0.0          0.0          0.0                2 3.803260-07   25 2.737650-01   25 2.098890-01
  400     3.20020D+01    1 7.602920+01    3 8.072210+01    5 8.248460+01   11 8.525690+01   13 8.627540+01
                        15 8.712260+01   17 8.772660+01   19 8.802600+01   21 8.823130+01   24 1.262200+02
                        25 1.307070+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 05 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 400 TIME STEPS, TIME = 3.200230D+01

GROSS GRID			1
			1
	SINE GRID		1
		DISTANCE	0.0
1	1	0.0	76103
	2	0.03	78138
2	3	0.06	80172
	4	0.08	81160
3	5	0.10	82148
	6	0.57	82196
	7	1.04	83144
	8	1.51	83190
	9	1.98	84136
	10	2.45	84181
4	11	2.92	85126
	12	3.14	85178
5	13	3.35	86128
	14	3.57	86172
6	15	3.79	87112
	16	4.01	87146
7	17	4.23	87173
	18	4.45	87191
8	19	4.67	88103
	20	4.89	88110
9	21	5.10	88123
	22	5.18	96173
	23	5.25	108138
10	24	5.32	126122
11	25	5.35	130171

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.644264
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 4.78 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.307070+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.602920+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
401	3.20123D+01	1	6.22750-07	1.055000+00 0.0		0.0	0.0					
401	3.20123D+01	1	6.22715D-07	1.055000+00 0.0		0.0	0.0	1	6.41741D-07			
401	3.20123D+01	1	6.37089D-08	1.055000+00 0.0		0.0	0.0	2	6.18622D-08	25 2.72432D-01	25	2.08430D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
401	3.2012D+01	1 7.60291D+01	3 8.07219D+01	5 8.24844D+01	11 8.52566D+01	13 8.62750D+01	
		15 8.71220D+01	17 8.77258D+01	19 8.80256D+01	21 8.82340D+01	24 1.26482D+02	
		25 1.30979D+02					
402	3.20223D+01	1 5.41886D-07	1.055000+00 0.0		0.0	0.0	
402	3.20223D+01	1 5.41886D-07	1.055000+00 0.0		0.0	0.0	1 5.62249D-07
402	3.20223D+01	1 5.59016D-08	1.055000+00 0.0		0.0	0.0	2 5.43235D-08 25 2.71260D-01 24 2.07947D-01
402	3.2022D+01	1 7.60290D+01	3 8.07217D+01	5 8.24841D+01	11 8.52562D+01	13 8.62746D+01	
		15 8.71214D+01	17 8.77251D+01	19 8.80252D+01	21 8.82367D+01	24 1.26745D+02	
		25 1.31250D+02					
403	3.20323D+01	1 4.46018D-07	1.055000+00 0.0		0.0	0.0	
403	3.20323D+01	1 4.46018D-07	1.055000+00 0.0		0.0	0.0	1 4.60462D-07
403	3.20323D+01	1 4.48272D-08	1.055000+00 0.0		0.0	0.0	2 4.34269D-08 25 2.70264D-01 24 2.07707D-01
403	3.2032D+01	1 7.60289D+01	3 8.07215D+01	5 8.24839D+01	11 8.52559D+01	13 8.62742D+01	
		15 8.71208D+01	17 8.77243D+01	19 8.80249D+01	21 8.82393D+01	24 1.27009D+02	
		25 1.31521D+02					
404	3.20433D+01	1 6.02896D-07	1.055000+00 0.0		0.0	0.0	
404	3.20433D+01	1 6.02896D-07	1.055000+00 0.0		0.0	0.0	1 5.54209D-07
404	3.20433D+01	1 6.28944D-08	1.055000+00 0.0		0.0	0.0	2 5.65891D-08 25 2.95951D-01 24 2.28133D-01
404	3.2043D+01	1 7.60288D+01	3 8.07213D+01	5 8.24836D+01	11 8.52555D+01	13 8.62737D+01	
		15 8.71201D+01	17 8.77234D+01	19 8.80245D+01	21 8.82423D+01	24 1.27298D+02	
		25 1.31817D+02					
405	3.20554D+01	1 6.22996D-07	1.055000+00 0.0		0.0	0.0	
405	3.20554D+01	1 6.22996D-07	1.055000+00 0.0		0.0	0.0	1 5.42509D-07
405	3.20554D+01	1 6.75406D-08	1.055000+00 0.0		0.0	0.0	2 5.75890D-08 25 3.24165D-01 24 2.50430D-01
405	3.2055D+01	1 7.60288D+01	3 8.07210D+01	5 8.24833D+01	11 8.52551D+01	13 8.62732D+01	
		15 8.71194D+01	17 8.77225D+01	19 8.80240D+01	21 8.82456D+01	24 1.27617D+02	
		25 1.32141D+02					
406	3.20687D+01	1 6.59971D-07	1.055000+00 0.0		0.0	0.0	
406	3.20687D+01	1 6.59971D-07	1.055000+00 0.0		0.0	0.0	1 5.75700D-07
406	3.20687D+01	1 7.64608D-08	1.055000+00 0.0		0.0	0.0	2 6.12353D-08 25 3.55126D-01 24 2.74741D-01
406	3.20690+01	1 7.60287D+01	3 8.07207D+01	5 8.24829D+01	11 8.52547D+01	13 8.62726D+01	
		15 8.71186D+01	17 8.77214D+01	19 8.80236D+01	21 8.82492D+01	24 1.27968D+02	
		25 1.32496D+02					
407	3.20833D+01	1 7.01150D-07	1.055000+00 0.0		0.0	0.0	
407	3.20833D+01	1 7.01150D-07	1.055000+00 0.0		0.0	0.0	1 6.06150D-07
407	3.20833D+01	1 8.67795D-08	1.055000+00 0.0		0.0	0.0	2 6.47784D-08 25 3.89103D-01 24 3.01220D-01
407	3.2083D+01	1 7.60286D+01	3 8.07205D+01	5 8.24826D+01	11 8.52542D+01	13 8.62720D+01	
		15 8.71177D+01	17 8.77203D+01	19 8.80231D+01	21 8.82532D+01	24 1.28353D+02	
		25 1.32885D+02					
408	3.20994D+01	1 7.09995D-07	1.055000+00 0.0		0.0	0.0	
408	3.20994D+01	1 7.09995D-07	1.055000+00 0.0		0.0	0.0	1 6.83115D-07
408	3.20994D+01	1 9.67434D-08	1.055000+00 0.0		0.0	0.0	2 6.92349D-08 25 4.26474D-01 24 3.30035D-01
408	3.20990+01	1 7.60284D+01	3 8.07201D+01	5 8.24822D+01	11 8.52537D+01	13 8.62713D+01	
		15 8.71168D+01	17 8.77191D+01	19 8.80225D+01	21 8.82577D+01	24 1.28777D+02	
		25 1.33311D+02					
409	3.21172D+01	1 7.45347D-07	1.055000+00 0.0		0.0	0.0	
409	3.21172D+01	1 7.45347D-07	1.055000+00 0.0		0.0	0.0	1 7.92327D-07
409	3.21172D+01	1 1.10071D-07	1.055000+00 0.0		0.0	0.0	2 7.58027D-08 25 4.67518D-01 24 3.61363D-01
409	3.2117D+01	1 7.60283D+01	3 8.07198D+01	5 8.24817D+01	11 8.52531D+01	13 8.62706D+01	
		15 8.71157D+01	17 8.77177D+01	19 8.80219D+01	21 8.82676D+01	24 1.29242D+02	
		25 1.33779D+02					
410	3.21367D+01	1 7.70580D-07	1.055000+00 0.0		0.0	0.0	
410	3.21367D+01	1 7.70580D-07	1.055000+00 0.0		0.0	0.0	1 9.12072D-07
410	3.21367D+01	1 1.19107D-07	1.055000+00 0.0		0.0	0.0	2 7.95696D-08 25 5.12618D-01 24 3.95394D-01
410	3.2137D+01	1 7.60282D+01	3 8.07194D+01	5 8.24812D+01	11 8.52524D+01	13 8.62698D+01	

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                    15 8.711450+01   17 8.771620+01   19 8.802130+01   21 8.826810+01   24 1.297530+02
                    25 1.342920+02
411 3.215810+01   1 8.502930-07 1.055000+00 0.0          0.0          0.0
411 3.215810+01   1 8.502930-07 1.055000+00 0.0          0.0          0.0          1 1.088490-06
411 3.215810+01   1 1.395920-07 1.055000+00 0.0          0.0          0.0          2 9.013430-08   25 5.620650-01   24 4.323250-01
  411     3.21580+01    1 7.602800+01   3 8.071900+01   5 8.248070+01   11 8.525170+01   13 8.626890+01
                    15 8.711320+01   17 8.771460+01   19 8.802070+01   21 8.827410+01   24 1.303140+02
                    25 1.348540+02
412 3.218170+01   1 9.286410-07 1.055000+00 0.0          0.0          0.0          1 1.289010-06
412 3.218170+01   1 9.286410-07 1.055000+00 0.0          0.0          0.0          2 1.016320-07   25 6.162970-01   24 4.723640-01
412 3.218170+01   1 1.620360-07 1.055000+00 0.0
  412     3.21820+01    1 7.602790+01   3 8.071850+01   5 8.248010+01   11 8.525080+01   13 8.626790+01
                    15 8.711180+01   17 8.771280+01   19 8.802000+01   21 8.828090+01   24 1.309300+02
                    25 1.354700+02
413 3.220760+01   1 9.904780-07 1.055000+00 0.0          0.0          0.0
413 3.220760+01   1 9.904780-07 1.055000+00 0.0          0.0          0.0          1 1.505960-06
413 3.220760+01   1 1.994180-07 1.055000+00 0.0          0.0          0.0          2 1.191640-07   25 6.758520-01   24 5.157360-01
  413     3.22080+01    1 7.602770+01   3 8.071800+01   5 8.247940+01   11 8.525000+01   13 8.626680+01
                    15 8.711020+01   17 8.771080+01   19 8.801930+01   21 8.828840+01   24 1.316050+02
                    25 1.361460+02
414 3.223610+01   1 1.139510-06 1.055000+00 0.0          0.0          0.0
414 3.223610+01   1 1.139510-06 1.055000+00 0.0          0.0          0.0          1 1.807140-06
414 3.223610+01   1 2.438020-07 1.055000+00 0.0          0.0          0.0          2 1.416570-07   25 7.410560-01   24 5.626720-01
  414     3.22360+01    1 7.602750+01   3 8.071740+01   5 8.247870+01   11 8.524910+01   13 8.626560+01
                    15 8.710850+01   17 8.770860+01   19 8.801860+01   21 8.829670+01   24 1.323450+02
                    25 1.368870+02
415 3.226750+01   1 1.329550-06 1.055000+00 0.0          0.0          0.0
415 3.226750+01   1 1.329550-06 1.055000+00 0.0          0.0          0.0          1 2.119950-06
415 3.226750+01   1 3.120280-07 1.055000+00 0.0          0.0          0.0          2 1.716850-07   25 8.125970-01   24 6.134170-01
  415     3.22680+01    1 7.602730+01   3 8.071680+01   5 8.247790+01   11 8.524800+01   13 8.626420+01
                    15 8.710660+01   17 8.770630+01   19 8.801790+01   21 8.830600+01   24 1.331570+02
                    25 1.376990+02
416 3.230200+01   1 1.756360-06 1.055000+00 0.0          0.0          0.0
416 3.230200+01   1 1.756360-06 1.055000+00 0.0          0.0          0.0          1 2.522320-06
416 3.230200+01   1 4.055020-07 1.055000+00 0.0          0.0          0.0          2 2.130080-07   25 8.909220-01   24 6.682290-01
  416     3.23020+01    1 7.602700+01   3 8.071610+01   5 8.247700+01   11 8.524680+01   13 8.626280+01
                    15 8.710460+01   17 8.770370+01   19 8.801720+01   21 8.831640+01   24 1.340470+02
                    25 1.385900+02
417 3.234000+01   1 2.323540-06 1.055000+00 0.0          0.0          0.0
417 3.234000+01   1 2.323540-06 1.055000+00 0.0          0.0          0.0          1 2.991310-06
417 3.234000+01   1 4.961350-07 1.055000+00 0.0          0.0          0.0          2 2.560290-07   25 9.766230-01   24 7.273600-01
  417     3.23400+01    1 7.602680+01   3 8.071530+01   5 8.247610+01   11 8.524550+01   13 8.626120+01
                    15 8.710230+01   17 8.770090+01   19 8.801650+01   21 8.832800+01   24 1.350220+02
                    25 1.395670+02
418 3.238180+01   1 3.230980-06 1.055000+00 0.0          0.0          0.0
418 3.238180+01   1 3.230980-06 1.055000+00 0.0          0.0          0.0          1 3.580390-06
418 3.238180+01   1 6.918050-07 1.055000+00 0.0          0.0          0.0          2 3.044580-07   25 1.070280+00   24 7.910480-01
  418     3.23820+01    1 7.602650+01   3 8.071440+01   5 8.247500+01   11 8.524410+01   13 8.625940+01
                    15 8.709980+01   17 8.769780+01   19 8.801580+01   21 8.834090+01   24 1.360900+02
                    25 1.406370+02
419 3.242770+01   1 4.195040-06 1.055000+00 0.0          0.0          0.0
419 3.242770+01   1 4.195040-06 1.055000+00 0.0          0.0          0.0          1 4.214200-06
419 3.242770+01   1 9.179450-07 1.055000+00 0.0          0.0          0.0          2 4.195880-07   25 1.172770+00   24 8.595540-01
  419     3.24280+01    1 7.602610+01   3 8.071350+01   5 8.247380+01   11 8.524250+01   13 8.625740+01
                    15 8.709700+01   17 8.769450+01   19 8.801520+01   21 8.835530+01   24 1.372600+02
                    25 1.418100+02
420 3.247830+01   1 5.625890-06 1.055000+00 0.0          0.0          0.0
420 3.247830+01   1 5.625890-06 1.055000+00 0.0          0.0          0.0          1 4.972860-06
420 3.247830+01   1 1.157490-06 1.055000+00 0.0          0.0          0.0          2 5.170930-07   25 1.284720+00   24 9.331290-01
  420     3.24780+01    1 7.602580+01   3 8.071250+01   5 8.247250+01   11 8.524080+01   13 8.625520+01
                    15 8.709400+01   17 8.769080+01   19 8.801470+01   21 8.837150+01   24 1.385410+02
                    25 1.430950+02
421 3.252970+01   1 6.452550-06 1.055000+00 0.0          0.0          0.0
421 3.252970+01   1 6.452550-06 1.055000+00 0.0          0.0          0.0          1 5.345100-06
421 3.252970+01   1 1.296120-06 1.055000+00 0.0          0.0          0.0          2 5.668410-07   25 1.302090+00   24 9.367690-01
  421     3.25300+01    1 7.602540+01   3 8.071140+01   5 8.247120+01   11 8.523900+01   13 8.625300+01
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                    15 8.709090D+01   17 8.76871D+01   19 8.801430+01   21 8.83882D+01   24 1.398390+02
                    25 1.44397D+02
422 3.258190+01   1 9.28384D-05 1.055000+00 0.0          0.0          0.0
422 3.258190+01   2 7.84394D-06 1.055000+00 0.0          0.0          0.0          1 2.56866D-05
422 3.258190+01   1 6.37118D-06 1.055000+00 0.0          0.0          0.0          2 1.91159D-06   24 1.30027D+00   24 9.29840D-01
  422     3.2582D+01    1 7.602500+01   3 8.07104D+01   5 8.24698D+01   11 8.52372D+01   13 8.625080+01
                    15 8.708780+01   17 8.76835D+01   19 8.80141D+01   21 8.84055D+01   24 1.411390+02
                    25 1.45654D+02
423 3.263520+01   1 5.29586D-05 1.055000+00 0.0          0.0          0.0
423 3.263520+01   2 4.86502D-06 1.055000+00 0.0          0.0          0.0          1 2.28047D-05
423 3.263520+01   1 4.27094D-06 1.055000+00 0.0          0.0          0.0          2 1.22957D-06   24 1.30145D+00   24 9.22106D-01
  423     3.2635D+01    1 7.602460+01   3 8.07093D+01   5 8.24684D+01   11 8.52354D+01   13 8.624850+01
                    15 8.708460+01   17 8.76798D+01   19 8.80142D+01   21 8.84234D+01   24 1.424400+02
                    25 1.46598D+02
424 3.269020+01   1 3.59334D-05 1.055000+00 0.0          0.0          0.0
424 3.269020+01   2 3.55909D-06 1.055000+00 0.0          0.0          0.0          1 2.19498D-05
424 3.269020+01   1 3.40733D-06 1.055000+00 0.0          0.0          0.0          2 9.31609D-07   24 1.309880+00   24 9.19601D-01
  424     3.2690D+01    1 7.602420+01   3 8.07081D+01   5 8.24670D+01   11 8.52335D+01   13 8.624610+01
                    15 8.708130+01   17 8.76760D+01   19 8.80144D+01   21 8.84421D+01   24 1.437500+02
                    25 1.48150D+02
425 3.274690+01   1 2.93298D-05 1.055000+00 0.0          0.0          0.0
425 3.274690+01   2 3.00658D-06 1.055000+00 0.0          0.0          0.0          1 2.18368D-05
425 3.274690+01   1 3.07998D-06 1.055000+00 0.0          0.0          0.0          2 8.03384D-07   24 1.321830+00   24 9.19536D-01
  425     3.2747D+01    1 7.602380+01   3 8.07069D+01   5 8.24655D+01   11 8.52315D+01   13 8.624360+01
                    15 8.707790+01   17 8.76722D+01   19 8.80148D+01   21 8.84618D+01   24 1.450720+02
                    25 1.49417D+02
426 3.280550+01   1 2.64927D-05 1.055000+00 0.0          0.0          0.0
426 3.280550+01   2 2.72106D-06 1.055000+00 0.0          0.0          0.0          1 2.18467D-05
426 3.280550+01   1 2.92402D-06 1.055000+00 0.0          0.0          0.0          2 7.32862D-07   24 1.335250+00   24 9.20408D-01
  426     3.2806D+01    1 7.602340+01   3 8.07057D+01   5 8.24640D+01   11 8.52294D+01   13 8.624110+01
                    15 8.707440+01   17 8.76683D+01   19 8.80154D+01   21 8.84824D+01   24 1.464070+02
                    25 1.50702D+02
427 3.286610+01   1 2.47744D-05 1.055000+00 0.0          0.0          0.0
427 3.286610+01   2 2.51207D-06 1.055000+00 0.0          0.0          0.0          1 2.17176D-05
427 3.286610+01   1 2.84480D-06 1.055000+00 0.0          0.0          0.0          2 6.85635D-07   24 1.349370+00   24 9.21657D-01
  427     3.2866D+01    1 7.602290+01   3 8.07044D+01   5 8.24624D+01   11 8.52273D+01   13 8.623840+01
                    15 8.707080+01   17 8.76643D+01   19 8.80163D+01   21 8.85040D+01   24 1.477570+02
                    25 1.52008D+02
428 3.292840+01   1 2.38034D-05 1.055000+00 0.0          0.0          0.0
428 3.292840+01   2 2.35674D-06 1.055000+00 0.0          0.0          0.0          1 2.14666D-05
428 3.292840+01   1 2.74067D-06 1.055000+00 0.0          0.0          0.0          2 6.41234D-07   24 1.363860+00   24 9.23044D-01
  428     3.2928D+01    1 7.602250+01   3 8.07031D+01   5 8.24607D+01   11 8.52251D+01   13 8.623570+01
                    15 8.706700+01   17 8.76603D+01   19 8.80175D+01   21 8.85266D+01   24 1.491200+02
                    25 1.53334D+02
429 3.300000+01   1 4.76647D-05 1.055000+00 0.0          0.0          0.0
429 3.300000+01   2 4.16735D-06 1.055000+00 0.0          0.0          0.0          1 4.77093D-05
429 3.300000+01   1 5.43886D-06 1.055000+00 0.0          0.0          0.0          2 1.12810D-06   24 1.533570+00   24 1.02841D+00
429 3.299450+01   1 1.01881D-05 1.055000+00 0.0          0.0          0.0
429 3.299450+01   2 9.27998D-07 1.055000+00 0.0          0.0          0.0          1 2.91619D-06
429 3.299450+01   1 9.72016D-07 1.055000+00 0.0          0.0          0.0          2 2.22750D-07   24 1.419450+00   24 9.51880D-01
  429     3.2995D+01    1 7.602200+01   3 8.07017D+01   5 8.24589D+01   11 8.52227D+01   13 8.623280+01
                    15 8.706310+01   17 8.76562D+01   19 8.80191D+01   21 8.85508D+01   24 1.505400+02
                    25 1.54718D+02
430 3.300450+01   1 4.40200D-06 1.055000+00 0.0          0.0          0.0
430 3.300450+01   1 4.40200D-06 1.055000+00 0.0          0.0          0.0          1 4.74036D-06
430 3.300450+01   1 4.28260D-07 1.055000+00 0.0          0.0          0.0          2 4.14760D-07   25 2.208920-01   25 1.42771D-01
  430     3.3005D+01    1 7.602190+01   3 8.07015D+01   5 8.24587D+01   11 8.52224D+01   13 8.623230+01
                    15 8.706250+01   17 8.76555D+01   19 8.80193D+01   21 8.85545D+01   24 1.507530+02
                    25 1.54939D+02
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PCC

HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ D
W9XNP110 20.58.07 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 430 TIME STEPS, TIME = 3.300450+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	76102
	2	0.03	78136
2	3	0.06	80170
	4	0.08	81158
3	5	0.10	82146
	6	0.57	82194
	7	1.04	83141
	8	1.51	83188
	9	1.98	84133
	10	2.45	84178
4	11	2.92	85122
	12	3.14	85175
5	13	3.35	86123
	14	3.57	86167
6	15	3.79	87106
	16	4.01	87139
7	17	4.23	87166
	18	4.45	87186
8	19	4.67	88102
	20	4.89	88121
9	21	5.10	88155
	22	5.18	105157
	23	5.25	125146
10	24	5.32	150175
11	25	5.35	154194

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	80.509858
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 5.09 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.549390+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.602190+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

cc

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
431	3.30145D+01	1	7.03109D-07	1.05500D+00	0.0	0.0	0.0						
431	3.30145D+01	1	7.03109D-07	1.05500D+00	0.0	0.0	0.0	1	8.25606D-07				
431	3.30145D+01	1	6.72224D-08	1.05500D+00	0.0	0.0	0.0	2	7.27217D-08	25	2.19043D-01	24	1.41379D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
431	3.3015D+01	1 7.60218D+01	3 8.07013D+01	5 8.24584D+01	11 8.52220D+01	13 8.62319D+01
		15 8.70619D+01	17 8.76549D+01	19 8.80196D+01	21 8.85582D+01	24 1.50966D+02
		25 1.55158D+02				
432	3.30245D+01	1 6.25439D-07	1.05500D+00	0.0	0.0	0.0
432	3.30245D+01	1 6.25439D-07	1.05500D+00	0.0	0.0	0.0	1	7.39723D-07				
432	3.30245D+01	1 6.04508D-08	1.05500D+00	0.0	0.0	0.0	2	6.62089D-08	25	2.17403D-01	24	1.41280D-01
432	3.3025D+01	1 7.60217D+01	3 8.07011D+01	5 8.24581D+01	11 8.52217D+01	13 8.62315D+01						
		15 8.70613D+01	17 8.76543D+01	19 8.80199D+01	21 8.85613D+01	24 1.51179D+02						
		25 1.55376D+02				
433	3.30345D+01	1 5.44867D-07	1.05500D+00	0.0	0.0	0.0
433	3.30345D+01	1 5.44867D-07	1.05500D+00	0.0	0.0	0.0	1	6.36029D-07				
433	3.30345D+01	1 4.93427D-08	1.05500D+00	0.0	0.0	0.0	2	5.52278D-08	25	2.15967D-01	24	1.41101D-01
433	3.3035D+01	1 7.60216D+01	3 8.07009D+01	5 8.24579D+01	11 8.52213D+01	13 8.62310D+01						
		15 8.70608D+01	17 8.76537D+01	19 8.80202D+01	21 8.85657D+01	24 1.51393D+02						
		25 1.55591D+02				
434	3.30455D+01	1 6.43639D-07	1.05500D+00	0.0	0.0	0.0
434	3.30455D+01	1 6.43639D-07	1.05500D+00	0.0	0.0	0.0	1	7.11801D-07				
434	3.30455D+01	1 6.24743D-08	1.05500D+00	0.0	0.0	0.0	2	6.47532D-08	25	2.35878D-01	24	1.54929D-01
434	3.30460+01	1 7.60215D+01	3 8.07006D+01	5 8.24576D+01	11 8.52209D+01	13 8.62305D+01						
		15 8.70601D+01	17 8.76530D+01	19 8.80205D+01	21 8.85697D+01	24 1.51627D+02						
		25 1.55827D+02				
435	3.30576D+01	1 6.81363D-07	1.05500D+00	0.0	0.0	0.0
435	3.30576D+01	1 6.81363D-07	1.05500D+00	0.0	0.0	0.0	1	8.19004D-07				
435	3.30576D+01	1 6.98886D-08	1.05500D+00	0.0	0.0	0.0	2	6.85061D-08	24	2.57754D-01	24	1.69992D-01
435	3.30580+01	1 7.60214D+01	3 8.07004D+01	5 8.24572D+01	11 8.52205D+01	13 8.62300D+01						
		15 8.70594D+01	17 8.76523D+01	19 8.80208D+01	21 8.85743D+01	24 1.51885D+02						
		25 1.56085D+02				
436	3.30710D+01	1 7.20596D-07	1.05500D+00	0.0	0.0	0.0
436	3.30710D+01	1 7.20596D-07	1.05500D+00	0.0	0.0	0.0	1	9.45629D-07				
436	3.30710D+01	1 7.79868D-08	1.05500D+00	0.0	0.0	0.0	2	7.19247D-08	24	2.83081D-01	24	1.86378D-01
436	3.3071D+01	1 7.60213D+01	3 8.07001D+01	5 8.24569D+01	11 8.52200D+01	13 8.62294D+01						
		15 8.70586D+01	17 8.76515D+01	19 8.80212D+01	21 8.85792D+01	24 1.52168D+02						
		25 1.56367D+02				
437	3.30856D+01	1 7.71255D-07	1.05500D+00	0.0	0.0	0.0
437	3.30856D+01	1 7.71255D-07	1.05500D+00	0.0	0.0	0.0	1	1.10109D-06				
437	3.30856D+01	1 9.20454D-08	1.05500D+00	0.0	0.0	0.0	2	7.86772D-08	24	3.10699D-01	24	2.04181D-01
437	3.3086D+01	1 7.60212D+01	3 8.06998D+01	5 8.24565D+01	11 8.52195D+01	13 8.62288D+01						
		15 8.70577D+01	17 8.76506D+01	19 8.80217D+01	21 8.85847D+01	24 1.52479D+02						
		25 1.56674D+02				
438	3.31017D+01	1 7.77342D-07	1.05500D+00	0.0	0.0	0.0
438	3.31017D+01	1 7.77342D-07	1.05500D+00	0.0	0.0	0.0	1	1.24849D-06				
438	3.31017D+01	1 9.26242D-08	1.05500D+00	0.0	0.0	0.0	2	7.46519D-08	24	3.40800D-01	24	2.23507D-01
438	3.3102D+01	1 7.60211D+01	3 8.06994D+01	5 8.24561D+01	11 8.52189D+01	13 8.62281D+01						
		15 8.70568D+01	17 8.76496D+01	19 8.80222D+01	21 8.85908D+01	24 1.52819D+02						
		25 1.57011D+02				
439	3.31194D+01	1 8.25187D-07	1.05500D+00	0.0	0.0	0.0
439	3.31194D+01	1 8.25187D-07	1.05500D+00	0.0	0.0	0.0	1	1.44987D-06				
439	3.31194D+01	1 1.06314D-07	1.05500D+00	0.0	0.0	0.0	2	7.84469D-08	24	3.73589D-01	24	2.44464D-01
439	3.3119D+01	1 7.60209D+01	3 8.06990D+01	5 8.24556D+01	11 8.52183D+01	13 8.62273D+01						
		15 8.70557D+01	17 8.76486D+01	19 8.80228D+01	21 8.85974D+01	24 1.53183D+02						
		25 1.57379D+02				
440	3.31389D+01	1 8.73902D-07	1.05500D+00	0.0	0.0	0.0
440	3.31389D+01	1 8.73902D-07	1.05500D+00	0.0	0.0	0.0	1	1.67995D-06				
440	3.31389D+01	1 1.28897D-07	1.05500D+00	0.0	0.0	0.0	2	8.53970D-08	24	4.09290D-01	24	2.67173D-01
440	3.3139D+01	1 7.60208D+01	3 8.06986D+01	5 8.24550D+01	11 8.52176D+01	13 8.62264D+01						

PCF

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                    15 8 .70546D+01   17 8 .76474D+01   19 8 .80234D+01   21 8 .86048D+01   24 1 .53602D+02
                    25 1 .57782D+02
441 3.31603D+01   1 9.744820-07 1.05500D+00 0.0          0.0          0.0
441 3.31603D+01   1 9.744820-07 1.05500D+00 0.0          0.0          0.0                1 1 .97597D-06
441 3.31603D+01   1 1.62052D-07 1.05500D+00 0.0          0.0          0.0                2 9 .60332D-08   24 4 .48148D-01   24 2 .91759D-01
  441     3.31600+01    1 7.60206D+01   3 8 .06982D+01   5 8 .24545D+01   11 8 .52168D+01   13 8 .62255D+01
                    15 8 .70533D+01   17 8 .76461D+01   19 8 .80242D+01   21 8 .86129D+01   24 1 .54050D+02
                    25 1 .58222D+02
442 3.31839D+01   1 1.03438D-06 1.05500D+00 0.0          0.0          0.0
442 3.31839D+01   1 1.03438D-06 1.05500D+00 0.0          0.0          0.0                1 2 .28101D-06
442 3.31839D+01   1 1.85922D-07 1.05500D+00 0.0          0.0          0.0                2 1 .02668D-07   24 4 .90434D-01   24 3 .18359D-01
  442     3.3184D+01    1 7.60204D+01   3 8 .06977D+01   5 8 .24538D+01   11 8 .52159D+01   13 8 .62244D+01
                    15 8 .70519D+01   17 8 .76448D+01   19 8 .80251D+01   21 8 .86238D+01   24 1 .54541D+02
                    25 1 .58704D+02
443 3.32099D+01   1 1.08923D-06 1.05500D+00 0.0          0.0          0.0
443 3.32099D+01   1 1.08923D-06 1.05500D+00 0.0          0.0          0.0                1 2 .61092D-06
443 3.32099D+01   1 2.16650D-07 1.05500D+00 0.0          0.0          0.0                2 1 .11641D-07   24 5 .36458D-01   24 3 .47130D-01
  443     3.32100+01    1 7.60203D+01   3 8 .06971D+01   5 8 .24531D+01   11 8 .52150D+01   13 8 .62233D+01
                    15 8 .70504D+01   17 8 .76433D+01   19 8 .80251D+01   21 8 .86317D+01   24 1 .55077D+02
                    25 1 .59232D+02
444 3.32384D+01   1 1.28276D-06 1.05500D+00 0.0          0.0          0.0
444 3.32384D+01   1 1.28276D-06 1.05500D+00 0.0          0.0          0.0                1 3 .08529D-06
444 3.32384D+01   1 2.87142D-07 1.05500D+00 0.0          0.0          0.0                2 1 .41057D-07   24 5 .86541D-01   24 3 .78224D-01
  444     3.32380+01    1 7.60200D+01   3 8 .06965D+01   5 8 .24523D+01   11 8 .52140D+01   13 8 .62220D+01
                    15 8 .70487D+01   17 8 .76416D+01   19 8 .80272D+01   21 8 .86526D+01   24 1 .55664D+02
                    25 1 .59809D+02
445 3.32698D+01   1 1.36594D-06 1.05500D+00 0.0          0.0          0.0
445 3.32698D+01   1 1.36594D-06 1.05500D+00 0.0          0.0          0.0                1 3 .52820D-06
445 3.32698D+01   1 3.48993D-07 1.05500D+00 0.0          0.0          0.0                2 1 .67230D-07   24 6 .41054D-01   24 4 .11820D-01
  445     3.32700+01    1 7.60198D+01   3 8 .06958D+01   5 8 .24515D+01   11 8 .52128D+01   13 8 .62206D+01
                    15 8 .70469D+01   17 8 .76398D+01   19 8 .80285D+01   21 8 .86547D+01   24 1 .56306D+02
                    25 1 .60441D+02
446 3.33043D+01   1 1.64855D-06 1.05500D+00 0.0          0.0          0.0
446 3.33043D+01   1 1.64855D-06 1.05500D+00 0.0          0.0          0.0                1 4 .08937D-06
446 3.33043D+01   1 4.54600D-07 1.05500D+00 0.0          0.0          0.0                2 2 .13042D-07   24 7 .00405D-01   24 4 .48101D-01
  446     3.3304D+01    1 7.60195D+01   3 8 .06950D+01   5 8 .24505D+01   11 8 .52116D+01   13 8 .62191D+01
                    15 8 .70449D+01   17 8 .76379D+01   19 8 .80300D+01   21 8 .86680D+01   24 1 .57005D+02
                    25 1 .61132D+02
447 3.33423D+01   1 2.24382D-06 1.05500D+00 0.0          0.0          0.0
447 3.33423D+01   1 2.24382D-06 1.05500D+00 0.0          0.0          0.0                1 4 .71859D-06
447 3.33423D+01   1 5.86828D-07 1.05500D+00 0.0          0.0          0.0                2 2 .69228D-07   24 7 .65022D-01   24 4 .87258D-01
  447     3.3342D+01    1 7.60193D+01   3 8 .06942D+01   5 8 .24495D+01   11 8 .52102D+01   13 8 .62174D+01
                    15 8 .70426D+01   17 8 .76358D+01   19 8 .80318D+01   21 8 .86827D+01   24 1 .57770D+02
                    25 1 .61888D+02
448 3.33840D+01   1 2.85025D-06 1.05500D+00 0.0          0.0          0.0
448 3.33840D+01   1 2.85025D-06 1.05500D+00 0.0          0.0          0.0                1 5 .37764D-06
448 3.33840D+01   1 7.23734D-07 1.05500D+00 0.0          0.0          0.0                2 3 .27131D-07   24 8 .35398D-01   24 5 .29502D-01
  448     3.3384D+01    1 7.60189D+01   3 8 .06933D+01   5 8 .24483D+01   11 8 .52087D+01   13 8 .62155D+01
                    15 8 .70402D+01   17 8 .76336D+01   19 8 .80338D+01   21 8 .86989D+01   24 1 .58606D+02
                    25 1 .62715D+02
449 3.34300D+01   1 3.91169D-06 1.05500D+00 0.0          0.0          0.0
449 3.34300D+01   1 3.91169D-06 1.05500D+00 0.0          0.0          0.0                1 6 .15925D-06
449 3.34300D+01   1 9.25732D-07 1.05500D+00 0.0          0.0          0.0                2 4 .11568D-07   24 9 .12043D-01   24 5 .75042D-01
  449     3.34300+01    1 7.60186D+01   3 8 .06923D+01   5 8 .24471D+01   11 8 .52070D+01   13 8 .62134D+01
                    15 8 .70375D+01   17 8 .76311D+01   19 8 .80362D+01   21 8 .87169D+01   24 1 .59518D+02
                    25 1 .63620D+02
450 3.34805D+01   1 4.78571D-06 1.05500D+00 0.0          0.0          0.0
450 3.34805D+01   1 4.78571D-06 1.05500D+00 0.0          0.0          0.0                1 6 .92201D-06
450 3.34805D+01   1 1.16591D-06 1.05500D+00 0.0          0.0          0.0                2 5 .01080D-07   24 9 .95585D-01   24 6 .24122D-01
  450     3.34810+01    1 7.60182D+01   3 8 .06912D+01   5 8 .24457D+01   11 8 .52051D+01   13 8 .62112D+01
                    15 8 .70346D+01   17 8 .76285D+01   19 8 .80390D+01   21 8 .87268D+01   24 1 .60513D+02
                    25 1 .64609D+02
451 3.35361D+01   1 2.86125D-05 1.05500D+00 0.0          0.0          0.0
451 3.35361D+01   2 2.46036D-06 1.05500D+00 0.0          0.0          0.0                1 1 .30418D-05
                  1 2.43997D-06 1.05500D+00 0.0          0.0          0.0                2 5 .64824D-07   24 1 .08390D+00   24 6 .75271D-01
                    1 7.60178D+01   3 8 .06900D+01   5 8 .24440D+01   11 8 .52031D+01   13 8 .62087D+01
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                    15 8.70314D+01   17 8.76257D+01   19 8.80422D+01   21 8.87587D+01   24 1.61597D+02
                    25 1.65675D+02
452 3.35973D+01   1 1.75934D-04 1.05500D+00 0.0          0.0          0.0
452 3.35973D+01   3 2.08801D-06 1.05500D+00 0.0          0.0          0.0          1 4.53191D-05
452 3.35973D+01   2 1.47197D-06 1.05500D+00 0.0          0.0          0.0          2 3.38507D-06   24 1.15871D+00   24 7.17037D-01
  452     3.35970D+01    1 7.60173D+01    3 8.06886D+01    5 8.24424D+01   11 8.52008D+01   13 8.62059D+01
                    15 8.70279D+01   17 8.76227D+01   19 8.80459D+01   21 8.87830D+01   24 1.62756D+02
                    25 1.66730D+02
453 3.36646D+01   1 1.13559D-04 1.05500D+00 0.0          0.0          0.0
453 3.36646D+01   2 9.43867D-06 1.05500D+00 0.0          0.0          0.0          1 4.53191D-05
453 3.36646D+01   2 1.15919D-06 1.05500D+00 0.0          0.0          0.0          2 3.17618D-06   24 1.20996D+00   24 7.43422D-01
  453     3.36650D+01    1 7.60168D+01    3 8.06871D+01    5 8.24406D+01   11 8.51983D+01   13 8.62029D+01
                    15 8.70240D+01   17 8.76194D+01   19 8.80503D+01   21 8.88098D+01   24 1.63966D+02
                    25 1.67812D+02
454 3.37386D+01   1 9.12430D-05 1.05500D+00 0.0          0.0          0.0
454 3.37386D+01   2 7.36844D-06 1.05500D+00 0.0          0.0          0.0          1 4.82702D-05
454 3.37386D+01   2 1.21077D-06 1.05500D+00 0.0          0.0          0.0          2 2.78762D-06   24 1.25393D+00   24 7.64778D-01
  454     3.37390D+01    1 7.60162D+01    3 8.06855D+01    5 8.24385D+01   11 8.51956D+01   13 8.61996D+01
                    15 8.70198D+01   17 8.76160D+01   19 8.80554D+01   21 8.88395D+01   24 1.65220D+02
                    25 1.68940D+02
455 3.38200D+01   1 8.98981D-05 1.05500D+00 0.0          0.0          0.0
455 3.38200D+01   2 7.68858D-06 1.05500D+00 0.0          0.0          0.0          1 5.26065D-05
455 3.38200D+01   2 1.42924D-06 1.05500D+00 0.0          0.0          0.0          2 2.79855D-06   24 1.29847D+00   24 7.85904D-01
  455     3.38200D+01    1 7.60156D+01    3 8.06837D+01    5 8.24362D+01   11 8.51925D+01   13 8.61959D+01
                    15 8.70152D+01   17 8.76124D+01   19 8.80613D+01   21 8.88723D+01   24 1.66518D+02
                    25 1.70121D+02
456 3.39095D+01   1 9.51395D-05 1.05500D+00 0.0          0.0          0.0
456 3.39095D+01   2 9.02440D-06 1.05500D+00 0.0          0.0          0.0          1 5.68347D-05
456 3.39095D+01   2 1.76189D-06 1.05500D+00 0.0          0.0          0.0          2 2.94532D-06   24 1.34743D+00   24 8.09180D-01
  456     3.39100D+01    1 7.60149D+01    3 8.06817D+01    5 8.24337D+01   11 8.51892D+01   13 8.61918D+01
                    15 8.70102D+01   17 8.76087D+01   19 8.80683D+01   21 8.89086D+01   24 1.67866D+02
                    25 1.71366D+02
457 3.40000D+01   1 6.93317D-05 1.05500D+00 0.0          0.0          0.0
457 3.40000D+01   2 6.46811D-06 1.05500D+00 0.0          0.0          0.0          1 5.15299D-05
457 3.40000D+01   2 1.36231D-06 1.05500D+00 0.0          0.0          0.0          2 2.21210D-06   24 1.29313D+00   24 7.70333D-01
  457     3.40000D+01    1 7.60142D+01    3 8.06796D+01    5 8.24311D+01   11 8.51858D+01   13 8.61877D+01
                    15 8.70052D+01   17 8.76051D+01   19 8.80758D+01   21 8.89453D+01   24 1.69159D+02
                    25 1.72582D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ O
W9XNP110 20.58.08 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 457 TIME STEPS, TIME = 3.400000D+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	76101
	2	0.03	78135
2	3	0.06	80168
	4	0.08	81156
3	5	0.10	82143
	6	0.57	82191
	7	1.04	83138
	8	1.51	83185
	9	1.98	84130
	10	2.45	84175
4	11	2.92	85119
	12	3.14	85171
5	13	3.35	86119
	14	3.57	86162
6	15	3.79	87101
	16	4.01	87133
7	17	4.23	87161
	18	4.45	87184
8	19	4.67	88108
	20	4.89	88140
9	21	5.10	88195
	22	5.18	112192
	23	5.25	139109
10	24	5.32	169116
11	25	5.35	172158

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 9.04838561D-02

ELAPSED CPU TIME IS 5.37 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.72582D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.60142D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
458	3.40995D+01	1	9.05192D-05	1.05500D+00	0.0	0.0	0.0				
458	3.40995D+01	3	1.36535D-06	1.05500D+00	0.0	0.0	0.0	1	5.39075D-05		
458	3.40995D+01	2	1.94371D-06	1.05500D+00	0.0	0.0	0.0	2	2.11854D-06	24 1.35971D+00	24 8.03807D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
458	3.41000D+01	1 7.60134D+01	3 8.06773D+01	5 8.24282D+01	11 8.51820D+01	13 8.61832D+01	
		15 8.69997D+01	17 8.76014D+01	19 8.80846D+01	21 8.89857D+01	24 1.70519D+02	
		25 1.73873D+02					
459	3.42090D+01	1 9.14260D-05	1.05500D+00	0.0	0.0	0.0	
459	3.42090D+01	3 1.60667D-06	1.05500D+00	0.0	0.0	0.0	1 5.54855D-05
459	3.42090D+01	2 2.23157D-06	1.05500D+00	0.0	0.0	0.0	2 2.12052D-06 24 1.43440D+00 24 8.41199D-01
459	3.42090D+01	1 7.60125D+01	3 8.06748D+01	5 8.24251D+01	11 8.51778D+01	13 8.61782D+01	
		15 8.69938D+01	17 8.75976D+01	19 8.80948D+01	21 8.90300D+01	24 1.71953D+02	
		25 1.75252D+02					
460	3.43295D+01	1 9.65594D-05	1.05500D+00	0.0	0.0	0.0	
460	3.43295D+01	3 2.02215D-06	1.05500D+00	0.0	0.0	0.0	1 5.62620D-05
460	3.43295D+01	2 2.65891D-06	1.05500D+00	0.0	0.0	0.0	2 2.20905D-06 24 1.52001D+00 24 8.83967D-01
460	3.43290D+01	1 7.60116D+01	3 8.06721D+01	5 8.24216D+01	11 8.51732D+01	13 8.61727D+01	
		15 8.69873D+01	17 8.75936D+01	19 8.81067D+01	21 8.90786D+01	24 1.73473D+02	
		25 1.76729D+02					
461	3.44589D+01	1 8.62926D-05	1.05500D+00	0.0	0.0	0.0	
461	3.44589D+01	3 2.02588D-06	1.05500D+00	0.0	0.0	0.0	1 5.29438D-05
461	3.44589D+01	2 2.63211D-06	1.05500D+00	0.0	0.0	0.0	2 1.97685D-06 24 1.58248D+00 24 9.12233D-01
461	3.44590D+01	1 7.60105D+01	3 8.06691D+01	5 8.24178D+01	11 8.51682D+01	13 8.61668D+01	
		15 8.69805D+01	17 8.75902D+01	19 8.81203D+01	21 8.91305D+01	24 1.75056D+02	
		25 1.78282D+02					
462	3.45937D+01	1 2.06295D-04	1.05500D+00	0.0	0.0	0.0	
462	3.45937D+01	3 5.86117D-06	1.05500D+00	0.0	0.0	0.0	1 6.15558D-05
462	3.45937D+01	2 5.97258D-06	1.05500D+00	0.0	0.0	0.0	2 4.27343D-06 24 1.59335D+00 24 9.10194D-01
462	3.45940D+01	1 7.60094D+01	3 8.06659D+01	5 8.24139D+01	11 8.51630D+01	13 8.61606D+01	
		15 8.69735D+01	17 8.75869D+01	19 8.81352D+01	21 8.91842D+01	24 1.76649D+02	
		25 1.79832D+02					
463	3.47344D+01	1 7.12965D-04	1.05500D+00	0.0	0.0	0.0	
463	3.47344D+01	4 1.98966D-06	1.05500D+00	0.0	0.0	0.0	1 1.19771D-04
463	3.47344D+01	3 4.00105D-06	1.05500D+00	0.0	0.0	0.0	2 1.41444D-05
463	3.47344D+01	2 3.62444D-06	1.05500D+00	0.0	0.0	0.0	3 2.45674D-06 24 1.54283D+00 24 8.73389D-01
463	3.47340D+01	1 7.60083D+01	3 8.06626D+01	5 8.24097D+01	11 8.51575D+01	13 8.61542D+01	
		15 8.69663D+01	17 8.75839D+01	19 8.81516D+01	21 8.92396D+01	24 1.78192D+02	
		25 1.81222D+02					
464	3.48672D+01	1 1.59787D-04	1.05500D+00	0.0	0.0	0.0	
464	3.48672D+01	3 2.82533D-06	1.05500D+00	0.0	0.0	0.0	1 7.86454D-05
464	3.48672D+01	2 5.51879D-06	1.05500D+00	0.0	0.0	0.0	2 3.95813D-06 24 1.32606D+00 24 7.45297D-01
464	3.48670D+01	1 7.60071D+01	3 8.06595D+01	5 8.24058D+01	11 8.51523D+01	13 8.61481D+01	
		15 8.69597D+01	17 8.75816D+01	19 8.81677D+01	21 8.92915D+01	24 1.79520D+02	
		25 1.82469D+02					
465	3.50000D+01	1 1.76613D-04	1.05500D+00	0.0	0.0	0.0	
465	3.50000D+01	3 4.34386D-06	1.05500D+00	0.0	0.0	0.0	1 6.72266D-05
465	3.50000D+01	2 5.50609D-06	1.05500D+00	0.0	0.0	0.0	2 3.99370D-06 24 1.24513D+00 24 6.93591D-01
465	3.50000D+01	1 7.60060D+01	3 8.06563D+01	5 8.24018D+01	11 8.51470D+01	13 8.61420D+01	
		15 8.69533D+01	17 8.75798D+01	19 8.81845D+01	21 8.93429D+01	24 1.80765D+02	
		25 1.83652D+02					

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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9KNP110 20 58 08 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 465 TIME STEPS, TIME = 3.500000+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	76101
	2	0.03	78133
2	3	0.06	80166
	4	0.08	81153
3	5	0.10	82140
	6	0.57	82188
	7	1.04	83135
	8	1.51	83181
	9	1.98	84127
	10	2.45	84171
4	11	2.92	85115
	12	3.14	85167
5	13	3.35	86114
	14	3.57	86157
6	15	3.79	86195
	16	4.01	87129
7	17	4.23	87158
	18	4.45	87186
8	19	4.67	88118
	20	4.89	88164
9	21	5.10	89134
	22	5.18	118102
	23	5.25	148114
10	24	5.32	180176
11	25	5.35	183165

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	85.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.328224790-01

ELAPSED CPU TIME IS 5.48 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.836520+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.600600+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
466	3.51461D+01	1	1.69211D-04	1.055000+00	0.0	0.0	0.0					
466	3.51461D+01	3	4.81939D-06	1.055000+00	0.0	0.0	0.0	1	6.50556D-05			
466	3.51461D+01	2	5.93643D-06	1.055000+00	0.0	0.0	0.0	2	3.77927D-06	24 1.29437D+00	24	7.16000D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
466	3.5146D+01	1 7.60048D+01	3 8.06528D+01	5 8.23974D+01	11 8.51413D+01	13 8.61354D+01	
		15 8.69464D+01	17 8.75783D+01	19 8.82037D+01	21 8.93986D+01	24 1.82059D+02	
		25 1.84895D+02					
467	3.53068D+01	1 1.46090D-04	1.055000+00	0.0	0.0	0.0	
467	3.53068D+01	3 4.69726D-06	1.055000+00	0.0	0.0	0.0	1 6.18406D-05
467	3.53068D+01	2 5.88318D-06	1.055000+00	0.0	0.0	0.0	2 3.28772D-06 24 1.35673D+00 24 7.45214D-01
467	3.5307D+01	1 7.60034D+01	3 8.06489D+01	5 8.23925D+01	11 8.51349D+01	13 8.61281D+01	
		15 8.69390D+01	17 8.75773D+01	19 8.82255D+01	21 8.94591D+01	24 1.83416D+02	
		25 1.86218D+02					
468	3.54836D+01	1 1.38272D-04	1.055000+00	0.0	0.0	0.0	
468	3.54836D+01	3 5.20421D-06	1.055000+00	0.0	0.0	0.0	1 5.75097D-05
468	3.54836D+01	2 6.16144D-06	1.055000+00	0.0	0.0	0.0	2 3.03568D-06 24 1.43641D+00 24 7.83145D-01
468	3.5484D+01	1 7.60019D+01	3 8.06447D+01	5 8.23872D+01	11 8.51278D+01	13 8.61201D+01	
		15 8.69312D+01	17 8.75770D+01	19 8.82503D+01	21 8.95246D+01	24 1.84853D+02	
		25 1.87635D+02					
469	3.56781D+01	1 2.39095D-04	1.055000+00	0.0	0.0	0.0	
469	3.56781D+01	4 3.40800D-07	1.055000+00	0.0	0.0	0.0	1 6.22355D-05
469	3.56781D+01	3 2.71145D-06	1.055000+00	0.0	0.0	0.0	2 5.06437D-06 24 1.52390D+00 24 8.24387D-01
469	3.5678D+01	1 7.60003D+01	3 8.06399D+01	5 8.23812D+01	11 8.51200D+01	13 8.61113D+01	
		15 8.69229D+01	17 8.75776D+01	19 8.82784D+01	21 8.95953D+01	24 1.86376D+02	
		25 1.89136D+02					
470	3.58390D+01	1 9.52302D-05	1.055000+00	0.0	0.0	0.0	
470	3.58390D+01	3 3.19631D-06	1.055000+00	0.0	0.0	0.0	1 3.82106D-05
470	3.58390D+01	2 3.88350D-06	1.055000+00	0.0	0.0	0.0	2 2.16617D-06 24 1.22200D+00 24 6.55665D-01
470	3.5839D+01	1 7.59988D+01	3 8.06360D+01	5 8.23763D+01	11 8.51135D+01	13 8.61041D+01	
		15 8.69164D+01	17 8.75787D+01	19 8.83024D+01	21 8.96528D+01	24 1.87598D+02	
		25 1.90350D+02					
471	3.60000D+01	1 1.10018D-04	1.055000+00	0.0	0.0	0.0	
471	3.60000D+01	3 3.97820D-06	1.055000+00	0.0	0.0	0.0	1 3.14816D-05
471	3.60000D+01	2 4.23706D-06	1.055000+00	0.0	0.0	0.0	2 2.37414D-06 24 1.19169D+00 24 6.35234D-01
471	3.60000D+01	1 7.59974D+01	3 8.06320D+01	5 8.23713D+01	11 8.51071D+01	13 8.60969D+01	
		15 8.69101D+01	17 8.75805D+01	19 8.83268D+01	21 8.97094D+01	24 1.88790D+02	
		25 1.91531D+02					

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 08 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 471 TIME STEPS, TIME = 3.600000+01

GROSS GRID	FINE GRID	DISTANCE	0.0
	1	0.0	76100
	2	0.03	78132
2	3	0.06	80167
	4	0.08	81150
3	5	0.10	82137
	6	0.57	82185
	7	1.04	83132
	8	1.51	83178
	9	1.98	84123
	10	2.45	84167
4	11	2.92	85111
	12	3.14	85162
5	13	3.35	86110
	14	3.57	86153
6	15	3.79	86191
	16	4.01	87126
7	17	4.23	87158
	18	4.45	87192
8	19	4.67	88133
	20	4.89	88189
9	21	5.10	89171
	22	5.18	121144
	23	5.25	154119
10	24	5.32	188179
11	25	5.35	191153

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.609639820-01

ELAPSED CPU TIME IS 5.56 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.91531D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.59974D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
472	3.61771D+01	1	1.24065D-04	1.05500D+00	0.0	0.0	0.0				
472	3.61771D+01	3	4.98596D-06	1.05500D+00	0.0	0.0	0.0	1	3.27792D-05		
472	3.61771D+01	2	5.41542D-06	1.05500D+00	0.0	0.0	0.0	2	2.66589D-06	24 1.27567D+00	24 6.75708D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
472	3.61770D+01	1 7.59958D+01	3 8.06276D+01	5 8.23658D+01	11 8.50993D+01	13 8.60891D+01	
		15 8.69035D+01	17 8.75831D+01	19 8.83542D+01	21 8.97709D+01	24 1.90066D+02	
		25 1.92787D+02					
473	3.63718D+01	1 9.32839D-05	1.05500D+00	0.0	0.0	0.0	
473	3.63718D+01	3 4.02533D-06	1.05500D+00	0.0	0.0	0.0	1 3.05063D-05
473	3.63718D+01	2 4.80517D-06	1.05500D+00	0.0	0.0	0.0	2 2.09083D-06 24 1.36941D+00 24 7.20493D-01
473	3.63720D+01	1 7.59942D+01	3 8.06227D+01	5 8.23598D+01	11 8.50921D+01	13 8.60806D+01	
		15 8.68967D+01	17 8.75869D+01	19 8.83849D+01	21 8.98375D+01	24 1.91435D+02	
		25 1.94166D+02					
474	3.65861D+01	1 9.33916D-05	1.05500D+00	0.0	0.0	0.0	
474	3.65861D+01	3 4.70711D-06	1.05500D+00	0.0	0.0	0.0	1 2.86549D-05
474	3.65861D+01	2 5.26389D-06	1.05500D+00	0.0	0.0	0.0	2 2.04965D-06 25 1.48454D+00 24 7.72319D-01
474	3.65860D+01	1 7.59923D+01	3 8.06174D+01	5 8.23531D+01	11 8.50834D+01	13 8.60714D+01	
		15 8.68897D+01	17 8.75919D+01	19 8.84192D+01	21 8.99097D+01	24 1.92914D+02	
		25 1.95651D+02					
475	3.67930D+01	1 2.63099D-03	1.05500D+00	0.0	0.0	0.0	
475	3.67930D+01	4 2.18177D-06	1.05500D+00	0.0	0.0	0.0	1 2.52643D-04
475	3.67930D+01	4 5.11132D-07	1.05500D+00	0.0	0.0	0.0	2 5.56350D-05
475	3.67930D+01	3 7.76944D-06	1.05500D+00	0.0	0.0	0.0	3 1.27816D-05
475	3.67930D+01	2 7.22345D-06	1.05500D+00	0.0	0.0	0.0	4 2.96992D-06 24 1.15888D+00 24 6.00726D-01
475	3.67930D+01	1 7.59904D+01	3 8.06122D+01	5 8.23467D+01	11 8.50751D+01	13 8.60626D+01	
		15 8.68834D+01	17 8.75977D+01	19 8.84528D+01	21 8.99784D+01	24 1.94073D+02	
		25 1.96480D+02					
476	3.70000D+01	1 6.56061D-04	1.05500D+00	0.0	0.0	0.0	
476	3.70000D+01	4 6.58727D-07	1.05500D+00	0.0	0.0	0.0	1 1.80360D-04
476	3.70000D+01	3 9.86653D-06	1.05500D+00	0.0	0.0	0.0	2 1.62358D-05
476	3.70000D+01	2 9.20376D-06	1.05500D+00	0.0	0.0	0.0	3 3.79050D-06 23 7.94879D-01 23 5.02806D-01
476	3.70000D+01	1 7.59886D+01	3 8.06070D+01	5 8.23402D+01	11 8.50668D+01	13 8.60540D+01	
		15 8.68776D+01	17 8.76043D+01	19 8.84869D+01	21 9.00460D+01	24 1.94865D+02	
		25 1.97127D+02					

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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.08 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 476 TIME STEPS, TIME = 3.700000+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75199
	2	0.03	78130
2	3	0.06	80161
	4	0.08	81147
3	5	0.10	82134
	6	0.57	82182
	7	1.04	83129
	8	1.51	83175
	9	1.98	84120
	10	2.45	84164
4	11	2.92	85107
	12	3.14	85158
5	13	3.35	86105
	14	3.57	86148
6	15	3.79	86188
	16	4.01	87124
7	17	4.23	87160
	18	4.45	88100
8	19	4.67	88149
	20	4.89	89114
9	21	5.10	90105
	22	5.18	124108
	23	5.25	158188
10	24	5.32	194186
11	25	5.35	197113

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	89.500000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.069650710-01

ELAPSED CPU TIME IS 5.65 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.97127D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.59886D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
477	3.72277D+01	1	7.50623D-04	1.05500D+00	0.0	0.0	0.0				
477	3.72277D+01	4	2.37523D-07	1.05500D+00	0.0	0.0	0.0	1	1.69821D-04		
477	3.72277D+01	4	7.52933D-08	1.05500D+00	0.0	0.0	0.0	2	1.73145D-05		
477	3.72277D+01	3	3.03231D-06	1.05500D+00	0.0	0.0	0.0	3	4.21357D-06	23 6.84494D-01	23 4.30815D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	********** NODE NUMBERS AND TEMPERATURES **********					
477	3.7228D+01	1 7.59866D+01	3 8.06013D+01	5 8.23331D+01	11 8.50577D+01	13 8.60446D+01	
		15 8.68717D+01	17 8.76125D+01	19 8.85247D+01	21 9.01187D+01	24 1.95518D+02	
		25 1.97663D+02					
478	3.74781D+01	1 4.62159D-04	1.05500D+00	0.0	0.0	0.0	
478	3.74781D+01	4 7.34228D-07	1.05500D+00	0.0	0.0	0.0	1 1.40968D-04
478	3.74781D+01	3 9.07752D-06	1.05500D+00	0.0	0.0	0.0	2 1.07255D-05
478	3.74781D+01	2 8.57037D-06	1.05500D+00	0.0	0.0	0.0	3 2.84040D-06 23 5.82508D-01 23 3.65053D-01
478	3.7478D+01	1 7.59844D+01	3 8.05951D+01	5 8.23254D+01	11 8.50477D+01	13 8.60346D+01	
		15 8.68660D+01	17 8.76225D+01	19 8.85668D+01	21 9.01960D+01	24 1.96073D+02	
		25 1.98151D+02					
479	3.77390D+01	1 4.99679D-03	1.05500D+00	0.0	0.0	0.0	
479	3.77390D+01	5 4.42952D-07	1.05500D+00	0.0	0.0	0.0	1 4.77389D-04
479	3.77390D+01	4 3.51049D-06	1.05500D+00	0.0	0.0	0.0	2 1.07947D-04
479	3.77390D+01	4 9.48545D-07	1.05500D+00	0.0	0.0	0.0	3 2.90705D-05
479	3.77390D+01	3 6.92415D-06	1.05500D+00	0.0	0.0	0.0	4 7.66454D-06 25 4.28624D-01 22 2.44082D-01
479	3.7739D+01	1 7.59821D+01	3 8.05886D+01	5 8.23174D+01	11 8.50375D+01	13 8.60244D+01	
		15 8.68608D+01	17 8.76341D+01	19 8.86108D+01	21 9.02732D+01	24 1.96135D+02	
		25 1.97723D+02					
480	3.80000D+01	1 7.22307D-03	1.05500D+00	0.0	0.0	0.0	
480	3.80000D+01	5 6.46417D-07	1.05500D+00	0.0	0.0	0.0	1 8.08863D-04
480	3.80000D+01	4 5.14645D-06	1.05500D+00	0.0	0.0	0.0	2 1.59690D-04
480	3.80000D+01	4 1.38157D-06	1.05500D+00	0.0	0.0	0.0	3 4.27331D-05
480	3.80000D+01	4 3.70574D-07	1.05500D+00	0.0	0.0	0.0	4 1.14606D-05
480	3.80000D+01	2 9.28151D-06	1.05500D+00	0.0	0.0	0.0	5 2.68526D-06 25 1.82271D+00 25 9.21850D-01
480	3.8000D+01	1 7.59798D+01	3 8.05822D+01	5 8.23094D+01	11 8.50273D+01	13 8.60146D+01	
		15 8.68564D+01	17 8.76467D+01	19 8.86550D+01	21 9.03463D+01	24 1.95070D+02	
		25 1.95900D+02					

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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.08 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 480 TIME STEPS, TIME = 3.800000+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75198
	2	0.03	78128
2	3	0.06	80158
	4	0.08	81145
3	5	0.10	82131
	6	0.57	82178
	7	1.04	83125
	8	1.51	83171
	9	1.98	84116
	10	2.45	84160
4	11	2.92	85103
	12	3.14	85154
5	13	3.35	86101
	14	3.57	86145
6	15	3.79	86186
	16	4.01	87125
7	17	4.23	87165
	18	4.45	88110
8	19	4.67	88166
	20	4.89	89138
9	21	5.10	90135
	22	5.18	125138
	23	5.25	160147
10	24	5.32	195107
11	25	5.35	195190

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.609553430-01

ELAPSED CPU TIME IS 5.76 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.959000+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.597980+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
481	3.82689D+01	1	1.84495D-03	1.05500D+00	0.0	0.0	0.0						
481	3.82689D+01	4	4.79975D-06	1.05500D+00	0.0	0.0	0.0	1	5.43254D-04				
481	3.82689D+01	4	1.85642D-06	1.05500D+00	0.0	0.0	0.0	2	4.62983D-05				
481	3.82689D+01	4	5.02748D-07	1.05500D+00	0.0	0.0	0.0	3	1.25165D-05				
481	3.82689D+01	3	3.11383D-06	1.05500D+00	0.0	0.0	0.0	4	3.34658D-06	25	2.27037D+00	25	1.15894D+00
481	3.82204D+01	1	1.37215D-04	1.05500D+00	0.0	0.0	0.0						
481	3.82204D+01	3	8.28523D-06	1.05500D+00	0.0	0.0	0.0	1	2.25057D-05				
481	3.82204D+01	2	6.85545D-06	1.05500D+00	0.0	0.0	0.0	2	2.71620D-06	25	1.88769D+00	25	9.63598D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
481	3.82200D+01	1 7.59777D+01	3 8.05768D+01	5 8.23027D+01	11 8.50188D+01	13 8.60065D+01	
		15 8.68532D+01	17 8.76582D+01	19 8.86923D+01	21 9.04036D+01	24 1.93438D+02	
		25 1.94012D+02					
482	3.84409D+01	1 9.78437D-04	1.05500D+00	0.0	0.0	0.0	
482	3.84409D+01	4 2.99185D-07	1.05500D+00	0.0	0.0	0.0	1 2.79198D-04
482	3.84409D+01	4 8.74532D-08	1.05500D+00	0.0	0.0	0.0	2 2.23160D-05
482	3.84409D+01	3 3.44102D-06	1.05500D+00	0.0	0.0	0.0	3 5.22659D-06 25 2.11979D+00 25 1.09261D+00
482	3.84121D+01	1 9.95867D-05	1.05500D+00	0.0	0.0	0.0	
482	3.84121D+01	3 4.96513D-06	1.05500D+00	0.0	0.0	0.0	1 1.27793D-05
482	3.84121D+01	2 4.25694D-06	1.05500D+00	0.0	0.0	0.0	2 1.98955D-06 25 1.86569D+00 25 9.61634D-01
482	3.84120D+01	1 7.59760D+01	3 8.05721D+01	5 8.22970D+01	11 8.50116D+01	13 8.59996D+01	
		15 8.68509D+01	17 8.76687D+01	19 8.87246D+01	21 9.04194D+01	24 1.91772D+02	
		25 1.92147D+02					
483	3.86038D+01	1 3.05564D-04	1.05500D+00	0.0	0.0	0.0	
483	3.86038D+01	4 4.57694D-07	1.05500D+00	0.0	0.0	0.0	1 1.50989D-04
483	3.86038D+01	3 3.60511D-06	1.05500D+00	0.0	0.0	0.0	2 7.11075D-06 25 1.94592D+00 25 1.01273D+00
483	3.85919D+01	1 3.10156D-05	1.05500D+00	0.0	0.0	0.0	
483	3.85919D+01	2 6.11043D-06	1.05500D+00	0.0	0.0	0.0	1 4.52384D-05
483	3.85919D+01	1 6.63802D-06	1.05500D+00	0.0	0.0	0.0	2 6.05922D-07 25 1.83300D+00 25 9.53961D-01
483	3.85920D+01	1 7.59743D+01	3 8.05677D+01	5 8.22916D+01	11 8.50048D+01	13 8.59936D+01	
		15 8.68491D+01	17 8.76789D+01	19 8.87545D+01	21 9.04885D+01	24 1.90057D+02	
		25 1.90314D+02					
484	3.87717D+01	1 1.19195D-03	1.05500D+00	0.0	0.0	0.0	
484	3.87717D+01	4 2.30949D-06	1.05500D+00	0.0	0.0	0.0	1 1.05610D-04
484	3.87717D+01	4 4.90153D-07	1.05500D+00	0.0	0.0	0.0	2 2.52331D-05
484	3.87717D+01	3 2.32556D-06	1.05500D+00	0.0	0.0	0.0	3 5.20778D-06 25 2.15046D+00 25 1.12995D+00
484	3.87431D+01	1 9.22022D-05	1.05500D+00	0.0	0.0	0.0	
484	3.87431D+01	3 3.45492D-06	1.05500D+00	0.0	0.0	0.0	1 1.06885D-05
484	3.87431D+01	2 2.82844D-06	1.05500D+00	0.0	0.0	0.0	2 1.81131D-06 25 1.83373D+00 25 9.63530D-01
484	3.87430D+01	1 7.59729D+01	3 8.05640D+01	5 8.22872D+01	11 8.49992D+01	13 8.59883D+01	
		15 8.68478D+01	17 8.76878D+01	19 8.87795D+01	21 9.05177D+01	24 1.88463D+02	
		25 1.88480D+02					
485	3.88715D+01	1 1.36058D-04	1.05500D+00	0.0	0.0	0.0	
485	3.88715D+01	3 1.98413D-06	1.05500D+00	0.0	0.0	0.0	1 8.51947D-05
485	3.88715D+01	2 4.74151D-06	1.05500D+00	0.0	0.0	0.0	2 3.69432D-06 25 1.62171D+00 25 8.60417D-01
485	3.88720D+01	1 7.59718D+01	3 8.05610D+01	5 8.22834D+01	11 8.49945D+01	13 8.59830D+01	
		15 8.68470D+01	17 8.76955D+01	19 8.88004D+01	21 9.05405D+01	24 1.86969D+02	
		25 1.86858D+02					
486	3.90000D+01	1 8.78974D-05	1.05500D+00	0.0	0.0	0.0	
486	3.90000D+01	3 1.75389D-06	1.05500D+00	0.0	0.0	0.0	1 5.99366D-05
486	3.90000D+01	2 2.86575D-06	1.05500D+00	0.0	0.0	0.0	2 2.25743D-06 25 1.66013D+00 25 8.88442D-01
486	3.90000D+01	1 7.59707D+01	3 8.05579D+01	5 8.22797D+01	11 8.49899D+01	13 8.59799D+01	
		15 8.68453D+01	17 8.77034D+01	19 8.88210D+01	21 9.05611D+01	24 1.85404D+02	
		25 1.85198D+02					

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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.09 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 486 TIME STEPS, TIME = 3.90000D+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75197
	2	0.03	78127
2	3	0.06	80156
	4	0.08	81142
3	5	0.10	82128
	6	0.57	82175
	7	1.04	83122
	8	1.51	83167
	9	1.98	84112
	10	2.45	84156
4	11	2.92	84199
	12	3.14	85150
5	13	3.35	85198
	14	3.57	86142
6	15	3.79	86185
	16	4.01	87126
7	17	4.23	87170
	18	4.45	88121
8	19	4.67	88182
	20	4.89	89160
9	21	5.10	90156
	22	5.18	123172
	23	5.25	155180
10	24	5.32	185140
11	25	5.35	185120

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	92.790000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.284654120-01

ELAPSED CPU TIME IS 5.90 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.85404D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.59707D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE NO.	PERCENT TEMP CHANGE
487	3.91285D+01	1	1.28238D-04	1.05500D+00	0.0	0.0	0.0	1	5.52856D-05			
487	3.91285D+01	3	3.19621D-06	1.05500D+00	0.0	0.0	0.0	2	2.91697D-06	25 1.70910D+00	25	9.22849D-01
487	3.91285D+01	2	3.65406D-06	1.05500D+00	0.0	0.0	0.0					

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
487	3.91285D+01	1 7.59696D+01	3 8.05549D+01	5 8.22760D+01	11 8.49852D+01	13 8.59758D+01	
		15 8.68457D+01	17 8.77115D+01	19 8.88413D+01	21 9.05796D+01	24 1.83784D+02	
		25 1.83439D+02					
488	3.92563D+01	1 8.94890D-05	1.05500D+00	0.0	0.0	0.0	
488	3.92569D+01	3 2.10191D-06	1.05500D+00	0.0	0.0	0.0	
488	3.92569D+01	2 2.61473D-06	1.05500D+00	0.0	0.0	0.0	
						1 4.61253D-05	
						2 2.08961D-06	25 1.74424D+00 25 9.50594D-01
488	3.9257D+01	1 7.59685D+01	3 8.05519D+01	5 8.22723D+01	11 8.49807D+01	13 8.59718D+01	
		15 8.68453D+01	17 8.77197D+01	19 8.88612D+01	21 9.05959D+01	24 1.82118D+02	
		25 1.81745D+02					
489	3.93854D+01	1 7.48334D-05	1.05500D+00	0.0	0.0	0.0	
489	3.93854D+01	3 1.77739D-06	1.05500D+00	0.0	0.0	0.0	
489	3.93854D+01	2 2.15283D-06	1.05500D+00	0.0	0.0	0.0	
						1 3.91968D-05	
						2 1.72P98D-06	25 1.77324D+00 25 9.75675D-01
489	3.9385D+01	1 7.59674D+01	3 8.05489D+01	5 8.22687D+01	11 8.49762D+01	13 8.59680D+01	
		15 8.68451D+01	17 8.77280D+01	19 8.88807D+01	21 9.06107D+01	24 1.80414D+02	
		25 1.79971D+02					
490	3.95139D+01	1 6.62179D-05	1.05500D+00	0.0	0.0	0.0	
490	3.95139D+01	2 9.19769D-06	1.05500D+00	0.0	0.0	0.0	
490	3.95139D+01	2 9.87940D-06	1.05500D+00	0.0	0.0	0.0	
						1 3.35277D-05	
						2 1.88946D-06	25 1.79842D+00 25 9.99281D-01
490	3.9514D+01	1 7.59663D+01	3 8.05460D+01	5 8.22651D+01	11 8.49717D+01	13 8.59642D+01	
		15 8.68451D+01	17 8.77364D+01	19 8.88997D+01	21 9.06223D+01	24 1.78673D+02	
		25 1.78173D+02					
491	3.96423D+01	1 6.41326D-04	1.05500D+00	0.0	0.0	0.0	
491	3.96423D+01	4 1.76286D-06	1.05500D+00	0.0	0.0	0.0	
491	3.96423D+01	3 2.78934D-06	1.05500D+00	0.0	0.0	0.0	
491	3.96423D+01	2 2.51242D-06	1.05500D+00	0.0	0.0	0.0	
491	3.96215D+01	1 3.13831D-05	1.05500D+00	0.0	0.0	0.0	
491	3.96215D+01	2 4.62158D-06	1.05500D+00	0.0	0.0	0.0	
491	3.96215D+01	1 4.11516D-06	1.05500D+00	0.0	0.0	0.0	
						1 1.00809D-04	
						2 1.26582D-05	
						3 2.04879D-06	25 2.01933D+00 25 1.13335D+00
						1 5.26842D-06	
						2 6.28707D-07	25 1.70390D+00 25 9.56317D-01
491	3.9622D+01	1 7.59654D+01	3 8.05435D+01	5 8.22622D+01	11 8.49681D+01	13 8.59611D+01	
		15 8.68452D+01	17 8.77436D+01	19 8.89153D+01	21 9.06310D+01	24 1.77154D+02	
		25 1.76469D+02					
492	3.97292D+01	1 3.28580D-04	1.05500D+00	0.0	0.0	0.0	
492	3.97292D+01	3 5.77002D-06	1.05500D+00	0.0	0.0	0.0	
492	3.97292D+01	2 6.85020D-06	1.05500D+00	0.0	0.0	0.0	
492	3.97193D+01	1 2.92359D-05	1.05500D+00	0.0	0.0	0.0	
492	3.97193D+01	2 3.83729D-06	1.05500D+00	0.0	0.0	0.0	
492	3.97193D+01	1 3.78016D-06	1.05500D+00	0.0	0.0	0.0	
						1 8.53614D-05	
						2 7.12696D-06	25 1.84594D+00 25 1.04604D+00
						1 4.31340D-06	
						2 6.03032D-07	25 1.68841D+00 25 9.56775D-01
492	3.9719D+01	1 7.59646D+01	3 8.05413D+01	5 8.22595D+01	11 8.49648D+01	13 8.59583D+01	
		15 8.68453D+01	17 8.77501D+01	19 8.89291D+01	21 9.06377D+01	24 1.75658D+02	
		25 1.74781D+02					
493	3.98171D+01	1 1.11833D-04	1.05500D+00	0.0	0.0	0.0	
493	3.98171D+01	3 1.43796D-06	1.05500D+00	0.0	0.0	0.0	
493	3.98171D+01	2 2.37930D-06	1.05500D+00	0.0	0.0	0.0	
493	3.98121D+01	1 1.44659D-05	1.05500D+00	0.0	0.0	0.0	
493	3.98121D+01	2 1.79915D-06	1.05500D+00	0.0	0.0	0.0	
493	3.98121D+01	1 1.78696D-06	1.05500D+00	0.0	0.0	0.0	
						1 5.93032D-05	
						2 2.82334D-06	25 1.75101D+00 25 1.00183D+00
						1 2.35056D-06	
						2 2.98818D-07	25 1.66669D+00 25 9.53588D-01
493	3.9812D+01	1 7.59638D+01	3 8.05393D+01	5 8.22570D+01	11 8.49617D+01	13 8.59558D+01	
		15 8.68456D+01	17 8.77563D+01	19 8.89419D+01	21 9.06429D+01	24 1.74144D+02	
		25 1.73114D+02					
494	3.99048D+01	1 7.83936D-05	1.05500D+00	0.0	0.0	0.0	
494	3.99048D+01	2 7.14675D-06	1.05500D+00	0.0	0.0	0.0	
494	3.99048D+01	2 1.48926D-06	1.05500D+00	0.0	0.0	0.0	
						1 4.85036D-05	
						2 2.51289D-06	25 1.71297D+00 25 9.89506D-01
494	3.9905D+01	1 7.59631D+01	3 8.05372D+01	5 8.22545D+01	11 8.49586D+01	13 8.59532D+01	
		15 8.68459D+01	17 8.77626D+01	19 8.89544D+01	21 9.06472D+01	24 1.72558D+02	
		25 1.71401D+02					

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495 4.000000D+01     1 7.22462D-05 1.05500D+00 0.0                0.0          0.0
495 4.000000D+01     2 7.09776D-06 1.05500D+00 0.0                0.0          0.0
495 4.000000D+01     2 1.37822D-06 1.05500D+00 0.0                0.0          0.0
495 3.999100D+01     1 2.30826D-05 1.05500D+00 0.0                0.0          0.0
495 3.999100D+01     2 2.67083D-06 1.05500D+00 0.0                0.0          0.0
495 3.999100D+01     1 2.62526D-06 1.05500D+00 0.0                0.0          0.0
495      3.9991D+01      1 7.59624D+01    3 8.05353D+01    5 8.22527D+01   11 8.49558D+01   13 8.59510D+01
                         15 8.68462D+01   17 8.77684D+01   19 8.89657D+01   21 9.06501D+01   24 1.71029D+02
                         25 1.69762D+02

496 4.000100D+01     1 7.01910D-06 1.05500D+00 0.0                0.0          0.0
496 4.000100D+01     1 7.01910D-06 1.05500D+00 0.0                0.0          0.0
496 4.000100D+01     1 5.40132D-07 1.05500D+00 0.0                0.0          0.0
496      4.0001D+01      1 7.59622D+01    3 8.05351D+01    5 8.22519D+01   11 8.49555D+01   13 8.59507D+01
                         15 8.68463D+01   17 8.77691D+01   19 8.89670D+01   21 9.06504D+01   24 1.70848D+02
                         25 1.69552D+02
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                                                                  1 4.51952D-05
                                                                  2 2.22806D-06    25 1.79833D+00   25 1.04919D+00
                                                                  1 4.11822D-06
                                                                  2 4.73877D-07    25 1.63908D+00   25 9.56286D-01

                                                                  1 7.02761D-06
                                                                  2 5.61831D-07    25 2.10256D-01   25 1.23854D-01
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GC

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.09 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 496 TIME STEPS, TIME = 4.000100+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75196
	2	0.03	78125
2	3	0.06	80154
	4	0.08	81139
3	5	0.10	82125
	6	0.57	82172
	7	1.04	83119
	8	1.51	83164
	9	1.98	84109
	10	2.45	84153
4	11	2.92	84196
	12	3.14	85147
5	13	3.35	85195
	14	3.57	86141
6	15	3.79	86185
	16	4.01	87129
7	17	4.23	87177
	18	4.45	88132
8	19	4.67	88197
	20	4.89	89175
9	21	5.10	90165
	22	5.18	119175
	23	5.25	147116
10	24	5.32	170185
11	25	5.35	169155

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690310
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 6.07 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.708480+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.596220+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
497	4.00110D+01	1	9.52609D-07	1.05500D+00	0.0	0.0	0.0	1	1.09865D-06			
497	4.00110D+01	1	9.52609D-07	1.05500D+00	0.0	0.0	0.0	2	7.16996D-08	25 2.08573D-01	25	1.23014D-01
497	4.00110D+01	1	7.84551D-08	1.05500D+00	0.0	0.0	0.0					

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
497	4.0011D+01	1 7.59621D+01	3 8.05349D+01	5 8.22517D+01	11 8.49551D+01	13 8.59504D+01
		15 8.68463D+01	17 8.77697D+01	19 8.89583D+01	21 9.06507D+01	24 1.70665D+02
		25 1.69343D+02				
498	4.0021D+01	1 8.59860D-07	1.05500D+00	0.0	0.0	0.0	1 1.01148D-06			
498	4.0021D+01	1 8.59860D-07	1.05500D+00	0.0	0.0	0.0	2 6.55469D-08	25 2.07104D-01	25	1.22298D-01
498	4.0021D+01	1 7.08416D-08	1.05500D+00	0.0	0.0	0.0				
498	4.0021D+01	1 7.59620D+01	3 8.05347D+01	5 8.22514D+01	11 8.49548D+01	13 8.59502D+01				
		15 8.68464D+01	17 8.77704D+01	19 8.89696D+01	21 9.06510D+01	24 1.70481D+02				
		25 1.69136D+02				
499	4.0031D+01	1 7.09891D-07	1.05500D+00	0.0	0.0	0.0	1 8.75675D-07			
499	4.0031D+01	1 7.09891D-07	1.05500D+00	0.0	0.0	0.0	2 5.40047D-08	25 2.05978D-01	25	1.21782D-01
499	4.0031D+01	1 5.67789D-08	1.05500D+00	0.0	0.0	0.0				
499	4.0031D+01	1 7.59619D+01	3 8.05344D+01	5 8.22511D+01	11 8.49545D+01	13 8.59439D+01				
		15 8.68464D+01	17 8.77711D+01	19 8.89709D+01	21 9.06512D+01	24 1.70295D+02				
		25 1.68930D+02				
500	4.0042D+01	1 7.88439D-07	1.05500D+00	0.0	0.0	0.0	1 9.70024D-07			
500	4.0042D+01	1 7.88439D-07	1.05500D+00	0.0	0.0	0.0	2 6.31008D-08	25 2.25259D-01	25	1.33345D-01
500	4.0042D+01	1 6.79102D-08	1.05500D+00	0.0	0.0	0.0				
500	4.0042D+01	1 7.59618D+01	3 8.05342D+01	5 8.22508D+01	11 8.49541D+01	13 8.59496D+01				
		15 8.68465D+01	17 8.77718D+01	19 8.89723D+01	21 9.06515D+01	24 1.70090D+02				
		25 1.68705D+02				
501	4.0054D+01	1 8.07092D-07	1.05500D+00	0.0	0.0	0.0	1 1.01731D-06			
501	4.0054D+01	1 8.07092D-07	1.05500D+00	0.0	0.0	0.0	2 6.33643D-08	25 2.46585D-01	25	1.46163D-01
501	4.0054D+01	1 6.93967D-08	1.05500D+00	0.0	0.0	0.0				
501	4.0054D+01	1 7.59617D+01	3 8.05339D+01	5 8.22505D+01	11 8.49537D+01	13 8.59493D+01				
		15 8.68465D+01	17 8.77727D+01	19 8.89738D+01	21 9.06517D+01	24 1.69862D+02				
		25 1.68458D+02				
502	4.0067D+01	1 8.22962D-07	1.05500D+00	0.0	0.0	0.0	1 1.07719D-06			
502	4.0067D+01	1 8.22962D-07	1.05500D+00	0.0	0.0	0.0	2 6.30437D-08	25 2.70145D-01	25	1.60363D-01
502	4.0067D+01	1 6.97289D-08	1.05500D+00	0.0	0.0	0.0				
502	4.0067D+01	1 7.59616D+01	3 8.05337D+01	5 8.22502D+01	11 8.49533D+01	13 8.59490D+01				
		15 8.68466D+01	17 8.77736D+01	19 8.89755D+01	21 9.06520D+01	24 1.69611D+02				
		25 1.68188D+02				
503	4.0082D+01	1 8.27008D-07	1.05500D+00	0.0	0.0	0.0	1 1.14419D-06			
503	4.0082D+01	1 8.27008D-07	1.05500D+00	0.0	0.0	0.0	2 6.30075D-08	25 2.96185D-01	25	1.76104D-01
503	4.0082D+01	1 6.96676D-08	1.05500D+00	0.0	0.0	0.0				
503	4.0082D+01	1 7.59615D+01	3 8.05333D+01	5 8.22498D+01	11 8.49528D+01	13 8.59486D+01				
		15 8.68467D+01	17 8.77746D+01	19 8.89774D+01	21 9.06523D+01	24 1.69333D+02				
		25 1.67892D+02				
504	4.0098D+01	1 7.75829D-07	1.05500D+00	0.0	0.0	0.0	1 1.19193D-06			
504	4.0098D+01	1 7.75829D-07	1.05500D+00	0.0	0.0	0.0	2 5.99708D-08	25 3.25086D-01	25	1.93628D-01
504	4.0098D+01	1 6.47341D-08	1.05500D+00	0.0	0.0	0.0				
504	4.0098D+01	1 7.59614D+01	3 8.05330D+01	5 8.22494D+01	11 8.49523D+01	13 8.59482D+01				
		15 8.68467D+01	17 8.77757D+01	19 8.89794D+01	21 9.06525D+01	24 1.69026D+02				
		25 1.67567D+02				
505	4.0116D+01	1 7.14242D-07	1.05500D+00	0.0	0.0	0.0	1 1.26020D-06			
505	4.0116D+01	1 7.14242D-07	1.05500D+00	0.0	0.0	0.0	2 5.37357D-08	25 3.57114D-01	25	2.13118D-01
505	4.0116D+01	1 5.39244D-08	1.05500D+00	0.0	0.0	0.0				
505	4.0116D+01	1 7.59612D+01	3 8.05326D+01	5 8.22489D+01	11 8.49518D+01	13 8.59477D+01				
		15 8.68468D+01	17 8.77769D+01	19 8.89817D+01	21 9.06528D+01	24 1.68686D+02				
		25 1.67210D+02				
506	4.0135D+01	1 6.41719D-07	1.05500D+00	0.0	0.0	0.0	1 1.35156D-06			
506	4.0135D+01	1 6.41719D-07	1.05500D+00	0.0	0.0	0.0	2 4.71473D-08	25 3.92569D-01	25	2.34776D-01
506	4.0135D+01	1 3.82982D-08	1.05500D+00	0.0	0.0	0.0				
506	4.0135D+01	1 7.59611D+01	3 8.05322D+01	5 8.22484D+01	11 8.49511D+01	13 8.59472D+01				

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                    15 8.684700D+01   17 8.77782D+01   19 8.898810+01   21 9.06630D+01   24 1.67
                    25 1.668170+02
507 4.01568D+01   1 5.151070-07 1.055000+00 0.0          0.0          0.0                  1 1.485870-06
507 4.01568D+01   1 5.151070-07 1.055000+00 0.0          0.0          0.0                  2 4.781060-08   25 4.319060-01   25 2.589100-01
507 4.01568D+01   1 2.255520-08 1.055000+00 0.0          0.0          0.0
      507    4.0157D+01    1 7.596090+01    3 8.053170+01    5 8.224780+01   11 8.495050+01   13 8.594670+01
                    15 8.684710+01   17 8.77796D+01   19 8.898680+01   21 9.06532D+01   24 1.67898D+02
                    25 1.663850+02
508 4.01804D+01   1 6.023810-07 1.055000+00 0.0          0.0          0.0                  1 1.801560-06
508 4.01804D+01   1 6.023810-07 1.055000+00 0.0          0.0          0.0                  2 5.610310-08   25 4.755850-01   25 2.858340-01
508 4.01804D+01   1 2.992800-08 1.055000+00 0.0          0.0          0.0
      508    4.0180D+01    1 7.596070+01    3 8.053120+01    5 8.224720+01   11 8.494970+01   13 8.594610+01
                    15 8.684720+01   17 8.77812D+01   19 8.898970+01   21 9.06533D+01   24 1.67441D+02
                    25 1.659100+02
509 4.02063D+01   1 6.663250-07 1.055000+00 0.0          0.0          0.0                  1 2.107540-06
509 4.02063D+01   1 6.863250-07 1.055000+00 0.0          0.0          0.0                  2 6.692040-08   25 5.238500-01   25 3.157440-01
509 4.02063D+01   1 4.492600-08 1.055000+00 0.0          0.0          0.0
      509    4.0206D+01    1 7.596050+01    3 8.053060+01    5 8.224650+01   11 8.494890+01   13 8.594540+01
                    15 8.684740+01   17 8.778300+01   19 8.899280+01   21 9.06534D+01   24 1.66937D+02
                    25 1.653860+02
510 4.02348D+01   1 7.697750-07 1.055000+00 0.0          0.0          0.0                  1 2.502430-06
510 4.02348D+01   1 7.697750-07 1.055000+00 0.0          0.0          0.0                  2 7.515150-08   25 5.774150-01   25 3.491320-01
510 4.02348D+01   1 7.513500-08 1.055000+00 0.0          0.0          0.0
      510    4.0235D+01    1 7.596030+01    3 8.053000+01    5 8.224580+01   11 8.494800+01   13 8.594470+01
                    15 8.684760+01   17 8.778430+01   19 8.899630+01   21 9.06534D+01   24 1.66380D+02
                    25 1.648080+02
511 4.02662D+01   1 8.351440-07 1.055000+00 0.0          0.0          0.0                  1 2.958410-06
511 4.02662D+01   1 8.351440-07 1.055000+00 0.0          0.0          0.0                  2 1.190540-07   25 6.367820-01   25 3.863770-01
511 4.02662D+01   1 1.663020-07 1.055000+00 0.0          0.0          0.0
      511    4.0266D+01    1 7.596010+01    3 8.052940+01    5 8.224500+01   11 8.494700+01   13 8.594400+01
                    15 8.684780+01   17 8.778710+01   19 8.900000+01   21 9.06532D+01   24 1.65766D+02
                    25 1.641720+02
512 4.03008D+01   1 8.810460-07 1.055000+00 0.0          0.0          0.0                  1 3.443820-06
512 4.03008D+01   1 8.810460-07 1.055000+00 0.0          0.0          0.0                  2 1.553330-07   25 7.024900-01   25 4.279000-01
512 4.03008D+01   1 2.454880-07 1.055000+00 0.0          0.0          0.0
      512    4.0301D+01    1 7.595980+01    3 8.052860+01    5 8.224410+01   11 8.494590+01   13 8.594310+01
                    15 8.684800+01   17 8.778940+01   19 8.900410+01   21 9.06528D+01   24 1.65087D+02
                    25 1.634690+02
513 4.03387D+01   1 1.270500-06 1.055000+00 0.0          0.0          0.0                  1 3.972070-06
513 4.03387D+01   1 1.270500-06 1.055000+00 0.0          0.0          0.0                  2 1.835790-07   25 7.751790-01   25 4.742050-01
513 4.03387D+01   1 3.035330-07 1.055000+00 0.0          0.0          0.0
      513    4.0339D+01    1 7.595990+01    3 8.052780+01    5 8.224310+01   11 8.494470+01   13 8.594220+01
                    15 8.684830+01   17 8.779200+01   19 8.900860+01   21 9.06523D+01   24 1.64337D+02
                    25 1.626940+02
514 4.03805D+01   1 1.957060-06 1.055000+00 0.0          0.0          0.0                  1 4.609700-06
514 4.03805D+01   1 1.957060-06 1.055000+00 0.0          0.0          0.0                  2 2.337360-07   25 8.557340-01   25 5.259780-01
514 4.03805D+01   1 4.235580-07 1.055000+00 0.0          0.0          0.0
      514    4.0380D+01    1 7.595920+01    3 8.052690+01    5 8.224210+01   11 8.494340+01   13 8.594120+01
                    15 8.684860+01   17 8.779480+01   19 8.901340+01   21 9.06514D+01   24 1.63509D+02
                    25 1.618380+02
515 4.04264D+01   1 2.694290-06 1.055000+00 0.0          0.0          0.0                  1 5.293250-06
515 4.04264D+01   1 2.694290-06 1.055000+00 0.0          0.0          0.0                  2 2.975320-07   25 9.448320-01   25 5.838130-01
515 4.04264D+01   1 6.076620-07 1.055000+00 0.0          0.0          0.0
      515    4.0426D+01    1 7.595830+01    3 8.052600+01    5 8.224090+01   11 8.494200+01   13 8.594010+01
                    15 8.684930+01   17 8.779790+01   19 8.901860+01   21 9.06502D+01   24 1.62595D+02
                    25 1.608930+02
516 4.04770D+01   1 4.004540-06 1.055000+00 0.0          0.0          0.0                  1 6.123190-06
516 4.04770D+01   1 4.004540-06 1.055000+00 0.0          0.0          0.0                  2 3.859260-07   25 1.043690+00   25 6.486870-01
516 4.04770D+01   1 9.826710-07 1.055000+00 0.0          0.0          0.0
      516    4.0477D+01    1 7.595850+01    3 8.052490+01    5 8.223960+01   11 8.494050+01   13 8.593890+01
                    15 8.684940+01   17 8.780130+01   19 8.902430+01   21 9.06485D+01   24 1.61583D+02
                    25 1.598500+02
517 4.05326D+01   1 7.118080-06 1.055000+00 0.0          0.0          0.0                  1 7.349920-06
517 4.05326D+01   1 7.118080-06 1.055000+00 0.0          0.0          0.0                  2 5.654770-07   25 1.154440+00   25 7.222010-01
517 4.05326D+01   1 1.393490-06 1.055000+00 0.0          0.0          0.0
      517    4.0533D+01    1 7.595810+01    3 8.052380+01    5 8.223830+01   11 8.493880+01   13 8.593760+01
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                                15 8.684390D+01   17 8.78051D+01   19 8.803030D+01   21 9.064620D+01   24 1.604650D+02
                                25 1.586950D+02
518 4.05938D+01     1 2.902370-05 1.055000+00 0.0          0.0          0.0
518 4.05938D+01     2 2.456500-06 1.055000+00 0.0          0.0          0.0                1 1.307880-05
518 4.05938D+01     1 2.017650-06 1.055000+00 0.0          0.0          0.0                2 6.732190-07   25 1.289870+00   25 8.127960-01
  518       4.0594D+01      1 7.595760+01     3 8.05225D+01    5 8.223670+01   11 8.493690+01   13 8.593620+01
                            15 8.685040+01    17 8.78092D+01   19 8.90368D+01   21 9.064320+01   24 1.592250+02
                            25 1.574050+02
519 4.06610D+01     1 2.652940-05 1.055000+00 0.0          0.0          0.0
519 4.06610D+01     2 2.044320-06 1.055000+00 0.0          0.0          0.0                1 1.434650-05
519 4.06610D+01     1 2.619740-06 1.055000+00 0.0          0.0          0.0                2 5.987760-07   25 1.435610+00   25 9.129500-01
  519       4.0661D+01      1 7.595720+01     3 8.05212D+01    5 8.223510+01   11 8.493490+01   13 8.593470+01
                            15 8.685100+01    17 8.78137D+01   19 8.90438D+01   21 9.063930+01   24 1.578470+02
                            25 1.559760+02
520 4.07311D+01     1 3.074900-05 1.055000+00 0.0          0.0          0.0
520 4.07311D+01     2 2.610800-06 1.055000+00 0.0          0.0          0.0                1 1.655040-05
520 4.07311D+01     1 3.333780-06 1.055000+00 0.0          0.0          0.0                2 7.349140-07   25 1.515170+00   25 9.714490-01
  520       4.0731D+01      1 7.595670+01     3 8.05198D+01    5 8.223340+01   11 8.493290+01   13 8.593320+01
                            15 8.685170+01    17 8.78184D+01   19 8.905090+01   21 9.063460+01   24 1.563940+02
                            25 1.544550+02
521 4.08012D+01     1 2.993780-05 1.055000+00 0.0          0.0          0.0
521 4.08012D+01     2 2.487180-06 1.055000+00 0.0          0.0          0.0                1 1.704700-05
521 4.08012D+01     1 3.255270-06 1.055000+00 0.0          0.0          0.0                2 7.164630-07   25 1.534670+00   25 9.936060-01
  521       4.0801D+01      1 7.595610+01     3 8.05184D+01    5 8.223170+01   11 8.493080+01   13 8.593170+01
                            15 8.685250+01    17 8.78231D+01   19 8.905770+01   21 9.062920+01   24 1.549230+02
                            25 1.529200+02
522 4.08712D+01     1 2.389700-05 1.055000+00 0.0          0.0          0.0
522 4.08712D+01     2 1.977260-06 1.055000+00 0.0          0.0          0.0                1 1.610840-05
522 4.08712D+01     1 2.674720-06 1.055000+00 0.0          0.0          0.0                2 5.905960-07   25 1.550890+00   25 1.014180+00
522 4.08668D+01     1 9.689130-06 1.055000+00 0.0          0.0          0.0
522 4.08668D+01     2 9.689130-06 1.055000+00 0.0          0.0          0.0                1 1.980320-06
522 4.08668D+01     1 1.493590-06 1.055000+00 0.0          0.0          0.0                2 5.127470-07   25 1.458140+00   25 9.535310-01
  522       4.0867D+01      1 7.595570+01     3 8.05171D+01    5 8.223010+01   11 8.492890+01   13 8.593030+01
                            15 8.685320+01    17 8.78275D+01   19 8.906380+01   21 9.062360+01   24 1.535280+02
                            25 1.514620+02
523 4.09325D+01     1 1.125170-05 1.055000+00 0.0          0.0          0.0
523 4.09325D+01     2 1.559950-06 1.055000+00 0.0          0.0          0.0                1 1.314800-05
523 4.09325D+01     1 1.518850-06 1.055000+00 0.0          0.0          0.0                2 3.455380-07   25 1.467950+00   25 9.692150-01
  523       4.0932D+01      1 7.595520+01     3 8.05158D+01    5 8.222860+01   11 8.492710+01   13 8.592890+01
                            15 8.685390+01    17 8.78316D+01   19 8.906980+01   21 9.061740+01   24 1.521160+02
                            25 1.499940+02
524 4.10000D+01     1 1.081970-05 1.055000+00 0.0          0.0          0.0
524 4.10000D+01     2 1.059830-06 1.055000+00 0.0          0.0          0.0                1 1.248560-05
524 4.10000D+01     1 1.382200-06 1.055000+00 0.0          0.0          0.0                2 3.077970-07   25 1.519460+00   25 1.01...0+00
524 4.09958D+01     1 8.770370-06 1.055000+00 0.0          0.0          0.0
524 4.09958D+01     1 8.770370-06 1.055000+00 0.0          0.0          0.0                1 1.810410-06
524 4.09958D+01     1 1.397650-06 1.055000+00 0.0          0.0          0.0                2 4.737830-07   25 1.423540+00   25 9.533320-01
  524       4.0996D+01      1 7.595470+01     3 8.05146D+01    5 8.222750+01   11 8.492530+01   13 8.592760+01
                            15 8.685490+01    17 8.78360D+01   19 8.907540+01   21 9.061980+01   24 1.507400+02
                            25 1.485640+02
525 4.10058D+01     1 6.239580-06 1.055000+00 0.0          0.0          0.0
525 4.10058D+01     1 6.239580-06 1.055000+00 0.0          0.0          0.0                1 5.394700-06
525 4.10058D+01     1 4.918380-07 1.055000+00 0.0          0.0          0.0                2 2.942320-07   25 2.413440-01   25 1.624520-01
  525       4.1006...+01      1 7.595460+01     3 8.05144D+01    5 8.222690+01   11 8.492500+01   13 8.592740+01
                            15 8.685480+01    17 8.78366D+01   19 8.907620+01   21 9.060980+01   24 1.505210+02
                            25 1.483220+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM 3033/ 0
2C 4A 10 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 575 TIME STEPS, TIME = 4.100580+01

GROSS GRID	FINE GRID	DISTANCE	
1	1	0.0	[illegible]
	2	0.02	78124
2	3	0.06	80151
	4	0.08	81137
3	5	0.10	82123
	6	0.57	82170
	7	1.04	83116
	8	1.51	83161
	9	1.98	84106
	10	2.45	84149
4	11	2.92	84192
	12	3.14	85144
5	13	3.35	85193
	14	3.57	86139
6	15	3.79	86185
	16	4.01	87133
7	17	4.23	87181
	18	4.45	88131
8	19	4.67	89078
	20	4.89	90083
9	21	5.10	90161
	22	5.18	133177
	23	5.25	134156
10	24	5.32	150452
	25	5.35	346132

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
	93.998203
2	0.0
3	73.400300

THE CURRENT TIME STEP (DELTAT) = 1.000000000-02

ELAPSED CPU TIME IS 6.38 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.50521D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.55546D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO IIER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
526	4.10158D+01	1	8.20010D-07	1.05500D+00	0.0	0.0	0.0						
526	4.10158D+01	1	8.20010D-07	1.05500D+00	0.0	0.0	0.0	1	8.93242D-07				
526	4.10158D+01	1	6.99601D-08	1.05500D+00	0.0	0.0	0.0	2	6.44594D-08	25	2.39979D-01	25	1.61796D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
526	4.1016D+01	1 7.59546D+01	3 8.05142D+01	5 8.22266D+01	11 8.49247D+01	13 8.59272D+01	
		15 8.68549D+01	17 8.78373D+01	19 8.90771D+01	21 9.06087D+01	24 1.50301D+02	
		25 1.46063D+02					
527	4.10258D+01	1 7.34642D-07	1.05500D+00	0.0	0.0	0.0	
527	4.10258D+01	1 7.34642D-07	1.05500D+00	0.0	0.0	0.0	1 8.12946D-07
527	4.10258D+01	1 6.26437D-08	1.05500D+00	0.0	0.0	0.0	2 5.72565D-08 25 2.38804D-01 25 1.61264D-01
527	4.1026D+01	1 7.59545D+01	3 8.05140D+01	5 8.22264D+01	11 8.49244D+01	13 8.59270D+01	
		15 8.68550D+01	17 8.78379D+01	19 8.90779D+01	21 9.06076D+01	24 1.50080D+02	
		25 1.47844D+02					
528	4.10358D+01	1 6.17542D-07	1.05500D+00	0.0	0.0	0.0	
528	4.10358D+01	1 6.17542D-07	1.05500D+00	0.0	0.0	0.0	1 7.10103D-07
528	4.10358D+01	1 5.07059D-08	1.05500D+00	0.0	0.0	0.0	2 4.63759D-08 25 2.37838D-01 25 1.60878D-01
528	4.1036D+01	1 7.59544D+01	3 8.05138D+01	5 8.22262D+01	11 8.49241D+01	13 8.59268D+01	
		15 8.68552D+01	17 8.78386D+01	19 8.90788D+01	21 9.06064D+01	24 1.49858D+02	
		25 1.47606D+02					
529	4.10468D+01	1 7.03355D-07	1.05500D+00	0.0	0.0	0.0	
529	4.10468D+01	1 7.03355D-07	1.05500D+00	0.0	0.0	0.0	1 8.00519D-07
529	4.10468D+01	1 6.39981D-08	1.05500D+00	0.0	0.0	0.0	2 5.74190D-08 25 2.60446D-01 25 1.76447D-01
529	4.1047D+01	1 7.59543D+01	3 8.05136D+01	5 8.22259D+01	11 8.49238D+01	13 8.59266D+01	
		15 8.68555D+01	17 8.78393D+01	19 8.90797D+01	21 9.06052D+01	24 1.49613D+02	
		25 1.47345D+02					
530	4.10589D+01	1 7.18567D-07	1.05500D+00	0.0	0.0	0.0	
530	4.10589D+01	1 7.18567D-07	1.05500D+00	0.0	0.0	0.0	1 8.24255D-07
530	4.10589D+01	1 6.29249D-08	1.05500D+00	0.0	0.0	0.0	2 5.48630D-08 25 2.85384D-01 25 1.93684D-01
530	4.1059D+01	1 7.59542D+01	3 8.05133D+01	5 8.22256D+01	11 8.49235D+01	13 8.59264D+01	
		15 8.68554D+01	17 8.78401D+01	19 8.90807D+01	21 9.06038D+01	24 1.49342D+02	
		25 1.47060D+02					
531	4.10722D+01	1 7.42662D-07	1.05500D+00	0.0	0.0	0.0	
531	4.10722D+01	1 7.42662D-07	1.05500D+00	0.0	0.0	0.0	1 8.65214D-07
531	4.10722D+01	1 6.96763D-08	1.05500D+00	0.0	0.0	0.0	2 5.95408D-08 25 3.[illegible]363D-01 25 2.12745D-01
531	4.1072D+01	1 7.59541D+01	3 8.05131D+01	5 8.22253D+01	11 8.49231D+01	13 8.59261D+01	
		15 8.68556D+01	17 8.78409D+01	19 8.90818D+01	21 9.06022D+01	24 1.49043D+02	
		25 1.46747D+02					
532	4.10868D+01	1 7.36854D-07	1.05500D+00	0.0	0.0	0.0	
532	4.10868D+01	1 7.36854D-07	1.05500D+00	0.0	0.0	0.0	1 8.91763D-07
532	4.10868D+01	1 6.83309D-08	1.05500D+00	0.0	0.0	0.0	2 5.77524D-08 25 3.43192D-01 25 2.37866D-01
532	4.1087D+01	1 7.59540D+01	3 8.05128D+01	5 8.22250D+01	11 8.49227D+01	13 8.59258D+01	
		15 8.68558D+01	17 8.78419D+01	19 8.90830D+01	21 9.06005D+01	24 1.48714D+02	
		25 1.46404D+02					
533	4.11030D+01	1 6.63028D-07	1.05500D+00	0.0	0.0	0.0	
533	4.11030D+01	1 6.63028D-07	1.05500D+00	0.0	0.0	0.0	1 8.84194D-07
533	4.11030D+01	1 6.07075D-08	1.05500D+00	0.0	0.0	0.0	2 5.20895D-08 25 3.76800D-01 25 2.57370D-01
533	4.1103D+01	1 7.59539D+01	3 8.05125D+01	5 8.22246D+01	11 8.49223D+01	13 8.59255D+01	
		15 8.68560D+01	17 8.78429D+01	19 8.90843D+01	21 9.05986D+01	24 1.48351D+02	
		25 1.46027D+02					
534	4.11207D+01	1 6.47114D-07	1.05500D+00	0.0	0.0	0.0	
534	4.11207D+01	1 6.47114D-07	1.05500D+00	0.0	0.0	0.0	1 9.35248D-07
534	4.11207D+01	1 5.29313D-08	1.05500D+00	0.0	0.0	0.0	2 4.75322D-08 25 4.13844D-01 25 2.83402D-01
534	4.1121D+01	1 7.59538D+01	3 8.05122D+01	5 8.22242D+01	11 8.49218D+01	13 8.59252D+01	
		15 8.68562D+01	17 8.78441D+01	19 8.90857D+01	21 9.05964D+01	24 1.47951D+02	
		25 1.45613D+02					
535	4.11402D+01	1 5.15042D-07	1.05500D+00	0.0	0.0	0.0	
535	4.11402D+01	1 5.15042D-07	1.05500D+00	0.0	0.0	0.0	1 9.34797D-07
535	4.11402D+01	1 4.22159D-08	1.05500D+00	0.0	0.0	0.0	2 4.25231D-08 25 4.54903D-01 25 3.12405D-01
535	4.1140D+01	1 7.59536D+01	3 8.05118D+01	5 8.22238D+01	11 8.49213D+01	13 8.59248D+01	

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                    15 8.68565D+01   17 8.78453D+01   19 8.90872D+01   21 9.05940D+01   24 1.47509D+02
                    25 1.45158D+02
536 4.11616D+01   1 4.29499D-07 1.05500D+00 0.0          0.0          0.0
536 4.11616D+01   1 4.29499D-07 1.05500D+00 0.0          0.0          0.0          1 9.88556D-07
536 4.11616D+01   1 2.57342D-08 1.05500D+00 0.0          0.0          0.0          2 3.58154D-08   25 5.00240D-01   25 3.44617D-01
  536     4.1162D+01    1 7.59535D+01    3 8.05114D+01    5 8.22233D+01   11 8.49207D+01   13 8.59244D+01
                    15 8.68567D+01   17 8.78467D+01   19 8.90889D+01   21 9.05912D+01   24 1.47023D+02
                    25 1.44658D+02
537 4.11852D+01   1 3.98897D-07 1.05500D+00 0.0          0.0          0.0
537 4.11852D+01   1 3.98897D-07 1.05500D+00 0.0          0.0          0.0          1 1.09422D-06
537 4.11852D+01   1 1.90624D-08 1.05500D+00 0.0          0.0          0.0          2 3.60860D-08   25 5.50328D-01   25 3.80440D-01
  537     4.1185D+01    1 7.59533D+01    3 8.05109D+01    5 8.22228D+01   11 8.49200D+01   13 8.59239D+01
                    15 8.68570D+01   17 8.78482D+01   19 8.90907D+01   21 9.05881D+01   24 1.47488D+02
                    25 1.44108D+02
538 4.12111D+01   1 4.61238D-07 1.05500D+00 0.0          0.0          0.0
538 4.12111D+01   1 4.61238D-07 1.05500D+00 0.0          0.0          0.0          1 1.33841D-06
538 4.12111D+01   1 2.50839D-08 1.05500D+00 0.0          0.0          0.0          2 3.69542D-08   25 6.05768D-01   25 4.20358D-01
  538     4.1211D+01    1 7.59532D+01    3 8.05104D+01    5 8.22222D+01   11 8.49193D+01   13 8.59234D+01
                    15 8.68574D+01   17 8.78499D+01   19 8.90927D+01   21 9.05847D+01   24 1.45898D+02
                    25 1.43502D+02
539 4.12396D+01   1 5.14474D-07 1.05500D+00 0.0          0.0          0.0
539 4.12396D+01   1 5.14474D-07 1.05500D+00 0.0          0.0          0.0          1 1.63287D-06
539 4.12396D+01   1 5.50637D-08 1.05500D+00 0.0          0.0          0.0          2 5.54327D-08   25 6.67105D-01   25 4.64875D-01
  539     4.1240D+01    1 7.59530D+01    3 8.05099D+01    5 8.22215D+01   11 8.49185D+01   13 8.59229D+01
                    15 8.68578D+01   17 8.78517D+01   19 8.90948D+01   21 9.05807D+01   24 1.45218D+02
                    25 1.42835D+02
540 4.12710D+01   1 5.51119D-07 1.05500D+00 0.0          0.0          0.0
540 4.12710D+01   1 5.51119D-07 1.05500D+00 0.0          0.0          0.0          1 1.92225D-06
540 4.12710D+01   1 1.02788D-07 1.05500D+00 0.0          0.0          0.0          2 7.89609D-08   25 7.34782D-01   25 5.14427D-01
  540     4.1271D+01    1 7.59528D+01    3 8.05093D+01    5 8.22208D+01   11 8.49177D+01   13 8.59223D+01
                    15 8.68582D+01   17 8.78537D+01   19 8.90971D+01   21 9.05763D+01   24 1.46531D+02
                    25 1.42100D+02
541 4.13055D+01   1 8.09575D-07 1.05500D+00 0.0          0.0          0.0
541 4.13055D+01   1 8.09575D-07 1.05500D+00 0.0          0.0          0.0          1 2.31052D-06
541 4.13055D+01   1 1.98203D-07 1.05500D+00 0.0          0.0          0.0          2 1.20597D-07   25 8.09635D-01   25 5.69764D-01
  541     4.1306D+01    1 7.59525D+01    3 8.05087D+01    5 8.22201D+01   11 8.49168D+01   13 8.59217D+01
                    15 8.68586D+01   17 8.78559D+01   19 8.90995D+01   21 9.05712D+01   24 1.43742D+02
                    25 1.41291D+02
542 4.13435D+01   1 1.39213D-06 1.05500D+00 0.0          0.0          0.0
542 4.13435D+01   1 1.39213D-06 1.05500D+00 0.0          0.0          0.0          1 2.77192D-06
542 4.13435D+01   1 2.98285D-07 1.05500D+00 0.0          0.0          0.0          2 1.62629D-07   25 8.92488D-01   25 6.31669D-01
  542     4.1344D+01    1 7.59523D+01    3 8.05080D+01    5 8.22192D+01   11 8.49158D+01   13 8.59210D+01
                    15 8.68592D+01   17 8.78583D+01   19 8.91021D+01   21 9.05655D+01   24 1.42872D+02
                    25 1.40398D+02
543 4.13853D+01   1 2.15370D-06 1.05500D+00 0.0          0.0          0.0
543 4.13853D+01   1 2.15370D-06 1.05500D+00 0.0          0.0          0.0          1 3.32110D-06
543 4.13853D+01   1 3.98282D-07 1.05500D+00 0.0          0.0          0.0          2 2.64545D-07   25 9.84250D-01   25 7.01042D-01
  543     4.1385D+01    1 7.59520D+01    3 8.05072D+01    5 8.22183D+01   11 8.49147D+01   13 8.59202D+01
                    15 8.68597D+01   17 8.78609D+01   19 8.91049D+01   21 9.05590D+01   24 1.41912D+02
                    25 1.39414D+02
544 4.14312D+01   1 2.90714D-06 1.05500D+00 0.0          0.0          0.0
544 4.14312D+01   1 2.90714D-06 1.05500D+00 0.0          0.0          0.0          1 3.91757D-06
544 4.14312D+01   1 5.81627D-07 1.05500D+00 0.0          0.0          0.0          2 2.63032D-07   25 1.08565D+00   25 7.78722D-01
  544     4.1431D+01    1 7.59517D+01    3 8.05064D+01    5 8.22173D+01   11 8.49135D+01   13 8.59194D+01
                    15 8.68604D+01   17 8.78638D+01   19 8.91079D+01   21 9.05516D+01   24 1.40854D+02
                    25 1.38328D+02
545 4.14818D+01   1 4.26840D-06 1.05500D+00 0.0          0.0          0.0
545 4.14818D+01   1 4.26840D-06 1.05500D+00 0.0          0.0          0.0          1 4.67830D-06
545 4.14818D+01   1 8.35911D-07 1.05500D+00 0.0          0.0          0.0          2 3.46118D-07   25 1.19798D+00   25 8.66046D-01
  545     4.1482D+01    1 7.59514D+01    3 8.05055D+01    5 8.22162D+01   11 8.49122D+01   13 8.59185D+01
                    15 8.68611D+01   17 8.78569D+01   19 8.91110D+01   21 9.05431D+01   24 1.39687D+02
                    25 1.37130D+02
546 4.15372D+01   1 1.60662D-06 1.05500D+00 0.0          0.0          0.0
546 4.15372D+01   1 1.60662D-06 1.05500D+00 0.0          0.0          0.0          1 4.06678D-06
546 4.15372D+01   1 1.15133D-07 1.05500D+00 0.0          0.0          0.0          2 1.42248D-07   25 1.31427D+00   25 9.38408D-01
  546     4.1537D+01    1 7.59510D+01    3 8.05045D+01    5 8.22150D+01   11 8.49107D+01   13 8.59176D+01
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                    15 8.68619D+01   17 8.78703D+01   19 8.91143D+01   21 9.05334D+01   24 1.38403D+02
                    25 1.35816D+02
547 4.15927D+01   1 2.58297D-05 1.05500D+00 0.0      0.0          0.0
547 4.15927D+01   2 2.00729D-06 1.05500D+00 0.0      0.0          0.0          1 7.91171D-06
547 4.15927D+01   1 1.65131D-06 1.05500D+00 0.0      0.0          0.0          2 5.01422D-07   25 1.29917D+00   25 9.56563D-01
      547    4.1593D+01    1 7.59507D+01   3 8.05035D+01   5 8.22138D+01   11 8.49093D+01   13 8.59167D+01
                    15 8.68628D+01   17 8.78737D+01   19 8.91174D+01   21 9.05233D+01   24 1.37119D+02
                    25 1.34517D+02
548 4.16481D+01   1 9.38866D-06 1.05500D+00 0.0      0.0          0.0
548 4.16481D+01   1 9.38866D-06 1.05500D+00 0.0      0.0          0.0          1 5.39767D-06
548 4.16481D+01   1 1.60624D-06 1.05500D+00 0.0      0.0          0.0          2 7.19511D-07   25 1.29287D+00   25 9.61119D-01
      548    4.1648D+01    1 7.59503D+01   3 8.05025D+01   5 8.22126D+01   11 8.49079D+01   13 8.59157D+01
                    15 8.68636D+01   17 8.78770D+01   19 8.91203D+01   21 9.05129D+01   24 1.35839D+02
                    25 1.33224D+02
549 4.17036D+01   1 3.27019D-06 1.05500D+00 0.0      0.0          0.0
549 4.17036D+01   1 3.27019D-06 1.05500D+00 0.0      0.0          0.0          1 4.07363D-06
549 4.17036D+01   1 6.51238D-07 1.05500D+00 0.0      0.0          0.0          2 3.60981D-07   25 1.29000D+00   25 9.68294D-01
      549    4.1704D+01    1 7.59500D+01   3 8.05015D+01   5 8.22115D+01   11 8.49066D+01   13 8.59148D+01
                    15 8.68644D+01   17 8.78803D+01   19 8.91230D+01   21 9.05020D+01   24 1.34562D+02
                    25 1.31931D+02
550 4.17590D+01   1 2.71981D-06 1.05500D+00 0.0      0.0          0.0
550 4.17590D+01   1 2.71981D-06 1.05500D+00 0.0      0.0          0.0          1 3.00405D-06
550 4.17590D+01   1 2.29172D-07 1.05500D+00 0.0      0.0          0.0          2 1.63687D-07   25 1.28911D+00   25 9.77084D-01
      550    4.1759D+01    1 7.59496D+01   3 8.05006D+01   5 8.22103D+01   11 8.49052D+01   13 8.59140D+01
                    15 8.68653D+01   17 8.78836D+01   19 8.91256D+01   21 9.04908D+01   24 1.33288D+02
                    25 1.30645D+02
551 4.18145D+01   1 1.98644D-06 1.05500D+00 0.0      0.0          0.0
551 4.18145D+01   1 1.98644D-06 1.05500D+00 0.0      0.0          0.0          1 2.26111D-06
551 4.18145D+01   1 2.15528D-07 1.05500D+00 0.0      0.0          0.0          2 1.50023D-07   25 1.28937D+00   25 9.86927D-01
      551    4.1814D+01    1 7.59493D+01   3 8.04996D+01   5 8.22092D+01   11 8.49038D+01   13 8.59131D+01
                    15 8.68662D+01   17 8.78868D+01   19 8.91280D+01   21 9.04792D+01   24 1.32016D+02
                    25 1.29355D+02
552 4.18699D+01   1 2.23889D-06 1.05500D+00 0.0      0.0          0.0
552 4.18699D+01   1 2.23889D-06 1.05500D+00 0.0      0.0          0.0          1 2.04091D-06
552 4.18699D+01   1 2.48809D-07 1.05500D+00 0.0      0.0          0.0          2 1.77586D-07   25 1.29031D+00   25 9.97491D-01
      552    4.1870D+01    1 7.59489D+01   3 8.04987D+01   5 8.22081D+01   11 8.49025D+01   13 8.59123D+01
                    15 8.68671D+01   17 8.78900D+01   19 8.91302D+01   21 9.04672D+01   24 1.30745D+02
                    25 1.28065D+02
553 4.19253D+01   1 2.71560D-06 1.05500D+00 0.0      0.0          0.0
553 4.19253D+01   1 2.71560D-06 1.05500D+00 0.0      0.0          0.0          1 1.84167D-06
553 4.19253D+01   1 4.11514D-07 1.05500D+00 0.0      0.0          0.0          2 2.01431D-07   25 1.29168D+00   25 1.00861D+00
553 4.19221D+01   1 5.88026D-06 1.05500D+00 0.0      0.0          0.0
553 4.19221D+01   1 5.88026D-06 1.05500D+00 0.0      0.0          0.0          1 1.30374D-06
553 4.19221D+01   1 9.16811D-07 1.05500D+00 0.0      0.0          0.0          2 3.37770D-07   25 1.29021D+00   25 9.52802D-01
      553    4.1922D+01    1 7.59486D+01   3 8.04978D+01   5 8.22070D+01   11 8.49013D+01   13 8.59115D+01
                    15 8.68679D+01   17 8.78929D+01   19 8.91322D+01   21 9.04556D+01   24 1.29548D+02
                    25 1.26845D+02
554 4.19611D+01   1 1.44055D-05 1.05500D+00 0.0      0.0          0.0
554 4.19611D+01   2 1.35861D-06 1.05500D+00 0.0      0.0          0.0          1 5.42734D-06
554 4.19611D+01   1 6.59177D-07 1.05500D+00 0.0      0.0          0.0          2 2.92085D-07   25 9.21939D-01   25 7.26824D-01
      554    4.1961D+01    1 7.59484D+01   3 8.04972D+01   5 8.22063D+01   11 8.49004D+01   13 8.59109D+01
                    15 8.68685D+01   17 8.78951D+01   19 8.91335D+01   21 9.04467D+01   24 1.28653D+02
                    25 1.25923D+02
555 4.20000D+01   1 5.74405D-06 1.05500D+00 0.0      0.0          0.0
555 4.20000D+01   1 5.74405D-06 1.05500D+00 0.0      0.0          0.0          1 2.73925D-06
555 4.20000D+01   1 6.77665D-07 1.05500D+00 0.0      0.0          0.0          2 3.21597D-07   25 9.18932D-01   25 7.29329D-01
      555    4.2000D+01    1 7.59481D+01   3 8.04965D+01   5 8.22055D+01   11 8.48994D+01   13 8.59104D+01
                    15 8.68692D+01   17 8.78973D+01   19 8.91348D+01   21 9.04377D+01   24 1.27756D+02
                    25 1.25005D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

I3M3033/ 0
20.58.11 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 555 TIME STEPS, TIME = 4.200000D+01

GROSS GRID	FINE GRID	DISTANCE	
			1
			1
			1
		DISTANCE	0.0
1	1	0.0	75195
	2	0.03	78122
2	3	0.06	80150
	4	0.08	81135
3	5	0.10	82121
	6	0.57	82167
	7	1.04	83113
	8	1.51	83158
	9	1.98	84103
	10	2.45	84147
4	11	2.92	84190
	12	3.14	85142
5	13	3.35	85191
	14	3.57	86139
6	15	3.79	86187
	16	4.01	87136
7	17	4.23	87190
	18	4.45	88149
8	19	4.67	89113
	20	4.89	89181
9	21	5.10	90144
	22	5.18	106145
	23	5.25	119177
10	24	5.32	127176
11	25	5.35	125100

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.89380005D-02

ELAPSED CPU TIME IS 6.68 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.27756D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.59481D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
556	4.20389D+		4.74678D-07	1.05500D+00	0.0	0.0	0.0				
556	4.20389D+0	1	4.74678D-07	1.05500D+00	0.0	0.0	0.0	1	1.40142D-06		
556	4.20389D+01	1	7.72265D-08	1.05500D+00	0.0	0.0	0.0	2	5.49632D-08	25 9.19073D-01	25 7.35232D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
21556	4.2039D+01	1 7.59479D+01	3 8.04959D+01	5 8.22047D+01	11 8.48985D+01	13 8.59098D+01
		15 8.68698D+01	17 8.78994D+01	19 8.91359D+01	21 9.04285D+01	24 1.26857D+02
		25 1.24085D+02				

557	4.20779D+01	1	8.31165D-07	1.05500D+00	0.0	0.0	0.0				
557	4.20779D+01	1	8.31165D-07	1.05500D+00	0.0	0.0	0.0	1	1.50507D-06		
557	4.20779D+01	1	1.60076D-07	1.05500D+00	0.0	0.0	0.0	2	8.94114D-08	25 9.20259D-01	25 7.41633D-01
21557	4.2078D+01		1 7.59476D+01	3 8.04952D+01		5 8.22040D+01		11 8.48976D+01		13 8.59093D+01	
			15 8.68705D+01	17 8.79015D+01		19 8.91370D+01		21 9.04191D+01		24 1.25957D+02	
			25 1.23165D+02								

558	4.21207D+01	1	3.11245D-06	1.05500D+00	0.0	0.0	0.0				
558	4.21207D+01	1	3.11245D-06	1.05500D+00	0.0	0.0	0.0	1	1.88044D-06		
558	4.21207D+01	1	3.84350D-07	1.05500D+00	0.0	0.0	0.0	2	2.00842D-07	25 1.01051D+00	25 8.20448D-01
21558	4.2121D+01		1 7.59474D+01	3 8.04946D+01		5 8.22031D+01		11 8.48967D+01		13 8.59087D+01	
			15 8.68712D+01	17 8.79039D+01		19 8.91381D+01		21 9.04086D+01		24 1.24966D+02	
			25 1.22155D+02								

559	4.21678D+01	1	1.01924D-06	1.05500D+00	0.0	0.0	0.0				
559	4.21678D+01	1	1.01924D-06	1.05500D+00	0.0	0.0	0.0	1	1.34815D-06		
559	4.21678D+01	1	1.08094D-07	1.05500D+00	0.0	0.0	0.0	2	7.45044D-08	25 1.11116D+00	25 9.09630D-01
21559	4.2168D+01		1 7.59471D+01	3 8.04938D+01		5 8.22022D+01		11 8.48956D+01		13 8.59080D+01	
			15 8.68720D+01	17 8.79064D+01		19 8.91391D+01		21 9.03968D+01		24 1.23875D+02	
			25 1.21044D+02								

560	4.22170D+01	1	5.06337D-06	1.05500D+00	0.0	0.0	0.0				
560	4.22170D+01	1	5.06337D-06	1.05500D+00	0.0	0.0	0.0	1	2.40386D-06		
560	4.22170D+01	1	7.50806D-07	1.05500D+00	0.0	0.0	0.0	2	3.23338D-07	25 1.16380D+00	25 9.61469D-01
21560	4.2217D+01		1 7.59468D+01	3 8.04930D+01		5 8.22013D+01		11 8.48945D+01		13 8.59074D+01	
			15 8.68728D+01	17 8.79089D+01		19 8.91401D+01		21 9.03843D+01		24 1.22734D+02	
			25 1.19880D+02								

561	4.22662D+01	1	8.44825D-06	1.05500D+00	0.0	0.0	0.0				
561	4.22662D+01	1	8.44825D-06	1.05500D+00	0.0	0.0	0.0	1	3.48303D-06		
561	4.22662D+01	1	1.31896D-06	1.05500D+00	0.0	0.0	0.0	2	5.31092D-07	25 1.16935D+00	25 9.75436D-01
21561	4.2266D+01		1 7.59466D+01	3 8.04922D+01		5 8.22004D+01		11 8.48934D+01		13 8.59067D+01	
			15 8.68736D+01	17 8.79115D+01		19 8.91409D+01		21 9.03714D+01		24 1.21591D+02	
			25 1.18710D+02								

562	4.23154D+01	1	6.38790D-06	1.05500D+00	0.0	0.0	0.0				
562	4.23154D+01	1	6.38790D-06	1.05500D+00	0.0	0.0	0.0	1	3.51737D-06		
562	4.23154D+01	1	1.10107D-06	1.05500D+00	0.0	0.0	0.0	2	4.58175D-07	25 1.17390D+00	25 9.88875D-01
21562	4.2315D+01		1 7.59463D+01	3 8.04915D+01		5 3.21995D+01		11 8.48924D+01		13 8.59061D+01	
			15 8.68745D+01	17 8.79140D+01		19 8.91416D+01		21 9.03584D+01		24 1.20446D+02	
			25 1.17537D+02								

563	4.23646D+01	1	5.58428D-06	1.05500D+00	0.0	0.0	0.0				
563	4.23646D+01	1	5.58428D-06	1.05500D+00	0.0	0.0	0.0	1	3.63749D-06		
563	4.23646D+01	1	1.00593D-06	1.05500D+00	0.0	0.0	0.0	2	4.30910D-07	25 1.17809D+00	25 1.00232D+00
563	4.23621D+01	1	4.14346D-06	1.05500D+00	0.0	0.0	0.0				
563	4.23621D+01	1	4.14346D-06	1.05500D+00	0.0	0.0	0.0	1	1.05621D-06		
563	4.23621D+01	1	5.56118D-07	1.05500D+00	0.0	0.0	0.0	2	2.32659D-07	25 1.11921D+00	25 9.52227D-01
563	4.2362D+01		1 7.59460D+01	3 8.04907D+01		5 8.21986D+01		11 8.48914D+01		13 8.59055D+01	
			15 8.68753D+01	17 8.79164D+01		19 8.91421D+01		21 9.03457D+01		24 1.19356D+02	
			25 1.16417D+02								

564	4.24087D+01	1	2.45906D-06	1.05500D+00	0.0	0.0	0.0				
564	4.24087D+01	1	2.45906D-06	1.05500D+00	0.0	0.0	0.0	1	3.27896D-06		
564	4.24087D+01	1	5.70354D-07	1.05500D+00	0.0	0.0	0.0	2	2.76884D-07	25 1.12187D+00	25 9.63663D-01
564	4.2409D+01		1 7.59457D+01	3 8.04900D+01		5 8.21978D+01		11 8.48904D+01		13 8.59050D+01	
			15 8.68761D+01	17 8.79187D+01		19 8.91425D+01		21 9.03329D+01		24 1.18264D+02	
			25 1.15295D+02								

565	4.24554D+01	1	3.33694D-06	1.05500D+00	0.0	0.0	0.0				

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565 4.24554D+01    1 3.33694D-06 1.05500D+00 0.0                    0.0          0.0          1 3.41882D-06
565 4.24554D+01    1 6.68396D-07 1.05500D+00 0.0                    0.0          0.0          2 3.12587D-07   25 1.12496D+00   25 9.75716D-01
565      4.2455D+01    1 7.59455D+01    3 8.04893D+01                5 8.21969D+01   11 8.48894D+01   13 8.59044D+01
                      15 8.68769D+01   17 8.79209D+01                19 8.91427D+01   21 9.03198D+01   24 1.17167D+02
                      25 1.14170D+02

566 4.25020D+01    1 4.13604D-06 1.05500D+00 0.0                    0.0          0.0          1 3.62253D-06
566 4.25020D+01    1 4.13604D-06 1.05500D+00 0.0                    0.0          0.0          2 3.51600D-07   25 1.12848D+00   25 9.88415D-01
566 4.25020D+01    1 7.66079D-07 1.05500D+00 0.0                    0.0          0.0
566      4.2502D+01    1 7.59452D+01    3 8.04886D+01                5 8.21961D+01   11 8.48884D+01   13 8.59039D+01
                      15 8.68777D+01   17 8.79232D+01                19 8.91429D+01   21 9.03065D+01   24 1.16067D+02
                      25 1.13042D+02

567 4.25486D+01    1 3.38215D-05 1.05500D+00 0.0                    0.0          0.0          1 9.08428D-06
567 4.25486D+01    2 2.87248D-06 1.05500D+00 0.0                    0.0          0.0          2 6.23796D-07   25 1.10855D+00   25 9.80656D-01
567 4.25486D+01    1 1.65847D-06 1.05500D+00 0.0                    0.0          0.0
567      4.2549D+01    1 7.59450D+01    3 8.04879D+01                5 8.21953D+01   11 8.48874D+01   13 8.59033D+01
                      15 8.68785D+01   17 8.79254D+01                19 8.91429D+01   21 9.02930D+01   24 1.14968D+02
                      25 1.11933D+02

568 4.25953D+01    1 4.90271D-05 1.05500D+00 0.0                    0.0          0.0          1 1.56576D-05
568 4.25953D+01    2 4.37224D-06 1.05500D+00 0.0                    0.0          0.0          2 9.41693D-07   24 1.09219D+00   25 9.62751D-01
568 4.25953D+01    1 2.52428D-06 1.05500D+00 0.0                    0.0          0.0
568      4.2595D+01    1 7.59447D+01    3 8.04872D+01                5 8.21945D+01   11 8.48865D+01   13 8.59028D+01
                      15 8.68793D+01   17 8.79275D+01                19 8.91427D+01   21 9.02793D+01   24 1.13876D+02
                      25 1.10856D+02

569 4.26419D+01    1 2.57187D-05 1.05500D+00 0.0                    0.0          0.0          1 1.23310D-05
569 4.26419D+01    2 2.54297D-06 1.05500D+00 0.0                    0.0          0.0          2 5.66295D-07   24 1.08008D+00   25 9.55215D-01
569 4.26419D+01    1 1.56198D-06 1.05500D+00 0.0                    0.0          0.0
569      4.2642D+01    1 7.59445D+01    3 8.04866D+01                5 8.21936D+01   11 8.48856D+01   13 8.59023D+01
                      15 8.68802D+01   17 8.79296D+01                19 8.91425D+01   21 9.02653D+01   24 1.12796D+02
                      25 1.09797D+02

570 4.26885D+01    1 1.50354D-05 1.05500D+00 0.0                    0.0          0.0          1 1.08550D-05
570 4.26885D+01    2 1.66983D-06 1.05500D+00 0.0                    0.0          0.0          2 3.76672D-07   24 1.06702D+00   25 9.52767D-01
570 4.26885D+01    1 1.06324D-06 1.05500D+00 0.0                    0.0          0.0
570      4.2689D+01    1 7.59442D+01    3 8.04859D+01                5 8.21928D+01   11 8.48846D+01   13 8.59018D+01
                      15 8.68810D+01   17 8.79317D+01                19 8.91421D+01   21 9.02512D+01   24 1.11729D+02
                      25 1.08751D+02

571 4.27352D+01    1 9.86965D-06 1.05500D+00 0.0                    0.0          0.0          1 9.34225D-06
571 4.27352D+01    1 9.86965D-06 1.05500D+00 0.0                    0.0          0.0          2 1.03343D-06   24 1.05452D+00   25 9.53138D-01
571 4.27352D+01    1 2.11351D-06 1.05500D+00 0.0                    0.0          0.0
571      4.2735D+01    1 7.59440D+01    3 8.04852D+01                5 8.21921D+01   11 8.48837D+01   13 8.59013D+01
                      15 8.68818D+01   17 8.79338D+01                19 8.91415D+01   21 9.02368D+01   24 1.10674D+02
                      25 1.07714D+02

572 4.27818D+01    1 7.22996D-06 1.05500D+00 0.0                    0.0          0.0          1 8.47903D-06
572 4.27818D+01    1 7.22996D-06 1.05500D+00 0.0                    0.0          0.0          2 8.36349D-07   24 1.04343D+00   25 9.55260D-01
572 4.27818D+01    1 1.66141D-06 1.05500D+00 0.0                    0.0          0.0
572      4.2782D+01    1 7.59437D+01    3 8.04846D+01                5 8.21913D+01   11 8.48828D+01   13 8.59008D+01
                      15 8.68826D+01   17 8.79358D+01                19 8.91409D+01   21 9.02222D+01   24 1.09631D+02
                      25 1.06685D+02

573 4.28285D+01    1 5.77510D-06 1.05500D+00 0.0                    0.0          0.0          1 7.94716D-06
573 4.28285D+01    1 5.77510D-06 1.05500D+00 0.0                    0.0          0.0          2 7.14254D-07   24 1.03362D+00   25 9.58545D-01
573 4.28285D+01    1 1.41468D-06 1.05500D+00 0.0                    0.0          0.0
573      4.2828D+01    1 7.59435D+01    3 8.04839D+01                5 8.21905D+01   11 8.48819D+01   13 8.59003D+01
                      15 8.68834D+01   17 8.79377D+01                19 8.91401D+01   21 9.02074D+01   24 1.08597D+02
                      25 1.05663D+02

574 4.28751D+01    1 4.41266D-06 1.05500D+00 0.0                    0.0          0.0          1 7.33965D-06
574 4.28751D+01    1 4.41266D-06 1.05500D+00 0.0                    0.0          0.0          2 5.87349D-07   24 1.02508D+00   25 9.62946D-01
574 4.28751D+01    1 1.14214D-06 1.05500D+00 0.0                    0.0          0.0
574      4.2875D+01    1 7.59433D+01    3 8.04832D+01                5 8.21897D+01   11 8.48810D+01   13 8.58999D+01
                      15 8.68843D+01   17 8.79396D+01                19 8.91392D+01   21 9.01924D+01   24 1.07572D+02
                      25 1.04645D+02

575 4.29217D+01    1 3.51527D-06 1.05500D+00 0.0                    0.0          0.0          1 6.77636D-06
575 4.29217D+01    1 3.51527D-06 1.05500D+00 0.0                    0.0          0.0          2 4.92877D-07   24 1.01769D+00   25 9.68233D-01
575 4.29217D+01    1 9.58811D-07 1.05500D+00 0.0                    0.0          0.0
575      4.2922D+01    1 7.59430D+01    3 8.04826D+01                5 8.21890D+01   11 8.48801D+01   13 8.58994D+01
                      15 8.68851D+01   17 8.79415D+01                19 8.91381D+01   21 9.01773D+01   24 1.06554D+02
                      25 1.03632D+02

576 4.29609D+01    1 7.55105D-06 1.05500D+00 0.0                    0.0          0.0
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576 4.29609D+01     1 7.55105D-06 1.05500D+00 0.0          0.0          0.0          1 5.08976D-06
576 4.29609D+01     1 7.76675D-07 1.05500D+00 0.0          0.0          0.0          2 4.74139D-07   25 8.53557D-01   25 8.23643D-01
  576     4.29610D+01     1 7.59428D+01     3 8.04821D+01     5 8.21887D+01    11 8.48794D+01    13 8.58991D+01
                          15 8.68858D+01    17 8.79430D+01    19 8.91371D+01    21 9.01644D+01    24 1.05704D+02
                          25 1.02778D+02

577 4.30000D+01     1 4.57281D-06 1.05500D+00 0.0          0.0          0.0          1 4.40795D-06
577 4.30000D+01     1 4.57281D-06 1.05500D+00 0.0          0.0          0.0          2 3.70775D-07   25 8.49504D-01   25 8.26539D-01
577 4.30000D+01     1 7.76777D-07 1.05500D+00 0.0          0.0          0.0
  577     4.30000D+01     1 7.59426D+01     3 8.04815D+01     5 8.21877D+01    11 8.48787D+01    13 8.58987D+01
                          15 8.68865D+01    17 8.79446D+01    19 8.91361D+01    21 9.01514D+01    24 1.04857D+02
                          25 1.01929D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.12 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 577 TIME STEPS, TIME = 4.300000D+01

GROSS GRID			1
			I
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	75184
	2	0.03	78121
2	3	0.06	80148
	4	0.08	81134
3	5	0.10	82119
	6	0.57	82165
	7	1.04	83111
	8	1.51	83156
	9	1.98	84100
	10	2.45	84144
4	11	2.92	84188
	12	3.14	85140
5	13	3.35	85190
	14	3.57	86139
6	15	3.79	86189
	16	4.01	87140
7	17	4.23	87194
	18	4.45	88153
8	19	4.67	89114
	20	4.89	89172
9	21	5.10	90115
	22	5.18	98161
	23	5.25	104135
10	24	5.32	104186
11	25	5.35	101193

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	92.730000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.91357474D-02

ELAPSED CPU TIME IS 6.91 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.04857D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.59426D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
578	4.30430D+01	1	5.92895D-06	1.05500D+00	0.0	0.0	0.0				
578	4.30430D+01	1	5.92895D-06	1.05500D+00	0.0	0.0	0.0	1	5.13477D-06		
578	4.30430D+01	1	9.99452D-07	1.05500D+00	0.0	0.0	0.0	2	4.56906D-07	25 9.29785D-01	25 9.12190D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
578	4.3043D+01	1 7.59424D+01	3 8.04810D+01	5 8.21870D+01	11 8.48779D+01	13 8.58983D+01	
		15 8.68872D+01	17 8.79462D+01	19 8.91348D+01	21 9.01369D+01	24 1.03929D+02	
		25 1.00999D+02					
579	4.30879D+01	1 1.31163D-06	1.05500D+00	0.0	0.0	0.0	
579	4.30879D+01	1 1.31163D-06	1.05500D+00	0.0	0.0	1 4.18203D-06	
579	4.30879D+01	1 2.73835D-07	1.05500D+00	0.0	0.0	2 1.59974D-07	25 9.66886D-01 25 9.57321D-01
579	4.3088D+01	1 7.59422D+01	3 8.04804D+01	5 8.21863D+01	11 8.48771D+01	13 8.58979D+01	
		15 8.68880D+01	17 8.79478D+01	19 8.91333D+01	21 9.01217D+01	24 1.02967D+02	
		25 1.00032D+02					
580	4.31327D+01	1 2.78782D-06	1.05500D+00	0.0	0.0	0.0	
580	4.31327D+01	1 2.78782D-06	1.05500D+00	0.0	0.0	1 3.55837D-06	
580	4.31327D+01	1 1.90715D-07	1.05500D+00	0.0	0.0	2 1.79171D-07	25 9.67427D-01 25 9.67115D-01
580	4.3133D+01	1 7.59420D+01	3 8.04798D+01	5 8.21857D+01	11 8.48763D+01	13 8.58975D+01	
		15 8.68888D+01	17 8.79494D+01	19 8.91317D+01	21 9.01063D+01	24 1.02007D+02	
		25 9.90648D+01					
581	4.31776D+01	1 1.86576D-06	1.05500D+00	0.0	0.0	0.0	
581	4.31776D+01	1 1.86576D-06	1.05500D+00	0.0	0.0	1 3.00852D-06	
581	4.31776D+01	1 1.38165D-07	1.05500D+00	0.0	0.0	2 1.37275D-07	25 9.67745D-01 25 9.76881D-01
581	4.3178D+01	1 7.59418D+01	3 8.04792D+01	5 8.21850D+01	11 8.48755D+01	13 8.58971D+01	
		15 8.68896D+01	17 8.79510D+01	19 8.91300D+01	21 9.00908D+01	24 1.01049D+02	
		25 9.80971D+01					
582	4.32224D+01	1 1.26699D-06	1.05500D+00	0.0	0.0	0.0	
582	4.32224D+01	1 1.26699D-06	1.05500D+00	0.0	0.0	1 2.58553D-06	
582	4.32224D+01	1 8.17288D-08	1.05500D+00	0.0	0.0	2 1.14163D-07	25 9.67966D-01 25 9.86743D-01
582	4.3222D+01	1 7.59416D+01	3 8.04786D+01	5 8.21843D+01	11 8.48748D+01	13 8.58968D+01	
		15 8.68904D+01	17 8.79525D+01	19 8.91282D+01	21 9.00752D+01	24 1.00092D+02	
		25 9.71291D+01					
583	4.32672D+01	1 1.54407D-05	1.05500D+00	0.0	0.0	0.0	
583	4.32672D+01	2 1.33771D-06	1.05500D+00	0.0	0.0	1 5.52575D-06	
583	4.32672D+01	1 6.56928D-07	1.05500D+00	0.0	0.0	2 2.68489D-07	25 9.76221D-01 25 1.00508D+00
583	4.32648D+01	1 3.02069D-06	1.05500D+00	0.0	0.0	0.0	
583	4.32648D+01	1 3.02069D-06	1.05500D+00	0.0	0.0	1 8.69161D-07	
583	4.32648D+01	1 4.16367D-07	1.05500D+00	0.0	0.0	2 1.80393D-07	25 9.24473D-01 25 9.51798D-01
583	4.3265D+01	1 7.59414D+01	3 8.04781D+01	5 8.21837D+01	11 8.48740D+01	13 8.58964D+01	
		15 8.68911D+01	17 8.79539D+01	19 8.91264D+01	21 9.00602D+01	24 9.91881D+01	
		25 9.62046D+01					
584	4.33071D+01	1 1.60369D-05	1.05500D+00	0.0	0.0	0.0	
584	4.33071D+01	2 1.50905D-06	1.05500D+00	0.0	0.0	1 6.95817D-06	
584	4.33071D+01	1 6.79900D-07	1.05500D+00	0.0	0.0	2 2.93805D-07	25 9.34422D-01 25 9.71285D-01
584	4.3307D+01	1 7.59412D+01	3 8.04776D+01	5 8.21830D+01	11 8.48733D+01	13 8.58961D+01	
		15 8.68918D+01	17 8.79553D+01	19 8.91245D+01	21 9.00452D+01	24 9.82808D+01	
		25 9.52702D+01					
585	4.33495D+01	1 1.04221D-05	1.05500D+00	0.0	0.0	0.0	
585	4.33495D+01	2 1.06524D-06	1.05500D+00	0.0	0.0	1 6.10721D-06	
585	4.33495D+01	1 5.20316D-07	1.05500D+00	0.0	0.0	2 2.16759D-07	25 9.41688D-01 25 9.88438D-01
585	4.3350D+01	1 7.59410D+01	3 8.04770D+01	5 8.21824D+01	11 8.48726D+01	13 8.58958D+01	
		15 8.68925D+01	17 8.79566D+01	19 8.91224D+01	21 9.00300D+01	24 9.73691D+01	
		25 9.43285D+01					
586	4.33919D+01	1 7.68267D-06	1.05500D+00	0.0	0.0	0.0	
586	4.33919D+01	1 7.68267D-06	1.05500D+00	0.0	0.0	1 5.40761D-06	
586	4.33919D+01	1 1.37731D-06	1.05500D+00	0.0	0.0	2 6.65446D-07	25 9.47561D-01 25 1.00453D+00
586	4.33896D+01	1 3.25557D-06	1.05500D+00	0.0	0.0	0.0	
586	4.33896D+01	1 3.25557D-06	1.05500D+00	0.0	0.0	1 1.00802D-06	
586	4.33896D+01	1 4.26148D-07	1.05500D+00	0.0	0.0	2 1.95695D-07	25 9.98016D-01 25 9.52009D-01
586	4.3390D+01	1 7.59		3 8.04765D+01	5 8.21818D+01	11 8.48720D+01	13 8.58955D+01

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                    15 8.68932D+01   17 8.79578D+01   19 8.91204D+01   21 9.00155D+01   24 9.65023D+01
                    25 9.34305D+01
587 4.34297D+01   1 3.74574D-06 1.05500D+00 0.0          0.0          0.0
587 4.34297D+01   1 3.74574D-06 1.05500D+00 0.0          0.0          0.0              1 4.25440D-06
587 4.34297D+01   1 8.13638D-07 1.05500D+00 0.0          0.0          0.0              2 4.35338D-07   25 9.01924D-01   25 9.65342D-01
  587     4.3430D+01     1 7.59406D+01     3 8.04761D+01   5 8.21813D+01   11 8.48713D+01   13 8.58952D+01
                    15 8.68939D+01   17 8.79590D+01   19 8.91183D+01   21 9.00009D+01   24 9.56306D+01
                    25 9.25286D+01
588 4.34697D+01   1 5.57309D-05 1.05500D+00 0.0          0.0          0.0
588 4.34697D+01   2 5.00667D-06 1.05500D+00 0.0          0.0          0.0              1 1.54392D-05
588 4.34697D+01   1 2.01939D-06 1.05500D+00 0.0          0.0          0.0              2 9.50228D-07   24 8.71433D-01   25 9.40451D-01
  588     4.3470D+01     1 7.59404D+01     3 8.04756D+01   5 8.21807D+01   11 8.48707D+01   13 8.58949D+01
                    15 8.68946D+01   17 8.79602D+01   19 8.91161D+01   21 8.99862D+01   24 9.47592D+01
                    25 9.16584D+01
589 4.35098D+01   1 2.20328D-04 1.05500D+00 0.0          0.0          0.0
589 4.35098D+01   3 1.65265D-06 1.05500D+00 0.0          0.0          0.0              1 7.05810D-05
589 4.35098D+01   1 9.73417D-06 1.05500D+00 0.0          0.0          0.0              2 2.86661D-06   24 8.50070D-01   24 8.97084D-01
  589     4.3510D+01     1 7.59402D+01     3 8.04751D+01   5 8.21801D+01   11 8.48700D+01   13 8.58946D+01
                    15 8.68953D+01   17 8.79613D+01   19 8.91138D+01   21 8.99714D+01   24 9.39091D+01
                    25 9.09201D+01
590 4.35499D+01   1 1.27466D-04 1.05500D+00 0.0          0.0          0.0
590 4.35499D+01   3 9.60496D-07 1.05500D+00 0.0          0.0          0.0              1 6.07516D-05
590 4.35499D+01   1 6.46464D-06 1.05500D+00 0.0          0.0          0.0              2 1.89009D-06   24 8.07483D-01   24 8.59856D-01
  590     4.3550D+01     1 7.59401D+01     3 8.04746D+01   5 8.21796D+01   11 8.48694D+01   13 8.58943D+01
                    15 8.68959D+01   17 8.79623D+01   19 8.91114D+01   21 8.99566D+01   24 9.31016D+01
                    25 9.02698D+01
591 4.35940D+01   1 1.07995D-04 1.05500D+00 0.0          0.0          0.0
591 4.35940D+01   3 8.74724D-07 1.05500D+00 0.0          0.0          0.0              1 6.51140D-05
591 4.35940D+01   1 6.59118D-06 1.05500D+00 0.0          0.0          0.0              2 1.74571D-06   24 8.29455D-01   24 8.90913D-01
  591     4.3594D+01     1 7.59399D+01     3 8.04741D+01   5 8.21790D+01   11 8.48687D+01   13 8.58940D+01
                    15 8.68967D+01   17 8.79635D+01   19 8.91087D+01   21 8.99400D+01   24 9.22722D+01
                    25 8.96266D+01
592 4.36410D+01   1 9.21392D-05 1.05500D+00 0.0          0.0          0.0
592 4.36410D+01   3 7.89188D-07 1.05500D+00 0.0          0.0          0.0              1 6.93564D-05
592 4.36410D+01   1 6.48632D-06 1.05500D+00 0.0          0.0          0.0              2 1.60513D-06   24 8.15505D-01   24 8.83804D-01
  592     4.3641D+01     1 7.59397D+01     3 8.04736D+01   5 8.21783D+01   11 8.48680D+01   13 8.58937D+01
                    15 8.68974D+01   17 8.79646D+01   19 8.91056D+01   21 8.99223D+01   24 9.14567D+01
                    25 8.90071D+01
593 4.36915D+01   1 9.03077D-05 1.05500D+00 0.0          0.0          0.0
593 4.36915D+01   3 8.18108D-07 1.05500D+00 0.0          0.0          0.0              1 7.52562D-05
593 4.36915D+01   1 7.03670D-06 1.05500D+00 0.0          0.0          0.0              2 1.61686D-06   24 8.01324D-01   24 8.76179D-01
  593     4.3692D+01     1 7.59395D+01     3 8.04730D+01   5 8.21777D+01   11 8.48673D+01   13 8.58934D+01
                    15 8.68983D+01   17 8.79658D+01   19 8.91022D+01   21 8.99031D+01   24 9.06553D+01
                    25 8.84028D+01
594 4.37463D+01   1 9.78584D-05 1.05500D+00 0.0          0.0          0.0
594 4.37463D+01   3 9.33342D-07 1.05500D+00 0.0          0.0          0.0              1 8.31242D-05
594 4.37463D+01   1 8.14217D-06 1.05500D+00 0.0          0.0          0.0              2 1.72462D-06   24 7.88311D-01   24 8.69569D-01
  594     4.3746D+01     1 7.59393D+01     3 8.04724D+01   5 8.21770D+01   11 8.48664D+01   13 8.58931D+01
                    15 8.68992D+01   17 8.79670D+01   19 8.90984D+01   21 8.98822D+01   24 8.98670D+01
                    25 8.78088D+01
595 4.38062D+01   1 1.13628D-04 1.05500D+00 0.0          0.0          0.0
595 4.38062D+01   3 1.13232D-06 1.05500D+00 0.0          0.0          0.0              1 9.29694D-05
595 4.38062D+01   1 9.79533D-06 1.05500D+00 0.0          0.0          0.0              2 1.90053D-06   24 7.75657D-01   24 8.63116D-01
  595     4.3806D+01     1 7.59390D+01     3 8.04717D+01   5 8.21762D+01   11 8.48656D+01   13 8.58927D+01
                    15 8.69001D+01   17 8.79683D+01   19 8.90940D+01   21 8.98591D+01   24 8.90914D+01
                    25 8.72227D+01
596 4.38720D+01   1 1.35031D-04 1.05500D+00 0.0          0.0          0.0
596 4.38720D+01   3 1.39578D-06 1.05500D+00 0.0          0.0          0.0              1 1.04318D-04
596 4.38720D+01   2 9.22557D-07 1.05500D+00 0.0          0.0          0.0              2 2.45651D-06   24 7.63476D-01   24 8.56958D-01
  596     4.3872D+01     1 7.59388D+01     3 8.04710D+01   5 8.21753D+01   11 8.48646D+01   13 8.58923D+01
                    15 8.69012D+01   17 8.79696D+01   19 8.90889D+01   21 8.98336D+01   24 8.83279D+01
                    25 8.66435D+01
597 4.39360D+01   1 1.02093D-04 1.05500D+00 0.0          0.0          0.0
597 4.39360D+01   3 1.06811D-06 1.05500D+00 0.0          0.0          0.0              1 9.50486D-05
597 4.39360D+01   1 9.42690D-06 1.05500D+00 0.0          0.0          0.0              2 1.70652D-06   23 6.74516D-01   24 7.49951D-01
  597     4.3936D+01     1 7.59385D+01     3 8.04703D+01   5 8.21745D+01   11 8.48637D+01   13 8.58920D+01
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                        15 8.69022D+01   17 8.79707D+01   19 8.90837D+01   21 8.98088D+01   24 8.76655D+01
                        25 8.61336D+01
598 4.40000D+01     1 9.70704D-05 1.05500D+00 0.0          0.0          0.0
598 4.40000D+01     2 9.55450D-06 1.05500D+00 0.0          0.0          0.0                1 8.67098D-05
598 4.40000D+01     1 8.14806D-06 1.05500D+00 0.0          0.0          0.0                2 2.05985D-06   23 6.24341D-01   23 6.82645D-01
  598      4.40000D+01     1 7.59383D+01    3 8.04696D+01    5 8.21738D+01   11 8.48629D+01   13 8.58917D+01
                        15 8.69031D+01   17 8.79718D+01   19 8.90783D+01   21 8.97839D+01   24 8.70696D+01
                        25 8.56717D+01
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HEATING6 02/12/83 OPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.12 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 598 TIME STEPS, TIME = 4.400000+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75194
	2	0.03	78120
2	3	0.06	80147
	4	0.08	81132
3	5	0.10	82117
	6	0.57	82163
	7	1.04	83109
	8	1.51	83154
	9	1.98	83198
	10	2.45	84143
4	11	2.92	84186
	12	3.14	85138
5	13	3.35	85189
	14	3.57	86140
6	15	3.79	86190
	16	4.01	87143
7	17	4.23	87197
	18	4.45	88153
8	19	4.67	89108
	20	4.89	89154
9	21	5.10	89178
	22	5.18	91133
	23	5.25	90183
10	24	5.32	87107
11	25	5.35	85167

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 6.40021558D-02

ELAPSED CPU TIME IS 7.15 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.13301D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 22

THE MINIMUM TEMPERATURE IS - 7.59383D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
599	4.40704D+01	1	1.04797D-04	1.05500D+00	0.0	0.0	0.0						
599	4.40704D+01	2	9.57157D-06	1.05500D+00	0.0	0.0	0.0	1	9.02910D-05				
599	4.40704D+01	1	9.39400D-06	1.05500D+00	0.0	0.0	0.0	2	2.14914D-06	23	6.31937D-01	23	6.95700D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
599	4.4070D+01	1 7.59380D+01	3 8.04689D+01	5 8.21729D+01	11 8.48619D+01	13 8.58913D+01	
		15 8.69042D+01	17 8.79728D+01	19 8.90722D+01	21 8.97567D+01	24 8.64104D+01	
		25 8.52097D+01					
600	4.41478D+01	1 1.25960D-04	1.05500D+00	0.0	0.0	0.0	
600	4.41478D+01	3 1.37264D-06	1.05500D+00	0.0	0.0	0.0	1 9.86289D-05
600	4.41478D+01	2 1.04114D-06	1.05500D+00	0.0	0.0	0.0	2 2.15709D-06 23 6.33357D-01 23 7.02148D-01
600	4.4148D+01	1 7.59377D+01	3 8.04681D+01	5 8.21720D+01	11 8.48609D+01	13 8.58909D+01	
		15 8.69053D+01	17 8.79738D+01	19 8.90651D+01	21 8.97268D+01	24 8.59001D+01	
		25 8.47496D+01					
601	4.42330D+01	1 1.45791D-04	1.05500D+00	0.0	0.0	0.0	
601	4.42330D+01	3 1.59640D-06	1.05500D+00	0.0	0.0	0.0	1 1.06728D-04
601	4.42330D+01	2 1.33871D-06	1.05500D+00	0.0	0.0	0.0	2 2.40351D-06 23 6.28368D-01 23 7.01543D-01
601	4.4233D+01	1 7.59374D+01	3 8.04673D+01	5 8.21710D+01	11 8.48598D+01	13 8.58906D+01	
		15 8.69066D+01	17 8.79747D+01	19 8.90569D+01	21 8.96943D+01	24 8.53319D+01	
		25 8.42924D+01					
602	4.43267D+01	1 1.66335D-04	1.05500D+00	0.0	0.0	0.0	
602	4.43267D+01	3 1.80463D-06	1.05500D+00	0.0	0.0	0.0	1 1.13047D-04
602	4.43267D+01	2 1.72148D-06	1.05500D+00	0.0	0.0	0.0	2 2.68438D-06 23 6.17091D-01 23 6.93820D-01
602	4.4327D+01	1 7.59371D+01	3 8.04664D+01	5 8.21700D+01	11 8.48587D+01	13 8.58902D+01	
		15 8.69079D+01	17 8.79755D+01	19 8.90476D+01	21 8.96589D+01	24 8.47774D+01	
		25 8.38387D+01					
603	4.44298D+01	1 1.87782D-04	1.05500D+00	0.0	0.0	0.0	
603	4.44298D+01	3 1.98455D-06	1.05500D+00	0.0	0.0	0.0	1 1.17924D-04
603	4.44298D+01	2 2.13092D-06	1.05500D+00	0.0	0.0	0.0	2 2.89551D-06 23 6.00141D-01 23 6.79477D-01
603	4.4430D+01	1 7.59367D+01	3 8.04655D+01	5 8.21689D+01	11 8.48575D+01	13 8.58897D+01	
		15 8.69092D+01	17 8.79762D+01	19 8.90368D+01	21 8.96206D+01	24 8.42372D+01	
		25 8.33886D+01					
604	4.45432D+01	1 2.04441D-04	1.05500D+00	0.0	0.0	0.0	
604	4.45432D+01	3 2.50568D-06	1.05500D+00	0.0	0.0	0.0	1 1.20424D-04
604	4.45432D+01	2 2.61666D-06	1.05500D+00	0.0	0.0	0.0	2 3.10136D-06 23 5.78535D-01 23 6.59496D-01
604	4.4543D+01	1 7.59364D+01	3 8.04645D+01	5 8.21677D+01	11 8.48562D+01	13 8.58893D+01	
		15 8.69107D+01	17 8.79766D+01	19 8.90244D+01	21 8.95795D+01	24 8.37106D+01	
		25 8.29409D+01					
605	4.46679D+01	1 2.17812D-04	1.05500D+00	0.0	0.0	0.0	
605	4.46679D+01	3 3.09032D-06	1.05500D+00	0.0	0.0	0.0	1 1.20347D-04
605	4.46679D+01	2 3.10956D-06	1.05500D+00	0.0	0.0	0.0	2 3.22307D-06 23 5.53732D-01 23 6.35412D-01
605	4.4668D+01	1 7.59360D+01	3 8.04634D+01	5 8.21665D+01	11 8.48548D+01	13 8.58889D+01	
		15 8.69122D+01	17 8.79766D+01	19 8.90101D+01	21 8.95354D+01	24 8.31959D+01	
		25 8.24933D+01					
606	4.48051D+01	1 2.25992D-04	1.05500D+00	0.0	0.0	0.0	
606	4.48051D+01	3 3.68860D-06	1.05500D+00	0.0	0.0	0.0	1 1.17425D-04
606	4.48051D+01	2 3.57517D-06	1.05500D+00	0.0	0.0	0.0	2 3.24819D-06 23 5.27582D-01 23 6.09277D-01
606	4.4805D+01	1 7.59356D+01	3 8.04623D+01	5 8.21652D+01	11 8.48534D+01	13 8.58885D+01	
		15 8.69138D+01	17 8.79762D+01	19 8.89938D+01	21 8.94884D+01	24 8.26897D+01	
		25 8.20426D+01					
607	4.49026D+01	1 5.42966D-05	1.05500D+00	0.0	0.0	0.0	
607	4.49026D+01	2 4.75728D-06	1.05500D+00	0.0	0.0	0.0	1 5.75204D-05
607	4.49026D+01	1 6.09736D-06	1.05500D+00	0.0	0.0	0.0	2 1.00971D-06 23 3.32093D-01 24 3.99429D-01
607	4.4903D+01	1 7.59353D+01	3 8.04615D+01	5 8.21643D+01	11 8.48524D+01	13 8.58882D+01	
		15 8.69148D+01	17 8.79756D+01	19 8.89818D+01	21 8.94559D+01	24 8.23594D+01	
		25 8.17386D+01					
608	4.50000D+01	1 6.18160D-05	1.05500D+00	0.0	0.0	0.0	
608	4.50000D+01	2 6.08281D-06	1.05500D+00	0.0	0.0	0.0	1 4.09919D-05
608	4.50000D+01	1 6.15298D-06	1.05500D+00	0.0	0.0	0.0	2 1.05777D-06 24 3.12222D-01 24 3.79097D-01
608	4.5000D+01	1 7.59350D+01	3 8.04607D+01	5 8.21634D+01	11 8.48515D+01	13 8.58879D+01	

15 8.69157D+01 17 8.79748D+01 19 8.89696D+01 21 8.94243D+01 24 8.20472D+01
25 8.14504D+01

PCC

HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.13 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 608 TIME STEPS, TIME = 4.500000+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75193
	2	0.03	78120
2	3	0.06	80146
	4	0.08	81131
3	5	0.10	82116
	6	0.57	82162
	7	1.04	83107
	8	1.51	83152
	9	1.98	83197
	10	2.45	84141
4	11	2.92	84185
	12	3.14	85137
5	13	3.35	85189
	14	3.57	86140
6	15	3.79	86192
	16	4.01	87144
7	17	4.23	87197
	18	4.45	88150
8	19	4.67	88197
	20	4.89	89131
9	21	5.10	89142
	22	5.18	87177
	23	5.25	85143
10	24	5.32	82105
11	25	5.35	81145

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	89.500000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 9.744317930-02

ELAPSED CPU TIME IS 7.28 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.942430+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 21

THE MINIMUM TEMPERATURE IS - 7.593500+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
609	4.51072D+01	1	3.24787D-05	1.05500D+00 0.0		0.0	0.0				
609	4.51072D+01	2	2.76028D-06	1.05500D+00 0.0		0.0	0.0	1	3.58025D-05		
609	4.51072D+01	1	3.64440D-06	1.05500D+00 0.0		0.0	0.0	2	5.52456D-07	24 3.26707D-01	24 3.98194D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
609	4.5107D+01	1 7.59347D+01	3 8.04599D+01	5 8.21625D+01	11 8.48505D+01	13 8.58877D+01	
		15 8.69167D+01	17 8.79736D+01	19 8.89558D+01	21 8.93903D+01	24 8.17205D+01	
		25 8.11416D+01					
610	4.52251D+01	1 4.12605D-05	1.05500D+00 0.0	0.0	0.0		
610	4.52251D+01	2 4.40036D-06	1.05500D+00 0.0	0.0	0.0	1 3.56012D-05	
610	4.52251D+01	1 4.89019D-06	1.05500D+00 0.0	0.0	0.0	2 6.88411D-07	24 3.44401D-01 24 4.21438D-01
610	4.5225D+01	1 7.59344D+01	3 8.04591D+01	5 8.21615D+01	11 8.48495D+01	13 8.58874D+01	
		15 8.69177D+01	17 8.79720D+01	19 8.89404D+01	21 8.93539D+01	24 8.13761D+01	
		25 8.08111D+01					
611	4.53548D+01	1 4.56066D-05	1.05500D+00 0.0	0.0	0.0		
611	4.53548D+01	2 5.24771D-06	1.05500D+00 0.0	0.0	0.0	1 3.43736D-05	
611	4.53548D+01	1 5.48698D-06	1.05500D+00 0.0	0.0	0.0	2 7.06428D-07	24 3.65205D-01 24 4.48786D-01
611	4.5355D+01	1 7.59340D+01	3 8.04582D+01	5 8.21605D+01	11 8.48484D+01	13 8.58871D+01	
		15 8.69187D+01	17 8.79698D+01	19 8.89231D+01	21 8.93150D+01	24 8.10109D+01	
		25 8.04565D+01					
612	4.54975D+01	1 4.33030D-05	1.05500D+00 0.0	0.0	0.0		
612	4.54975D+01	2 5.24792D-06	1.05500D+00 0.0	0.0	0.0	1 3.20331D-05	
612	4.54975D+01	1 5.70120D-06	1.05500D+00 0.0	0.0	0.0	2 6.56646D-07	24 3.89503D-01 24 4.80803D-01
612	4.5497D+01	1 7.59337D+01	3 8.04573D+01	5 8.21595D+01	11 8.48473D+01	13 8.58868D+01	
		15 8.69196D+01	17 8.79670D+01	19 8.89037D+01	21 8.92736D+01	24 8.06214D+01	
		25 8.00740D+01					
613	4.56544D+01	1 4.14186D-05	1.05500D+00 0.0	0.0	0.0		
613	4.56544D+01	2 5.32629D-06	1.05500D+00 0.0	0.0	0.0	1 2.92888D-05	
613	4.56544D+01	1 5.50965D-06	1.05500D+00 0.0	0.0	0.0	2 5.91042D-07	24 4.17939D-01 24 5.18397D-01
613	4.5654D+01	1 7.59333D+01	3 8.04563D+01	5 8.21584D+01	11 8.48461D+01	13 8.58865D+01	
		15 8.69204D+01	17 8.79633D+01	19 8.88821D+01	21 8.92294D+01	24 8.02035D+01	
		25 7.96599D+01					
614	4.58270D+01	1 3.98743D-05	1.05500D+00 0.0	0.0	0.0		
614	4.58270D+01	2 4.75972D-06	1.05500D+00 0.0	0.0	0.0	1 2.58180D-05	
614	4.58270D+01	1 5.08376D-06	1.05500D+00 0.0	0.0	0.0	2 5.22046D-07	24 4.51082D-01 25 5.65496D-01
614	4.5827D+01	1 7.59330D+01	3 8.04553D+01	5 8.21572D+01	11 8.48449D+01	13 8.58862D+01	
		15 8.69210D+01	17 8.79587D+01	19 8.88580D+01	21 8.91823D+01	24 7.97524D+01	
		25 7.92094D+01					
615	4.60000D+01	1 2.97413D-05	1.05500D+00 0.0	0.0	0.0		
615	4.60000D+01	2 1.75036D-06	1.05500D+00 0.0	0.0	0.0	1 1.85718D-05	
615	4.60000D+01	1 2.19679D-06	1.05500D+00 0.0	0.0	0.0	2 2.43167D-07	25 4.49181D-01 25 5.67081D-01
615	4.6000D+01	1 7.59326D+01	3 8.04544D+01	5 8.21562D+01	11 8.48438D+01	13 8.58860D+01	
		15 8.69214D+01	17 8.79533D+01	19 8.88336D+01	21 8.91366D+01	24 7.93057D+01	
		25 7.87602D+01					

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HEATINGS 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.13 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 615 TIME STEPS, TIME = 4.600000D+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75193
	2	0.03	78119
2	3	0.06	80145
	4	0.08	81131
3	5	0.10	82116
	6	0.57	82161
	7	1.04	83106
	8	1.51	83151
	9	1.98	83196
	10	2.45	84140
4	11	2.92	84184
	12	3.14	85137
5	13	3.35	85189
	14	3.57	86140
6	15	3.79	86192
	16	4.01	87144
7	17	4.23	87195
	18	4.45	88143
8	19	4.67	88183
	20	4.89	89109
9	21	5.10	89114
	22	5.18	86134
	23	5.25	83116
10	24	5.32	79131
11	25	5.35	78176

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.72983074D-01

ELAPSED CPU TIME IS 7.36 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.91366D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.59326D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
616	4.61903D+01	1	4.21117D-05	1.05500D+00	0.0	0.0	0.0	1	1.50592D-05		
616	4.61903D+01	2	6.88284D-06	1.05500D+00	0.0	0.0	0.0	2	5.77382D-07	25 4.98445D-01	25 6.32863D-01
616	4.61903D+01	1	4.82485D-06	1.05500D+00	0.0	0.0	0.0				

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
616	4.61900D+01	1 7.59323D+01	3 8.04534D+01	5 8.21551D+01	11 8.48427D+01	13 8.58856D+01
		15 8.69215D+01	17 8.79468D+01	19 8.88066D+01	21 8.90878D+01	24 7.88152D+01
		25 7.02618D+01				
617	4.63996D+01	1 2.12846D-05	1.05500D+00	0.0	0.0	0.0	1	1.18938D-05		
617	4.63996D+01	2 3.24525D-06	1.05500D+00	0.0	0.0	0.0	2	3.89724D-07	25 5.50508D-01	25 7.03419D-01
617	4.63996D+01	1 2.87517D-06	1.05500D+00	0.0	0.0	0.0				
617	4.64000D+01	1 7.59319D+01	3 8.04524D+01	5 8.21540D+01	11 8.48415D+01	13 8.58853D+01
		15 8.69212D+01	17 8.79388D+01	19 8.87767D+01	21 8.90357D+01	24 7.82738D+01
		25 7.77113D+01				
618	4.66298D+01	1 2.38760D-05	1.05500D+00	0.0	0.0	0.0	1	1.01579D-05		
618	4.66298D+01	2 3.86532D-06	1.05500D+00	0.0	0.0	0.0	2	4.32470D-07	25 6.07848D-01	25 7.82187D-01
618	4.66298D+01	1 3.54585D-06	1.05500D+00	0.0	0.0	0.0				
618	4.66300D+01	1 7.59315D+01	3 8.04515D+01	5 8.21529D+01	11 8.48404D+01	13 8.58848D+01
		15 8.69204D+01	17 8.79292D+01	19 8.87438D+01	21 8.89800D+01	24 7.76761D+01
		25 7.71034D+01				
619	4.68149D+01	1 3.31957D-05	1.05500D+00	0.0	0.0	0.0	1	1.45516D-06		
619	4.68149D+01	2 4.95853D-06	1.05500D+00	0.0	0.0	0.0	2	4.61436D-07	25 4.92426D-01	25 6.38655D-01
619	4.68149D+01	1 3.92716D-06	1.05500D+00	0.0	0.0	0.0				
619	4.68150D+01	1 7.59312D+01	3 8.04507D+01	5 8.21520D+01	11 8.48395D+01	13 8.58845D+01
		15 8.69195D+01	17 8.79207D+01	19 8.87173D+01	21 8.89363D+01	24 7.71931D+01
		25 7.66110D+01				
620	4.70000D+01	1 5.75225D-06	1.05500D+00	0.0	0.0	0.0	1	3.36798D-06		
620	4.70000D+01	1 5.75225D-06	1.05500D+00	0.0	0.0	0.0	2	3.82641D-07	25 4.92514D-01	25 6.42876D-01
620	4.70000D+01	1 1.00925D-06	1.05500D+00	0.0	0.0	0.0				
620	4.70000D+01	1 7.59310D+01	3 8.04500D+01	5 8.21513D+01	11 8.48387D+01	13 8.58840D+01
		15 8.69182D+01	17 8.79118D+01	19 8.86908D+01	21 8.88935D+01	24 7.67086D+01
		25 7.61185D+01				

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROl ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.13 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 620 TIME STEPS, TIME = 4.700000+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75193
	2	0.03	78119
2	3	0.06	80145
	4	0.08	81130
3	5	0.10	82115
	6	0.57	82160
	7	1.04	83105
	8	1.51	83150
	9	1.98	83195
	10	2.45	84140
4	11	2.92	84184
	12	3.14	85136
5	13	3.35	85188
	14	3.57	86140
6	15	3.79	86192
	16	4.01	87143
7	17	4.23	87191
	18	4.45	88135
8	19	4.67	88169
	20	4.89	88189
9	21	5.10	88189
	22	5.18	85128
	23	5.25	81131
10	24	5.32	76171
11	25	5.35	76112

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	85.000000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.850843130-01

ELAPSED CPU TIME IS 7.43 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.88935D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.59310D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
621	4.72036D+01	1	1.85758D-06	1.05500D+00	0.0	0.0	0.0				
621	4.72036D+01	1	1.85758D-06	1.05500D+00	0.0	0.0	0.0	1	2.45046D-06		
621	4.72036D+01	1	3.43176D-07	1.05500D+00	0.0	0.0	0.0	2	2.75019D-07	25 5.41779D-01	25 7.11758D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
621	4.7204D+01	1 7.59307D+01	3 8.04493D+01	5 8.21505D+01	11 8.46378D+01	13 8.58835D+01	
		15 8.69164D+01	17 8.79014D+01	19 8.86617D+01	21 8.88471D+01	24 7.61751D+01	
		25 7.55767D+01					
622	4.74275D+01	1 6.41860D-06	1.05500D+00	0.0	0.0	0.0	
622	4.74275D+01	1 6.41860D-06	1.05500D+00	0.0	0.0	0.0	1 2.77364D-06
622	4.74275D+01	1 1.13537D-06	1.05500D+00	0.0	0.0	0.0	2 4.03062D-07 25 5.95383D-01 25 7.87786D-01
622	4.7428D+01	1 7.55305D+01	3 8.04486D+01	5 8.21497D+01	11 8.48370D+01	13 8.58829D+01	
		15 8.69141D+01	17 8.78694D+01	19 8.86298D+01	21 8.87971D+01	24 7.55884D+01	
		25 7.49813D+01					
623	4.76739D+01	1 1.35957D-05	1.05500D+00	0.0	0.0	0.0	
623	4.76739D+01	2 2.39181D-06	1.05500D+00	0.0	0.0	0.0	1 4.16278D-06
623	4.76739D+01	1 2.14855D-06	1.05500D+00	0.0	0.0	0.0	2 2.32837D-07 25 6.53776D-01 25 8.71919D-01
623	4.7674D+01	1 7.59302D+01	3 8.04479D+01	5 8.21488D+01	11 8.48360D+01	13 8.58820D+01	
		15 8.69109D+01	17 8.78755D+01	19 8.85948D+01	21 8.87430D+01	24 7.49440D+01	
		25 7.43276D+01					
624	4.78369D+01	1 1.50422D-05	1.05500D+00	0.0	0.0	0.0	
624	4.78369D+01	2 2.16431D-06	1.05500D+00	0.0	0.0	0.0	1 3.01190D-06
624	4.78369D+01	1 1.61688D-06	1.05500D+00	0.0	0.0	0.0	2 1.94817D-07 25 4.34505D-01 25 5.84581D-01
624	4.7837D+01	1 7.59300D+01	3 8.04475D+01	5 8.21483D+01	11 8.48354D+01	13 8.58814D+01	
		15 8.69086D+01	17 8.78659D+01	19 8.85717D+01	21 8.87077D+01	24 7.45169D+01	
		25 7.38931D+01					
625	4.80000D+01	1 2.59525D-05	1.05500D+00	0.0	0.0	0.0	
625	4.80000D+01	2 3.77252D-06	1.05500D+00	0.0	0.0	0.0	1 3.25487D-06
625	4.80000D+01	1 2.88844D-06	1.05500D+00	0.0	0.0	0.0	2 3.32278D-07 25 4.31423D-01 25 5.83929D-01
625	4.80000D+01	1 7.59299D+01	3 8.04471D+01	5 8.21478D+01	11 8.48348D+01	13 8.58807D+01	
		15 8.69060D+01	17 8.78560D+01	19 8.85486D+01	21 8.86727D+01	24 7.40906D+01	
		25 7.34616D+01					

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.13 11-16-83

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 625 TIME STEPS, TIME = 4.800000D+01

GROSS GRID			1
			!
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	75193
	2	0.03	78119
2	3	0.06	80145
	4	0.08	81130
3	5	0.10	82115
	6	0.57	82160
	7	1.04	83105
	8	1.51	83150
	9	1.98	83195
	10	2.45	84139
4	11	2.92	84183
	12	3.14	85136
5	13	3.35	85188
	14	3.57	86140
6	15	3.79	86191
	16	4.01	87140
7	17	4.23	87186
	18	4.45	88125
8	19	4.67	88155
	20	4.89	88170
9	21	5.10	88167
	22	5.18	84126
	23	5.25	79149
10	24	5.32	74109
11	25	5.35	73146

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.63054008D-01

ELAPSED CPU TIME IS 7.49 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.87025D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.34616D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
626	4.81794D+01	1	8.42746D-05	1.05500D+00	0.0	0.0	0.0	1	1.03276D-05		
626	4.81794D+01	3	2.08599D-06	1.05500D+00	0.0	0.0	0.0	2	6.61157D-07	25 4.65283D-01	25 6.33369D-01
626	4.81794D+01	1	9.61452D-06	1.05500D+00	0.0	0.0	0.0				

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
626	4.8179D+01	1 7.59297D+01	3 8.04466D+01	5 8.21473D+01	11 8.48342D+01	13 8.58799D+01	
		15 8.69029D+01	17 8.78449D+01	19 8.85233D+01	21 8.86346D+01	24 7.36266D+01	
		25 7.29963D+01					
627	4.83767D+01	1 5.75024D-05	1.05500D+00	0.0	0.0	1 1.06899D-05	
627	4.83767D+01	2 8.25008D-06	1.05500D+00	0.0	0.0	2 7.84524D-07	25 5.05551D-01 25 6.92570D-01
627	4.83767D+01	1 7.37186D-06	1.05500D+00	0.0	0.0		
627	4.8377D+01	1 7.59295D+01	3 8.04461D+01	5 8.21467D+01	11 8.48335D+01	13 8.58788D+01	
		15 8.68992D+01	17 8.78323D+01	19 8.84955D+01	21 8.85931D+01	24 7.31237D+01	
		25 7.24907D+01					
628	4.85937D+01	1 7.70446D-05	1.05500D+00	0.0	0.0	1 1.36656D-05	
628	4.85937D+01	3 2.23448D-06	1.05500D+00	0.0	0.0	2 9.02193D-07	25 5.48747D-01 25 7.56989D-01
628	4.85937D+01	2 1.71766D-06	1.05500D+00	0.0	0.0		
628	4.8594D+01	1 7.59293D+01	3 8.04456D+01	5 8.21460D+01	11 8.48327D+01	13 8.58776D+01	
		15 8.68948D+01	17 8.78180D+01	19 8.84651D+01	21 8.85479D+01	24 7.25778D+01	
		25 7.19420D+01					
629	4.87968D+01	1 5.55548D-05	1.05500D+00	0.0	0.0	1 1.15998D-05	
629	4.87968D+01	2 8.09052D-06	1.05500D+00	0.0	0.0	2 7.51486D-07	25 5.07883D-01 25 7.05962D-01
629	4.87968D+01	1 7.27105D-06	1.05500D+00	0.0	0.0		
629	4.8797D+01	1 7.59292D+01	3 8.04451D+01	5 8.21454D+01	11 8.48319D+01	13 8.58763D+01	
		15 8.68903D+01	17 8.78044D+01	19 8.84366D+01	21 8.85061D+01	24 7.20738D+01	
		25 7.14341D+01					
630	4.90000D+01	1 7.03356D-05	1.05500D+00	0.0	0.0	1 1.22662D-05	
630	4.90000D+01	3 1.92427D-06	1.05500D+00	0.0	0.0	2 5.86169D-07	25 5.00943D-01 25 7.01266D-01
630	4.90000D+01	1 9.57192D-06	1.05500D+00	0.0	0.0		
630	4.9000D+01	1 7.59290D+01	3 8.04446D+01	5 8.21448D+01	11 8.48311D+01	13 8.58748D+01	
		15 8.68855D+01	17 8.77904D+01	19 8.84083D+01	21 8.84616D+01	24 7.15759D+01	
		25 7.09332D+01					

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20 58 13 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 634 TIME STEPS, TIME = 5.000000D+01

GROSS GRID	FINE GRID	DISTANCE	
		1	
		1	
		1	
		DISTANCE	0.0
1	1	0.0	75193
	2	0.03	78119
2	3	0.06	80144
	4	0.08	81129
3	5	0.10	82114
	6	0.57	82159
	7	1.04	83104
	8	1.51	83149
	9	1.98	83194
	10	2.45	84138
4	11	2.92	84183
	12	3.14	85135
5	13	3.35	85187
	14	3.57	86137
6	15	3.79	86186
	16	4.01	87131
7	17	4.23	87172
	18	4.45	88105
8	19	4.67	88127
	20	4.89	88135
9	21	5.10	88127
	22	5.18	82133
	23	5.25	76110
10	24	5.32	69132
11	25	5.35	68170

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.65349994D-01

ELAPSED CPU TIME IS 7.62 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.83529D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20 21

THE MINIMUM TEMPERATURE IS - 6.86955D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

200

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
635	5.02919D+01	1	8.60829D-04	1.05500D+00	0.0	0.0	0.0				
635	5.02919D+01	4	2.29911D-06	1.05500D+00	0.0	0.0	0.0	1	8.20625D-05		
635	5.02919D+01	3	5.46710D-06	1.05500D+00	0.0	0.0	0.0	2	9.94738D-06	24 5.86256D-01	24 8.45667D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
635	5.0292D+01	1 7.59278D+01	3 8.04411D+01	5 8.21402D+01	11 8.48245D+01	13 8.58624D+01	
		15 8.68484D+01	17 8.76958D+01	19 8.82294D+01	21 8.82093D+01	24 6.87385D+01	
		25 6.81288D+01					
636	5.06130D+01	1 6.11446D-04	1.05500D+00	0.0	0.0	0.0	
636	5.06130D+01	4 2.36646D-06	1.05500D+00	0.0	0.0	0.0	1 8.51319D-05
636	5.06130D+01	3 4.66024D-06	1.05500D+00	0.0	0.0	0.0	2 6.88337D-06 24 5.93442D-01 24 8.63333D-01
636	5.0613D+01	1 7.59274D+01	3 8.04400D+01	5 8.21388D+01	11 8.48224D+01	13 8.58584D+01	
		15 8.68375D+01	17 8.76710D+01	19 8.81953D+01	21 8.81480D+01	24 6.81450D+01	
		25 6.75445D+01					
637	5.09661D+01	1 7.88690D-04	1.05500D+00	0.0	0.0	0.0	
637	5.09661D+01	4 4.37667D-06	1.05500D+00	0.0	0.0	0.0	1 9.18811D-05
637	5.09661D+01	3 6.69774D-06	1.05500D+00	0.0	0.0	0.0	2 8.56999D-06 24 6.08511D-01 24 8.92964D-01
637	5.0966D+01	1 7.59270D+01	3 8.04387D+01	5 8.21370D+01	11 8.48198D+01	13 8.58535D+01	
		15 8.68250D+01	17 8.76432D+01	19 8.81370D+01	21 8.80817D+01	24 6.75365D+01	
		25 6.69460D+01					
638	5.13419D+01	1 1.37850D-03	1.05500D+00	0.0	0.0	0.0	
638	5.13419D+01	5 1.78434D-06	1.05500D+00	0.0	0.0	0.0	1 1.68022D-04
638	5.13419D+01	4 2.30955D-06	1.05500D+00	0.0	0.0	0.0	2 2.15140D-05
638	5.13419D+01	3 2.95473D-06	1.05500D+00	0.0	0.0	0.0	3 3.43252D-06 24 5.66268D-01 24 8.38462D-01
638	5.1342D+01	1 7.59265D+01	3 8.04371D+01	5 8.21349D+01	11 8.48166D+01	13 8.58478D+01	
		15 8.68109D+01	17 8.76131D+01	19 8.80859D+01	21 8.80125D+01	24 6.69702D+01	
		25 6.64149D+01					
639	5.16709D+01	1 7.91135D-04	1.05500D+00	0.0	0.0	0.0	
639	5.16709D+01	4 3.30070D-06	1.05500D+00	0.0	0.0	0.0	1 1.17221D-04
639	5.16709D+01	3 6.14057D-06	1.05500D+00	0.0	0.0	0.0	2 8.85076D-06 24 4.27431D-01 24 6.38240D-01
639	5.1671D+01	1 7.59259D+01	3 8.04356D+01	5 8.21328D+01	11 8.48136D+01	13 8.58424D+01	
		15 8.67979D+01	17 8.75864D+01	19 8.80414D+01	21 8.79530D+01	24 6.65428D+01	
		25 6.59984D+01					
640	5.20000D+01	1 9.13778D-04	1.05500D+00	0.0	0.0	0.0	
640	5.20000D+01	4 3.93784D-06	1.05500D+00	0.0	0.0	0.0	1 1.02617D-04
640	5.20000D+01	3 6.78803D-06	1.05500D+00	0.0	0.0	0.0	2 9.80839D-06 24 3.82074D-01 24 5.74178D-01
640	5.2000D+01	1 7.59253D+01	3 8.04338D+01	5 8.21305D+01	11 8.48102D+01	13 8.58365D+01	
		15 8.67844D+01	17 8.75593D+01	19 8.79970D+01	21 8.78947D+01	24 6.61607D+01	
		25 6.56349D+01					

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HEATING6 02/12/83
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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.14 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 640 TIME STEPS, TIME = 5.20000D+01

GROSS GRID			1
			I
FINE GRID		DISTANCE	0.0
1	1	0.0	75193
	2	0.03	78118
2	3	0.06	80143
	4	0.08	81128
3	5	0.10	82113
	6	0.57	82158
	7	1.04	83103
	8	1.51	83148
	9	1.98	83193
	10	2.45	84137
4	11	2.92	84181
	12	3.14	85133
5	13	3.35	85184
	14	3.57	86132
6	15	3.79	86178
	16	4.01	87120
7	17	4.23	87156
	18	4.45	87183
8	19	4.67	88100
	20	4.89	88103
9	21	5.10	87189
	22	5.18	80188
	23	5.25	73167
10	24	5.32	66116
11	25	5.35	65163

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.310000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.29060640D-01

ELAPSED CPU TIME IS 7.71 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.80256D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.56349D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
641	5.23620D+01	1	2.15813D-03	1.05500D+00	0.0	0.0	0.0	1	1.88676D-04		
641	5.23620D+01	5	1.60630D-06	1.05500D+00	0.0	0.0	0.0	2	2.32641D-05		
641	5.23620D+01	4	2.16532D-06	1.05500D+00	0.0	0.0	0.0	3	3.59281D-06	24 3.28061D-01	24 4.95855D-01
641	5.23620D+01	3	2.89566D-06	1.05500D+00	0.0						

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
641	5.2362D+01	1 7.59246D+01	3 8.04317D+01	5 8.21277D+01	11 8.48061D+01	13 8.58296D+01	
		15 8.67691D+01	17 8.75292D+01	19 8.79486D+01	21 8.78319D+01	24 6.58327D+01	
		25 6.53521D+01					
642	5.27601D+01	1 1.54543D-03	1.05500D+00	0.0	0.0	1 1.87383D-04	
642	5.27601D+01	5 1.78058D-06	1.05500D+00	0.0	0.0	2 1.72974D-05	
642	5.27601D+01	4 2.23581D-06	1.05500D+00	0.0	0.0	3 2.83358D-06	24 2.55283D-01 24 3.87775D-01
642	5.27601D+01	3 2.63690D-06	1.05500D+00	0.0	0.0		
642	5.2760D+01	1 7.59238D+01	3 8.04291D+01	5 8.21243D+01	11 8.48012D+01	13 8.58214D+01	
		15 8.67515D+01	17 8.74956D+01	19 8.78957D+01	21 8.77646D+01	24 6.55774D+01	
		25 6.51215D+01					
643	5.31981D+01	1 5.98235D-02	1.05500D+00	0.0	0.0	1 3.46533D-03	
643	5.31981D+01	7 3.40154D-06	1.05500D+00	0.0	0.0	2 5.18057D-04	
643	5.31981D+01	6 3.38273D-06	1.05500D+00	0.0	0.0	3 1.11905D-04	
643	5.31981D+01	5 3.32902D-06	1.05500D+00	0.0	0.0	4 2.00297D-05	
643	5.31981D+01	4 3.61154D-06	1.05500D+00	0.0	0.0	5 3.48247D-06	25 2.42658D+00 25 3.72931D+00
643	5.31981D+01	3 3.85896D-06	1.05500D+00	0.0	0.0		
643	5.28717D+01	1 5.89094D-04	1.05500D+00	0.0	0.0	1 2.28761D-04	
643	5.28717D+01	4 9.83791D-07	1.05500D+00	0.0	0.0	2 3.73116D-06	25 6.71475D-01 25 1.03111D+00
643	5.28717D+01	2 3.02106D-06	1.05500D+00	0.0	0.0		
643	5.28629D+01	1 5.28461D-05	1.05500D+00	0.0	0.0	1 1.17949D-05	
643	5.28629D+01	2 6.44572D-06	1.05500D+00	0.0	0.0	2 6.61283D-07	25 6.25345D-01 25 9.60274D-01
643	5.28629D+01	1 3.24982D-06	1.05500D+00	0.0	0.0		
643	5.2863D+01	1 7.59234D+01	3 8.04284D+01	5 8.21233D+01	11 8.47998D+01	13 8.58192D+01	
		15 8.67469D+01	17 8.74869D+01	19 8.78821D+01	21 8.77476D+01	24 6.57052D+01	
		25 6.57468D+01					
644	5.29657D+01	1 6.10481D-04	1.05500D+00	0.0	0.0	1 2.27772D-04	
644	5.29657D+01	4 1.03654D-06	1.05500D+00	0.0	0.0	2 3.43763D-06	25 5.72352D-01 25 8.70540D-01
644	5.29657D+01	2 2.48389D-06	1.05500D+00	0.0	0.0		
644	5.2966D+01	1 7.59231D+01	3 8.04276D+01	5 8.21224D+01	11 8.47984D+01	13 8.58169D+01	
		15 8.67421D+01	17 8.74782D+01	19 8.78685D+01	21 8.77307D+01	24 6.60833D+01	
		25 6.63192D+01					
645	5.30685D+01	1 3.45817D-04	1.05500D+00	0.0	0.0	1 1.75861D-04	
645	5.30685D+01	3 3.43079D-06	1.05500D+00	0.0	0.0	2 4.94332D-06	25 6.46527D-01 25 9.74872D-01
645	5.30685D+01	2 3.50636D-06	1.05500D+00	0.0	0.0		
645	5.3069D+01	1 7.59228D+01	3 8.04269D+01	5 8.21214D+01	11 8.47970D+01	13 8.58146D+01	
		15 8.67374D+01	17 8.74694D+01	19 8.78550D+01	21 8.77141D+01	24 6.65778D+01	
		25 6.59657D+01					
646	5.31713D+01	1 3.50953D-04	1.05500D+00	0.0	0.0	1 1.57518D-04	
646	5.31713D+01	3 3.45185D-06	1.05500D+00	0.0	0.0	2 4.72743D-06	25 7.17819D-01 25 1.07192D+00
646	5.31713D+01	2 3.36151D-06	1.05500D+00	0.0	0.0		
646	5.31596D+01	1 1.95678D-05	1.05500D+00	0.0	0.0	1 6.06846D-06	
646	5.31596D+01	2 2.00204D-06	1.05500D+00	0.0	0.0	2 2.41827D-07	25 6.39216D-01 25 9.54543D-01
646	5.31596D+01	1 1.21101D-06	1.05500D+00	0.0	0.0		
646	5.3160D+01	1 7.59225D+01	3 8.04262D+01	5 8.21204D+01	11 8.47957D+01	13 8.58126D+01	
		15 8.67332D+01	17 8.74617D+01	19 8.78431D+01	21 8.76997D+01	24 6.70952D+01	
		25 6.76049D+01					
647	5.32507D+01	1 1.75660-04	1.05500D+00	0.0	0.0	1 1.07259D-04	
647	5.32507D+01	3 1.81572D-06	1.05500D+00	0.0	0.0	2 2.56439D-06	25 6.82445D-01 25 1.00946D+00
647	5.32507D+01	2 1.54475D-06	1.05500D+00	0.0	0.0		
647	5.32454D+01	1 1.02603D-05	1.05500D+00	0.0	0.0	1 2.68104D-06	
647	5.32454D+01	2 9.71052D-07	1.05500D+00	0.0	0.0	2 1.32687D-07	25 6.44057D-01 25 9.52577D-01
647	5.32454D+01	1 6.46182D-07	1.05500D+00	0.0	0.0		
647	5.3245D+01	1 7.59223D+01	3 8.04255D+01	5 8.21196D+01	11 8.47945D+01	13 8.58106D+01	
		15 8.67292D+01	17 8.74543D+01	19 8.78319D+01	21 8.76865D+01	24 6.76403D+01	

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                25 6.82490D+01
648 5.33311D+01     1 1.21759D-04 1.05500D+00 0.0          0.0          0.0
648 5.33311D+01     2 8.89595D-06 1.05500D+00 0.0          0.0          0.0                1 8.33607D-05
648 5.33311D+01     2 9.35886D-07 1.05500D+00 0.0          0.0          0.0                2 2.42073D-06   25 6.76566D-01   25 9.91315D-01
  648       5.3331D+01      1 7.59221D+01     3 8.04248D+01     5 8.21187D+01     11 8.47932D+01     13 8.58086D+01
                15 8.67251D+01     17 8.74470D+01     19 8.78207D+01     21 8.76738D+01     24 6.82321D+01
                25 6.89256D+01
649 5.34168D+01     1 1.10688D-04 1.05500D+00 0.0          0.0          0.0
649 5.34168D+01     2 8.45402D-06 1.05500D+00 0.0          0.0          0.0                1 7.35713D-05
649 5.34168D+01     1 9.78416D-06 1.05500D+00 0.0          0.0          0.0                2 1.83576D-06   25 7.05682D-01   25 1.02383D+00
649 5.34106D+01     1 1.31782D-05 1.05500D+00 0.0          0.0          0.0
649 5.34106D+01     2 1.19870D-06 1.05500D+00 0.0          0.0          0.0                1 3.06182D-06
649 5.34106D+01     1 6.70947D-07 1.05500D+00 0.0          0.0          0.0                2 1.60910D-07   25 6.57389D-01   25 9.53767D-01
  649       5.3411D+01      1 7.59218D+01     3 8.04242D+01     5 8.21178D+01     11 8.47920D+01     13 8.58067D+01
                15 8.67214D+01     17 8.74401D+01     19 8.78104D+01     21 8.76624D+01     24 6.88172D+01
                25 6.95830D+01
650 5.34902D+01     1 6.47483D-05 1.05500D+00 0.0          0.0          0.0
650 5.34902D+01     2 5.28088D-06 1.05500D+00 0.0          0.0          0.0                1 5.52705D-05
650 5.34902D+01     1 5.71725D-06 1.05500D+00 0.0          0.0          0.0                2 1.44450D-06   25 6.77185D-01   25 9.73205D-01
  650       5.3490D+01      1 7.59216D+01     3 8.04235D+01     5 8.21170D+01     11 8.47908D+01     13 8.58048D+01
                15 8.67176D+01     17 8.74333D+01     19 8.78009D+01     21 8.76515D+01     24 6.94324D+01
                25 7.02601D+01
651 5.35697D+01     1 6.32868D-04 1.05500D+00 0.0          0.0          0.0
651 5.35697D+01     3 6.22621D-06 1.05500D+00 0.0          0.0          0.0                1 1.44174D-04
651 5.35697D+01     2 3.70969D-06 1.05500D+00 0.0          0.0          0.0                2 7.45857D-06   25 8.22396D-01   25 1.17050D+00
651 5.35548D+01     1 4.71965D-05 1.05500D+00 0.0          0.0          0.0
651 5.35548D+01     2 3.68745D-06 1.05500D+00 0.0          0.0          0.0                1 1.50757D-05
651 5.35548D+01     1 2.83682D-06 1.05500D+00 0.0          0.0          0.0                2 7.52085D-07   25 6.53364D-01   25 9.29921D-01
  651       5.3555D+01      1 7.59214D+01     3 8.04229D+01     5 8.21163D+01     11 8.47898D+01     13 8.58032D+01
                15 8.67145D+01     17 8.74277D+01     19 8.77917D+01     21 8.76429D+01     24 6.99669D+01
                25 7.09135D+01
652 5.36193D+01     1 7.12356D-04 1.05500D+00 0.0          0.0          0.0
652 5.36193D+01     3 6.68972D-06 1.05500D+00 0.0          0.0          0.0                1 1.86951D-04
652 5.36193D+01     2 3.14683D-06 1.05500D+00 0.0          0.0          0.0                2 8.61047D-06   25 8.59835D-01   25 1.21251D+00
652 5.36053D+01     1 5.64125D-06 1.05500D+00 0.0          0.0          0.0
652 5.36053D+01     1 5.84125D-06 1.05500D+00 0.0          0.0          0.0                1 7.32668D-05
652 5.36053D+01     1 4.57612D-07 1.05500D+00 0.0          0.0          0.0                2 4.73418D-07   25 6.72048D-01   25 9.47701D-01
  652       5.3605D+01      1 7.59212D+01     3 8.04225D+01     5 8.21157D+01     11 8.47890D+01     13 8.58020D+01
                15 8.67120D+01     17 8.74234D+01     19 8.77852D+01     21 8.76365D+01     24 7.04390D+01
                25 7.15856D+01
653 5.36559D+01     1 1.69908D-04 1.05500D+00 0.0          0.0          0.0
653 5.36559D+01     3 1.47228D-06 1.05500D+00 0.0          0.0          0.0                1 9.95739D-05
653 5.36559D+01     2 8.82504D-07 1.05500D+00 0.0          0.0          0.0                2 2.53646D-06   25 7.50638D-01   25 1.04859D+00
653 5.36512D+01     1 4.00790D-06 1.05500D+00 0.0          0.0          0.0
653 5.36512D+01     1 4.00790D-06 1.05500D+00 0.0          0.0          0.0                1 2.56218D-06
653 5.36512D+01     1 3.12081D-07 1.05500D+00 0.0          0.0          0.0                2 2.37121D-07   25 6.80750D-01   25 9.50960D-01
  653       5.3651D+01      1 7.59211D+01     3 8.04221D+01     5 8.21152D+01     11 8.47883D+01     13 8.58009D+01
                15 8.67098D+01     17 8.74184D+01     19 8.77793D+01     21 8.76308D+01     24 7.09291D+01
                25 7.22663D+01
654 5.36870D+01     1 8.30870D-05 1.05500D+00 0.0          0.0          0.0
654 5.36970D+01     2 9.86593D-06 1.05500D+00 0.0          0.0          0.0                1 7.55544D-05
654 5.36970D+01     1 5.00008D-06 1.05500D+00 0.0          0.0          0.0                2 1.80127D-06   25 7.31019D-01   25 1.01156D+00
654 5.36942D+01     1 3.66726D-06 1.05500D+00 0.0          0.0          0.0
654 5.36942D+01     1 3.66726D-06 1.05500D+00 0.0          0.0          0.0                1 1.95477D-05
654 5.36942D+01     1 3.51001D-07 1.05500D+00 0.0          0.0          0.0                2 2.18877D-07   25 6.82440D-01   25 9.51260D-01
  654       5.3694D+01      1 7.59210D+01     3 8.04217D+01     5 8.21147D+01     11 8.47876D+01     13 8.57988D+01
                15 8.67077D+01     17 8.74157D+01     19 8.77738D+01     21 8.76257D+01     24 7.14419D+01
                25 7.29537D+01
655 5.37373D+01     1 5.16452D-05 1.05500D+00 0.0          0.0          0.0
655 5.37373D+01     2 6.79705D-06 1.05500D+00 0.0          0.0          0.0                1 6.24558D-05
655 5.37373D+01     1 3.29826D-06 1.05500D+00 0.0          0.0          0.0                2 1.23798D-06   25 7.25138D-01   25 9.93969D-01
  655       5.3737D+01      1 7.59208D+01     3 8.04214D+01     5 8.21142D+01     11 8.47869D+01     13 8.57987D+01
                15 8.67056D+01     17 8.74120D+01     19 8.77683D+01     21 8.76207D+01     24 7.20034D+01
                25 7.36789D+01
656 5.37803D+01     1 5.55380D-05 1.05500D+00 0.0          0.0          0.0
                                  1.05500D+00 0.0          0.0          0.0                1 5.88710D-05
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656 5.37203D+01    1 2.97171D-06 1.055[illegible]0+00 0.0          0.0          0.0          2 1.10524D-06   25 7.59143D-01   25 1.[illegible]
656 5.37769D+01    2 3.97338D-06 1.05500D+00 0.0                  0.0          0.0
656 5.37769D+01    1 3.97338D-06 1.05500D+00 0.0                  0.0          0.0          1 2.14001D-06
656 5.37769D+01    1 3.64[illegible]D-07 1.05500D+00 0.0          0.0          0.0          2 2.21018D-07   25 7.01195D-01   25 9.51691D-01
    656  5.3777D+01     1 7.59207D+01    3 8.04210D+01    5 8.21138D+01   11 8.47863D+01   13 8.57977D-01
                        15 8.67037D+01   17 8.74086D+01   19 8.77633D+01   21 8.76163D+01   24 7.25608D+01
                        25 7.43801D+01

657 5.38166D+01    1 3.68504D-05 1.05500D+00 0.0                  0.0          0.0          1 4.70882D-05
657 5.38166D+01    2 4.[illegible]8845D-06 1.05500D+00 0.0        0.0          0.0          2 7.35610D-07   25 7.26450D-[illegible]   25 9.[illegible]3D-01
657 5.38166D+01    1 1.[illegible]6709-06 1.05500D+00 0.0         0.0          0.0
    657  5.38[illegible]D+01     1 7.59206D+01    3 8.04207D+01    5 8.21133D+01   11 8.47856D+01   13 8.57967D+01
                        15 8.[illegible]1[illegible]D+01   17 8.74051D+01   19 8.77583D+01   21 8.76120D+01   24 7.31538D+01
                        25 7.[illegible]

658 5.38563D+01    1 2.52551D-05 1.05500D+00 0.0                  0.0          0.0          1 4.48849D-05
658 5.38563D+01    2 3.73896D-06 1.05500D+00 0.0                  0.0          0.0          2 6.[illegible]235D-07   25 7.49903D-01   25 9.[illegible]
658 5.38563D+01    1 6.72313D-06 1.05500D+00 0.0                  0.0          0.0
    658  5.3856D+01     1 7.59204D+01    2 8.04203D+01    5 8.[illegible]1128D+01   11 8.47849D+01   13 8.57957D+01
                        15 8.[illegible]9[illegible]D+01   17 8.74017D+01   19 8.[illegible]533D+01   21 8.76079D+01   24 7.[illegible]7930+01
                        25 7.58564D+01

659 5.38960D+01    1 2.28631D-05 1.05500D+00 0.0                  0.0          0.0          1 4.18704D-05
659 5.38960D+01    2 3.39040D-06 1.05500D+00 0.0                  0.0          0.0          2 6.23642D-07   25 7.71364D-01   25 [illegible]
659 5.38960D+01    1 1.57535D-06 1.05500D+00 0.0                  0.0          0.0
659 5.38934D+01    1 3.50372D-06 1.05500D+00 0.0                  0.0          0.0          1 1.71052D-06
659 5.38934D+01    1 3.50372D-06 1.05500D+00 0.0                  0.0          0.0          2 1.99143D-07   25 7.22046D-01   2[illegible]
659 5.38934D+01    1 3.[illegible]D-07 1.05500D+00 0.0            0.0          0.0
    659  5.3893D+01     1 7.59203D+01    3 8.04200D+01    5 8.21124D+01   [illegible]47843D+01   13 8.57946D+01
                        15 8.66980D+01   17 8.73965D+01   19 8.77486D+01   21 8.76042D+01   24 7.43908D+01
                        25 7.65785D+01

660 5.39305D+01    1 1.[illegible]0328D-05 1.05500D+00 0.0        0.0          0.0          1 3.47364D-05
660 5.39305D+01    2 2.[illegible]2[illegible]D-06 1.05500D+00 0.0  0.0          0.0          2 4.41471D-07   25 7.38583D-01   25 9.64479D-01
660 5.39305D+01    1 1.06[illegible]510-06 1.05500D+00 0.0        0.0          0.0
    660  5.393[illegible]D+01     1 7.59202D+01    3 8.04196D+01    5 8.21119D+01   11 8.47837D+01   13 8.57938D+01
                        15 8.66961D+01   17 8.73953D+01   19 8.77440D+01   21 8.76007D+01   24 7.50267D+01
                        25 7.73170D+01

661 5.39652D+01    1 1.[illegible]3570-05 1.05500D+00 0.0         0.0          0.0          1 3.05382D-05
661 5.39652D+01    2 2.182960-06 1.05500D+00 0.0                  0.0          0.0          2 4.12140D-07   25 7.08418D-01   25 9.16251D-01
661 5.39652D+01    1 8.[illegible]4D-07 1.05500D+00 0.0           0.0          0.0
    661  5.3965D+01     1 7.59201D+01    3 8.04193D+01    5 8.21115D+01   11 8.47831D+01   13 8.57929D+01
                        15 8.[illegible]9440+01   17 8.73923D+01   19 8.77396D+01   21 8.[illegible]76D+01   24 7.56433D+01
                        25 7.80255D+01

662 5.40000D+01    1 1.[illegible]3300-05 1.05500D+00 0.0         0.0          0.0          1 2.68013D-05
662 5.40000D+01    2 2.570570-06 1.05500D+00 0.0                  0.0          0.0          2 3.04424D-07   25 7.20[illegible]80-01   25 9.[illegible]
662 5.40000D+01    1 6.650530-07 1.05500D+00 0.0                  0.0          0.0
    662  5.4000D+01     1 7.59200D+01    3 8.04190D+01    5 8.21110D+01   11 8.47825D+01   13 8.57920D+01
                        15 8.66927D+01   17 8.73893D+01   19 8.77353D+01   21 8.75946D+01   24 7.62783D+01
                        25 7.87461D+01
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 14 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 662 TIME STEPS, TIME = 5.40000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75192
	2	0.03	78117
2	3	0.06	80142
	4	0.08	81127
3	5	0.10	82111
	6	0.57	82156
	7	1.04	83101
	8	1.51	83146
	9	1.98	83191
	10	2.45	84135
4	11	2.92	84178
	12	3.14	85130
5	13	3.35	85179
	14	3.57	86126
6	15	3.79	86169
	16	4.01	87107
7	17	4.23	87139
	18	4.45	87162
8	19	4.67	87174
	20	4.89	87173
9	21	5.10	871[illegible]
	22	5.18	8119[illegible]
	23	5.25	77155
10	24	5.32	76128
11	25	5.35	78175

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.310000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.476280140-02

ELAPSED CPU TIME IS 8.09 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.773530+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 7.592000+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

cc

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
663	5.40348D+01	1 1	.13737D-05	1.055000D+00 0.0		0.0	0.0					
663	5.40348D+01	2 1	.75435D-06	1.055000D+00 0.0		0.0	0.0	1 2	.62594D-05			
663	5.40348D+01	1 7	.15892D-07	1.055000D+00 0.0		0.0	0.0	2 3	.36427D-07	25 7 .33686D-01	25 9	.31711D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
663	5.4035D+01	1 7.59199D+01	3 8.04186D+01	5 8.21107D+01	11 8.47819D+01	13 8.57911D+01	
		15 8.66910D+01	17 8.73863D+01	19 8.77340D+01	21 8.75918D+01	24 7.69303D+01	
		25 7.94798D+01					
664	5.40702D+01	1 1.01047D-05	1.055000D+00 0.0	0.0	0.0		
664	5.40702D+01	2 1.55341D-06	1.055000D+00 0.0	0.0	0.0	1 2 .51323D-05	
664	5.40702D+01	1 6.58236D-07	1.055000D+00 0.0	0.0	0.0	2 3 .01423D-07	25 7 .59771D-01 25 9 .55929D-01
664	5.4070D+01	1 7.59197D+01	3 8.04183D+01	5 8.21102D+01	11 8.47813D+01	13 8.57902D+01	
		15 8.66892D+01	17 8.73832D+01	19 8.77266D+01	21 8.75891D+01	24 7.76115D+01	
		25 8.02395D+01					
665	5.41057D+01	1 9.67103D-06	1.055000D+00 0.0	0.0	0.0		
665	5.41057D+01	1 9.67103D-06	1.055000D+00 0.0	0.0	0.0	1 2 .39471D-05	
665	5.41057D+01	1 2.28985D-06	1.055000D+00 0.0	0.0	0.0	2 1 .01460D-06	25 7 .71028D-01 25 9 .60908D-01
665	5.4106D+01	1 7.59196D+01	3 8.04180D+01	5 8.21098D+01	11 8.47807D+01	13 8.57892D+01	
		15 8.66874D+01	17 8.73801D+01	19 8.77223D+01	21 8.75865D+01	24 7.83082D+01	
		25 8.10106D+01					
666	5.41411D+01	1 8.74857D-06	1.055000D+00 0.0	0.0	0.0		
666	5.41411D+01	1 8.74857D-06	1.055000D+00 0.0	0.0	0.0	1 2 .24543D-05	
666	5.41411D+01	1 2.07214D-06	1.055000D+00 0.0	0.0	0.0	2 9 .40399D-07	25 7 .81318D-01 25 9 .64164D-01
666	5.4141D+01	1 7.59195D+01	3 8.04176D+01	5 8.21094D+01	11 8.47801D+01	13 8.57883D+01	
		15 8.66857D+01	17 8.73770D+01	19 8.77179D+01	21 8.75842D+01	24 7.90192D+01	
		25 8.17919D+01					
667	5.41765D+01	1 7.93723D-06	1.055000D+00 0.0	0.0	0.0		
667	5.41765D+01	1 7.93723D-06	1.055000D+00 0.0	0.0	0.0	1 2 .10970D-05	
667	5.41765D+01	1 1.88259D-06	1.055000D+00 0.0	0.0	0.0	2 8 .66698D-07	25 7 .90747D-01 25 9 .66779D-01
667	5.4177D+01	1 7.59194D+01	3 8.04173D+01	5 8.21089D+01	11 8.47795D+01	13 8.57874D+01	
		15 8.66839D+01	17 8.73740D+01	19 8.77136D+01	21 8.75821D+01	24 7.97433D+01	
		25 8.25326D+01					
668	5.42120D+01	1 7.19189D-06	1.055000D+00 0.0	0.0	0.0		
668	5.42120D+01	1 7.19189D-06	1.055000D+00 0.0	0.0	0.0	1 1 .97890D-05	
668	5.42120D+01	1 1.73188D-06	1.055000D+00 0.0	0.0	0.0	1 8 .05320D-07	25 7 .99358D-01 25 9 .67949D-01
668	5.4212D+01	1 7.59193D+01	3 8.04169D+01	5 8.21085D+01	11 8.47788D+01	13 8.57864D+01	
		15 8.66821D+01	17 8.73709D+01	19 8.77093D+01	21 8.75801D+01	24 8.04798D+01	
		25 8.33820D+01					
669	5.42474D+01	1 6.54312D-06	1.055000D+00 0.0	0.0	0.0		
669	5.42474D+01	1 6.54312D-06	1.055000D+00 0.0	0.0	0.0	1 1 .85582D-05	
669	5.42474D+01	1 1.26161D-06	1.055000D+00 0.0	0.0	0.0	2 7 .70982D-07	25 8 .07286D-01 25 9 .68177D-01
669	5.4247D+01	1 7.59191D+01	3 8.04166D+01	5 8.21080D+01	11 8.47782D+01	13 8.57855D+01	
		15 8.66803D+01	17 8.73678D+01	19 8.77051D+01	21 8.75784D+01	24 8.12276D+01	
		25 8.41893D+01					
670	5.42829D+01	1 5.83867D-06	1.055000D+00 0.0	0.0	0.0		
670	5.42829D+01	1 5.83867D-06	1.055000D+00 0.0	0.0	0.0	1 1 .73182D-05	
670	5.42829D+01	1 1.38932D-06	1.055000D+00 0.0	0.0	0.0	2 6 .70987D-07	25 8 .14431D-01 25 9 .67381D-01
670	5.4283D+01	1 7.59190D+01	3 8.04162D+01	5 8.21076D+01	11 8.47776D+01	13 8.57845D+01	
		15 8.66785D+01	17 8.73647D+01	19 8.77008D+01	21 8.75769D+01	24 8.19858D+01	
		25 8.50037D+01					
671	5.43183D+01	1 5.37239D-06	1.055000D+00 0.0	0.0	0.0		
671	5.43183D+01	1 5.37239D-06	1.055000D+00 0.0	0.0	0.0	1 1 .62407D-05	
671	5.43183D+01	1 1.28032D-06	1.055000D+00 0.0	0.0	0.0	2 6 .29267D-07	25 8 .21077D-01 25 9 .65931D-01
671	5.4318D+01	1 7.59189D+01	3 8.04159D+01	5 8.21071D+01	11 8.47769D+01	13 8.57835D+01	
		15 8.66767D+01	17 8.73617D+01	19 8.76966D+01	21 8.75756D+01	24 8.27538D+01	
		25 8.58248D+01					
672	5.43538D+01	1 4.85120D-06	1.055000D+00 0.0	0.0	0.0		
672	5.43538D+01	1 4.85120D-06	1.055000D+00 0.0	0.0	0.0	1 1 .51683D-05	
672	5.43538D+01	1 1.16737D-06	1.055000D+00 0.0	0.0	0.0	2 5 .81437D-07	25 8 .27131D-01 25 9 .63744D-01
672	5.4354D+01	1 7.59188D+01	3 8.04155D+01	5 8.21066D+01	11 8.47763D+01	13 8.57826D+01	

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                    15 8.66[illegible]  17 8.735860+01   19 8.769240+01   21 8.757450+01   24 8.353060+01
                    25 8.6[illegible]
673 5.438920+01   1 4.233650-0[illegible] .055000+00 0.0        0.0        0.0
673 5.438920+01   1 4.233650-06 .055000+00 0.0        0.0        0.0              1 1.406050-05
673 5.438920+01   1 9.978170-07 1.055000+00 0.0      0.0        0.0              2 5.112700-07   25 8.324750-01   25 9.607110-01
  673     5.4389D+01    1 7.591860+01   3 8.041520+01   5 8.210620+01   11 8.477560+01   13 8.578160+01
                    15 8.667310+01   17 8.735550+01   19 8.768830+01   21 8.757370+01   24 8.431570+01
                    25 8.748440+01
674 5.442470+01   1 3.973640-06 1.055000+00 0.0      0.0        0.0
674 5.442470+01   1 3.973640-06 1.055000+00 0.0      0.0        0.0              1 1.319130-05
674 5.442470+01   1 9.388170-07 1.055000+00 0.0      0.0        0.0              2 4.894160-07   25 8.375480-01   25 9.573680-01
  674     5.4425D+01    1 7.591950+01   3 8.041480+01   5 8.210570+01   11 8.477500+01   13 8.578060+01
                    15 8.667130+01   17 8.735240+01   19 8.768410+01   21 8.757300+01   24 8.510820+01
                    25 8.832190+01
675 5.446010+01   1 3.452870-06 1.055000+00 0.0      0.0        0.0
675 5.446010+01   1 3.452870-06 1.055000+00 0.0      0.0        0.0              1 1.220930-05
675 5.446010+01   1 8.219710-07 1.055000+00 0.0      0.0        0.0              2 4.362130-07   25 8.419890-01   25 9.533180-01
  675     5.4460D+01    1 7.591840+01   3 8.041440+01   5 8.210520+01   11 8.477430+01   13 8.577970+01
                    15 8.666950+01   17 8.734940+01   19 8.768010+01   21 8.757260+01   24 8.590770+01
                    25 8.916290+01
676 5.449550+01   1 3.202850-06 1.055000+00 0.0      0.0        0.0
676 5.449550+01   1 3.202850-06 1.055000+00 0.0      0.0        0.0              1 1.141080-05
676 5.449550+01   1 7.751060-07 1.055000+00 0.0      0.0        0.0              2 4.158780-07   25 8.461470-01   25 9.489790-01
  676     5.4496D+01    1 7.591830+01   3 8.041410+01   5 8.210480+01   11 8.477360+01   13 8.577870+01
                    15 8.666770+01   17 8.734630+01   19 8.767600+01   21 8.757240+01   24 8.671350+01
                    25 9.001010+01
677 5.453100+01   1 1.529860-05 1.055000+00 0.0      0.0        0.0
677 5.453100+01   2 1.673740-06 1.055000+00 0.0      0.0        0.0              1 1.474080-05
677 5.453100+01   1 5.144120-07 1.055000+00 0.0      0.0        0.0              2 3.093150-07   25 8.573630-01   25 9.541850-01
  677     5.4531D+01    1 7.591810+01   3 8.041370+01   5 8.210430+01   11 8.477300+01   13 8.577770+01
                    15 8.666580+01   17 8.734320+01   19 8.767200+01   21 8.757250+01   24 8.752690+01
                    25 9.086880+01
678 5.456650+01   1 3.086080-05 1.055000+00 0.0      0.0        0.0
678 5.456650+01   2 3.208220-06 1.055000+00 0.0      0.0        0.0              1 2.023400-05
678 5.456650+01   1 1.170540-06 1.055000+00 0.0      0.0        0.0              2 5.803580-07   25 8.809840-01   25 9.695100-01
  678     5.4567D+01    1 7.591800+01   3 8.041330+01   5 8.210380+01   11 8.477230+01   13 8.577670+01
                    15 8.666400+01   17 8.734020+01   19 8.766800+01   21 8.757280+01   24 8.834940+01
                    25 9.174990+01
679 5.460200+01   1 1.919990-05 1.055000+00 0.0      0.0        0.0
679 5.460200+01   2 2.202090-06 1.055000+00 0.0      0.0        0.0              1 1.830870-05
679 5.460200+01   1 8.788520-07 1.055000+00 0.0      0.0        0.0              2 4.115390-07   25 8.971860-01   25 9.[illegible]
  679     5.4602D+01    1 7.591790+01   3 8.041300+01   5 8.210330+01   11 8.477160+01   13 8.577570+01
                    15 8.666220+01   17 8.733710+01   19 8.766400+01   21 8.757230+01   24 8.918330+01
                    25 9.264710+01
680 5.463750+01   1 1.241360-05 1.055000+00 0.0      0.0        0.0
680 5.463750+01   2 1.591240-06 1.055000+00 0.0      0.0        0.0              1 1.577860-05
680 5.463750+01   1 6.389310-07 1.055000+00 0.0      0.0        0.0              2 2.937630-07   25 9.096890-01   25 9.818860-01
  680     5.4637D+01    1 7.591770+01   3 8.041260+01   5 8.210280+01   11 8.477100+01   13 8.577470+01
                    15 8.666040+01   17 8.733400+01   19 8.766010+01   21 8.757400+01   24 9.002910+01
                    25 9.355680+01
681 5.467300+01   1 8.920790-06 1.055000+00 0.0      0.0        0.0
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681 5.467300+01   1 1.923040-06 1.055000+00 0.0      0.0        0.0              2 8.846780-07   25 9.200110-01   25 9.833720-01
  681     5.4673D+01    1 7.591760+01   3 8.041220+01   5 8.210240+01   11 8.477030+01   13 8.577370+01
                    15 8.665850+01   17 8.733100+01   19 8.765620+01   21 8.757500+01   24 9.088690+01
                    25 9.447680+01
682 5.470840+01   1 6.711720-06 1.055000+00 0.0      0.0        0.0
682 5.470840+01   1 6.711720-06 1.055000+00 0.0      0.0        0.0              1 1.434460-05
682 5.470840+01   1 1.568500-06 1.055000+00 0.0      0.0        0.0              2 7.235360-07   25 9.287430-01   25 9.830380-01
  682     5.4708D+01    1 7.591750+01   3 8.041180+01   5 8.210190+01   11 8.476960+01   13 8.577270+01
                    15 8.665670+01   17 8.732790+01   19 8.765240+01   21 8.757620+01   24 9.175590+01
                    25 9.540560+01
683 5.474390+01   1 5.409820-06 1.055000+00 0.0      0.0        0.0
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  683     5.4744D+01    1 7.591730+01   3 8.041140+01   5 8.210140+01   11 8.476890+01   13 8.577160+01
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                    15 8.66548D+01   17 8.73248D+01   19 8.76486D+01   21 8.75776D+01   24 9.26353  01
                    25 9.63419D+01
684 5.47794D+01   1 4.853160-06 1.05500D+00 0.0          0.0          0.0
684 5.47794D+01   1 1.353160-06 1.05500D+00 0.0          0.0          0.0              1 1.263090-05
684 5.47794D+01   1 1.233630-06 1.05500D+00 0.0          0.0          0.0              2 5.534060-07   25 9.431340-01   25 9.78945D-01
  684     5.4779D+01    1 7.59172D+01   3 8.04111D+01   5 8.21009D+01   11 8.47682D+01   13 8.57706D+01
                    15 8.66530D+01   17 8.73218D+01   19 8.76448D+01   21 8.75793D+01   24 9.35245D+01
                    25 9.72050D+01
685 5.48149D+01   1 4.154560-06 1.05500D+00 0.0          0.0          0.0
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685 5.48149D+01   1 1.040350-06 1.05500D+00 0.0          0.0          0.0              2 4.612470-07   25 9.490430-01   25 9.755290-01
  685     5.4815D+01    1 7.59171D+01   3 8.04107D+01   5 8.21004D+01   11 8.47675D+01   13 8.57696D+01
                    15 8.66511D+01   17 8.73187D+01   19 8.76411D+01   21 8.75812D+01   24 9.44225D+01
                    25 9.82340D+01
686 5.48504D+01   1 3.667820-06 1.05500D+00 0.0          0.0          0.0
686 5.48504D+01   1 3.667820-06 1.05500D+00 0.0          0.0          0.0              1 1.095620-05
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  686     5.4850D+01    1 7.59169D+01   3 8.04103D+01   5 8.20999D+01   11 8.47668D+01   13 8.57686D+01
                    15 8.66493D+01   17 8.73157D+01   19 8.76374D+01   21 8.75834D+01   24 9.53287D+01
                    25 9.91884D+01
687 5.48859D+01   1 3.231580-06 1.05500D+00 0.0          0.0          0.0
687 5.48859D+01   1 3.231580-06 1.05500D+00 0.0          0.0          0.0              1 1.020580-05
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  687     5.4886D+01    1 7.59168D+01   3 8.04099D+01   5 8.20994D+01   11 8.47661D+01   13 8.57675D+01
                    15 8.66474D+01   17 8.73126D+01   19 8.76338D+01   21 8.75857D+01   24 9.62423D+01
                    25 1.00147D+02
688 5.49213D+01   1 2.937240-06 1.05500D+00 0.0          0.0          0.0
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  688     5.4921D+01    1 7.59166D+01   3 8.04095D+01   5 8.20988D+01   11 8.47654D+01   13 8.57665D+01
                    15 8.66455D+01   17 8.73096D+01   19 8.76302D+01   21 8.75883D+01   24 9.71627D+01
                    25 1.01111D+02
689 5.49568D+01   1 2.469750-06 1.05500D+00 0.0          0.0          0.0
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  689     5.4957D+01    1 7.59165D+01   3 8.04091D+01   5 8.20983D+01   11 8.47646D+01   13 8.57655D+01
                    15 8.66437D+01   17 8.73065D+01   19 8.76267D+01   21 8.75912D+01   24 9.80891D+01
                    25 1.02078D+02
690 5.49923D+01   1 2.166310-06 1.05500D+00 0.0          0.0          0.0
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  690     5.4992D+01    1 7.59164D+01   3 8.04087D+01   5 8.20978D+01   11 8.47639D+01   13 8.57644D+01
                    15 8.66418D+01   17 8.73035D+01   19 8.76233D+01   21 8.75943D+01   24 9.90210D+01
                    25 1.03048D+02
691 5.50278D+01   1 2.840900-06 1.05500D+00 0.0          0.0          0.0
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691 5.50278D+01   1 6.810460-07 1.05500D+00 0.0          0.0          0.0              2 3.463460-07   25 9.742220-01   24 9.46309D-01
  691     5.5027D+01    1 7.59162D+01   3 8.04083D+01   5 8.20973D+01   11 8.47632D+01   13 8.57634D+01
                    15 8.66399D+01   17 8.73004D+01   19 8.76198D+01   21 8.75976D+01   24 9.99581D+01
                    25 1.04022D+02
692 5.50634D+01   1 2.260640-06 1.05500D+00 0.0          0.0          0.0
692 5.50634D+01   1 2.260640-06 1.05500D+00 0.0          0.0          0.0              1 7.502820-06
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  692     5.5063D+01    1 7.59161D+01   3 8.04079D+01   5 8.20968D+01   11 8.47625D+01   13 8.57623D+01
                    15 8.66381D+01   17 8.72974D+01   19 8.76165D+01   21 8.76011D+01   24 1.00904D+02
                    25 1.05094D+02
693 5.50992D+01   1 1.793090-06 1.05500D+00 0.0          0.0          0.0
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  693     5.5099D+01    1 7.59159D+01   3 8.04075D+01   5 8.20962D+01   11 8.47617D+01   13 8.57612D+01
                    15 8.66362D+01   17 8.72944D+01   19 8.76131D+01   21 8.76049D+01   24 1.01858D+02
                    25 1.05992D+02
694 5.51351D+01   1 1.448740-06 1.05500D+00 0.0          0.0          0.0
694 5.51351D+01   1 1.448740-06 1.05500D+00 0.0          0.0          0.0              1 6.382260-06
694 5.51351D+01   1 3.669060-07 1.05500D+00 0.0          0.0          0.0              2 2.041570-07   25 9.954370-01   24 9.45075D-01
  694     5.5135D+01    1 7.59158D+01   3 8.04070D+01   5 8.20957D+01   11 8.47610D+01   13 8.57601D+01
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                    15 8.66343D+01   17 8.72913D+01   19 8.76099D+01   21 8.76090D+01   24 1.02820D+02
                    25 1.06984D+02
695 5.51713D+01   1 1.27629D-06 1.05500D+00 0.0        0.0        0.0
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695 5.51713D+01   1 2.99274D-07 1.05500D+00 0.0        0.0        0.0          2 1.81350D-07   25 1.00263D+00   24 9.44653D-01
  695     5.5171D+01    1 7.59156D+01    3 8.04066D+01    5 8.20951D+01   11 8.47602D+01   13 8.57591D+01
                    15 8.66323D+01   17 8.72882D+01   19 8.76066D+01   21 8.76133D+01   24 1.03792D+02
                    25 1.07990D+02
696 5.52076D+01   1 1.08688D-06 1.05500D+00 0.0        0.0        0.0
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696 5.52076D+01   1 2.38795D-07 1.05500D+00 0.0        0.0        0.0          2 1.51878D-07   25 1.00978D+00   24 9.44242D-01
  696     5.5208D+01    1 7.59155D+01    3 8.04062D+01    5 8.20946D+01   11 8.47595D+01   13 8.57580D+01
                    15 8.66304D+01   17 8.72851D+01   19 8.76034D+01   21 8.76179D+01   24 1.04772D+02
                    25 1.09000D+02
697 5.52442D+01   1 1.13725D-06 1.05500D+00 0.0        0.0        0.0
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697 5.52442D+01   1 2.13324D-07 1.05500D+00 0.0        0.0        0.0          2 1.47774D-07   25 1.01740D+00   24 9.43867D-01
  697     5.5244D+01    1 7.59153D+01    3 8.04058D+01    5 8.20940D+01   11 8.47587D+01   13 8.57568D+01
                    15 8.66284D+01   17 8.72821D+01   19 8.76002D+01   21 8.76228D+01   24 1.05760D+02
                    25 1.10017D+02
698 5.52810D+01   1 1.14526D-06 1.05500D+00 0.0        0.0        0.0
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698 5.52810D+01   1 1.07741D-07 1.05500D+00 0.0        0.0        0.0          2 1.19208D-07   25 1.02485D+00   24 9.43497D-01
  698     5.5281D+01    1 7.59152D+01    3 8.04053D+01    5 8.20935D+01   11 8.47579D+01   13 8.57557D+01
                    15 8.66265D+01   17 8.72790D+01   19 8.75971D+01   21 8.76279D+01   24 1.06758D+02
                    25 1.11042D+02
699 5.53180D+01   1 1.18282D-06 1.05500D+00 0.0        0.0        0.0
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699 5.53180D+01   1 1.18518D-07 1.05500D+00 0.0        0.0        0.0          2 1.09080D-07   25 1.03278D+00   24 9.43163D-01
  699     5.5318D+01    1 7.59150D+01    3 8.04049D+01    5 8.20929D+01   11 8.47571D+01   13 8.57546D+01
                    15 8.66245D+01   17 8.72758D+01   19 8.75941D+01   21 8.76333D+01   24 1.07765D+02
                    25 1.12075D+02
700 5.53553D+01   1 1.18475D-06 1.05500D+00 0.0        0.0        0.0
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700 5.53553D+01   1 9.24457D-08 1.05500D+00 0.0        0.0        0.0          2 1.11761D-07   25 1.04056D+00   24 9.42826D-01
  700     5.5355D+01    1 7.59149D+01    3 8.04044D+01    5 8.20923D+01   11 8.47563D+01   13 8.57534D+01
                    15 8.66225D+01   17 8.72727D+01   19 8.75910D+01   21 8.76390D+01   24 1.08781D+02
                    25 1.13116D+02
701 5.53929D+01   1 1.21181D-06 1.05500D+00 0.0        0.0        0.0
701 5.53929D+01   1 1.21181D-06 1.05500D+00 0.0        0.0        0.0          1 3.51172D-06
701 5.53929D+01   1 9.14333D-08 1.05500D+00 0.0        0.0        0.0          2 1.00439D-07   25 1.04884D+00   24 9.42531D-01
  701     5.5393D+01    1 7.59147D+01    3 8.04040D+01    5 8.20917D+01   11 8.47555D+01   13 8.57523D+01
                    15 8.66205D+01   17 8.72696D+01   19 8.75881D+01   21 8.76450D+01   24 1.09807D+02
                    25 1.14164D+02
702 5.54309D+01   1 1.20214D-06 1.05500D+00 0.0        0.0        0.0
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  702     5.5431D+01    1 7.59145D+01    3 8.04035D+01    5 8.20911D+01   11 8.47547D+01   13 8.57511D+01
                    15 8.66184D+01   17 8.72664D+01   19 8.75852D+01   21 8.76513D+01   24 1.10841D+02
                    25 1.15221D+02
703 5.54691D+01   1 1.21322D-06 1.05500D+00 0.0        0.0        0.0
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703 5.54691D+01   1 8.70742D-08 1.05500D+00 0.0        0.0        0.0          2 9.58457D-08   25 1.06561D+00   24 9.41982D-01
  703     5.5469D+01    1 7.59144D+01    3 8.04030D+01    5 8.20905D+01   11 8.47538D+01   13 8.57499D+01
                    15 8.66164D+01   17 8.72632D+01   19 8.75823D+01   21 8.76579D+01   24 1.11885D+02
                    25 1.16287D+02
704 5.55076D+01   1 1.20164D-06 1.05500D+00 0.0        0.0        0.0
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704 5.55076D+01   1 1.18355D-07 1.05500D+00 0.0        0.0        0.0          2 1.21748D-07   25 1.07422D+00   24 9.41730D-01
  704     5.5508D+01    1 7.59142D+01    3 8.04026D+01    5 8.20899D+01   11 8.47530D+01   13 8.57487D+01
                    15 8.66143D+01   17 8.72600D+01   19 8.75795D+01   21 8.76648D+01   24 1.12939D+02
                    25 1.17361D+02
705 5.55465D+01   1 1.04422D-05 1.05500D+00 0.0        0.0        0.0
705 5.55465D+01   2 9.59381D-07 1.05500D+00 0.0        0.0        0.0          1 4.38743D-06
705 5.55465D+01   1 4.28485D-07 1.05500D+00 0.0        0.0        0.0          2 1.88921D-07   25 1.07623D+00   24 9.40727D-01
  705     5.5546D+01    1 7.59140D+01    3 8.04021D+01    5 8.20893D+01   11 8.47521D+01   13 8.57475D+01
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                    15 8.66122D+01   17 8.72568D+01   19 8.75767D+01   21 8.76720D+01   24 1.14001D+02
                    25 1.18437D+02
706 5.55857D+01   1 1.09120D-05 1.05500D+00 0.0          0.0          0.0
706 5.55857D+01   2 1.05130D-06 1.05500D+00 0.0          0.0          0.0          1 5.74221D-06
706 5.55857D+01   1 5.01354D-07 1.05500D+00 0.0          0.0          0.0          2 2.13105D-07   25 1.07842D+00   24 9.39151D-01
    706      5.5586D+01    1 7.59139D+01   3 8.04016D+01   5 8.20887D+01   11 8.47513D+01   13 8.57462D+01
                    15 8.66101D+01   17 8.72536D+01   19 8.75740D+01   21 8.76796D+01   24 1.15072D+02
                    25 1.19516D+02
707 5.56255D+01   1 7.40836D-06 1.05500D+00 0.0          0.0          0.0
707 5.56255D+01   1 7.40836D-06 1.05500D+00 0.0          0.0          0.0          1 5.11843D-06
707 5.56255D+01   1 1.25459D-06 1.05500D+00 0.0          0.0          0.0          2 6.05058D-07   25 1.08448D+00   24 9.38007D-01
    707      5.5625D+01    1 7.59137D+01   3 8.04011D+01   5 8.20880D+01   11 8.47504D+01   13 8.57450D+01
                    15 8.66079D+01   17 8.72503D+01   19 8.75714D+01   21 8.76875D+01   24 1.16151D+02
                    25 1.20600D+02
708 5.56657D+01   1 5.67476D-06 1.05500D+00 0.0          0.0          0.0
708 5.56657D+01   1 5.67476D-06 1.05500D+00 0.0          0.0          0.0          1 4.65834D-06
708 5.56657D+01   1 1.01555D-06 1.05500D+00 0.0          0.0          0.0          2 5.13092D-07   25 1.09296D+00   24 9.37625D-01
    708      5.5666D+01    1 7.59135D+01   3 8.04006D+01   5 8.20874D+01   11 8.47495D+01   13 8.57437D+01
                    15 8.66058D+01   17 8.72471D+01   19 8.75688D+01   21 8.76957D+01   24 1.17241D+02
                    25 1.21693D+02
709 5.57064D+01   1 4.63455D-06 1.05500D+00 0.0          0.0          0.0
709 5.57064D+01   1 4.63455D-06 1.05500D+00 0.0          0.0          0.0          1 4.27850D-06
709 5.57064D+01   1 8.77117D-07 1.05500D+00 0.0          0.0          0.0          2 4.57497D-07   25 1.10263D+00   24 9.37418D-01
    709      5.5706D+01    1 7.59133D+01   3 8.04000D+01   5 8.20867D+01   11 8.47485D+01   13 8.57424D+01
                    15 8.66035D+01   17 8.72437D+01   19 8.75663D+01   21 8.77044D+01   24 1.18340D+02
                    25 1.22796D+02
710 5.57477D+01   1 4.21509D-06 1.05500D+00 0.0          0.0          0.0
710 5.57477D+01   1 4.21509D-06 1.05500D+00 0.0          0.0          0.0          1 3.95216D-06
710 5.57477D+01   1 8.32840D-07 1.05500D+00 0.0          0.0          0.0          2 4.34953D-07   25 1.11297D+00   24 9.37368D-01
    710      5.5748D+01    1 7.59131D+01   3 8.03995D+01   5 8.20860D+01   11 8.47476D+01   13 8.57411D+01
                    15 8.66013D+01   17 8.72404D+01   19 8.75639D+01   21 8.77134D+01   24 1.19449D+02
                    25 1.23909D+02
711 5.57896D+01   1 4.22183D-06 1.05500D+00 0.0          0.0          0.0
711 5.57896D+01   1 4.22183D-06 1.05500D+00 0.0          0.0          0.0          1 3.72699D-06
711 5.57896D+01   1 8.84264D-07 1.05500D+00 0.0          0.0          0.0          2 4.43753D-07   25 1.12355D+00   24 9.37371D-01
    711      5.5790D+01    1 7.59129D+01   3 8.03990D+01   5 8.20853D+01   11 8.47466D+01   13 8.57397D+01
                    15 8.65990D+01   17 8.72370D+01   19 8.75615D+01   21 8.77228D+01   24 1.20569D+02
                    25 1.25032D+02
712 5.58320D+01   1 3.80153D-06 1.05500D+00 0.0          0.0          0.0
712 5.58320D+01   1 3.80153D-06 1.05500D+00 0.0          0.0          0.0          1 3.64469D-06
712 5.58320D+01   1 8.13475D-07 1.05500D+00 0.0          0.0          0.0          2 4.11769D-07   25 1.13460D+00   24 9.37440D-01
    712      5.5832D+01    1 7.59127D+01   3 8.03984D+01   5 8.20846D+01   11 8.47457D+01   13 8.57383D+01
                    15 8.65967D+01   17 8.72336D+01   19 8.75592D+01   21 8.77326D+01   24 1.21699D+02
                    25 1.26167D+02
713 5.58750D+01   1 4.17204D-06 1.05500D+00 0.0          0.0          0.0
713 5.58750D+01   1 4.17204D-06 1.05500D+00 0.0          0.0          0.0          1 3.71132D-06
713 5.58750D+01   1 8.47945D-07 1.05500D+00 0.0          0.0          0.0          2 4.22493D-07   25 1.14549D+00   24 9.37487D-01
    713      5.5875D+01    1 7.59125D+01   3 8.03979D+01   5 8.20839D+01   11 8.47447D+01   13 8.57369D+01
                    15 8.65944D+01   17 8.72302D+01   19 8.75570D+01   21 8.77429D+01   24 1.22840D+02
                    25 1.27313D+02
714 5.59186D+01   1 3.98624D-06 1.05500D+00 0.0          0.0          0.0
714 5.59186D+01   1 3.98624D-06 1.05500D+00 0.0          0.0          0.0          1 3.65885D-06
714 5.59186D+01   1 8.33741D-07 1.05500D+00 0.0          0.0          0.0          2 4.10265D-07   25 1.15662D+00   24 9.37536D-01
    714      5.5919D+01    1 7.59123D+01   3 8.03973D+01   5 8.20831D+01   11 8.47436D+01   13 8.57355D+01
                    15 8.65920D+01   17 8.72268D+01   19 8.75548D+01   21 8.77535D+01   24 1.23991D+02
                    25 1.28469D+02
715 5.59593D+01   1 1.34767D-06 1.05500D+00 0.0          0.0          0.0
715 5.59593D+01   1 1.34767D-06 1.05500D+00 0.0          0.0          0.0          1 2.10624D-06
715 5.59593D+01   1 1.52678D-07 1.05500D+00 0.0          0.0          0.0          2 1.61651D-07   25 1.08078D+00   24 8.65432D-01
    715      5.5959D+01    1 7.59122D+01   3 8.03967D+01   5 8.20824D+01   11 8.47427D+01   13 8.57342D+01
                    15 8.65898D+01   17 8.72236D+01   19 8.75529D+01   21 8.77637D+01   24 1.25064D+02
                    25 1.29550D+02
716 5.60000D+01   1 4.21808D-06 1.05500D+00 0.0          0.0          0.0
716 5.60000D+01   1 4.21808D-06 1.05500D+00 0.0          0.0          0.0          1 3.03060D-06
716 5.60000D+01   1 7.45235D-07 1.05500D+00 0.0          0.0          0.0          2 3.59000D-07   25 1.07657D+00   24 8.55489D-01
    716      5.6000D+01    1 7.59120D+01   3 8.03962D+01   5 8.20817D+01   11 8.47417D+01   13 8.57329D+01
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15 8 658750+01 17 8 722040+01 19 8 755110+01 21 8 777410+01 24 1 261340+02
25 1 306270+02

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.16 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 716 TIME STEPS, TIME = 5.600000D+01

GROSS GRID		1
	FINE GRID	1
	DISTANCE	0.0
1	1	0.0	75191
	2	0.03	78115
2	3	0.06	80140
	4	0.08	81124
3	5	0.10	82108
	6	0.57	82154
	7	1.04	82199
	8	1.51	83143
	9	1.98	83187
	10	2.45	84131
4	11	2.92	84174
	12	3.14	85125
5	13	3.35	85173
	14	3.57	86118
6	15	3.79	86159
	16	4.01	86194
7	17	4.23	87122
	18	4.45	87142
8	19	4.67	87155
	20	4.89	87164
9	21	5.10	87177
	22	5.18	96140
	23	5.25	108117
10	24	5.32	126113
11	25	5.35	130163

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 4.07191810D-02

ELAPSED CPU TIME IS 8.62 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.30627D+02 (+-0.1 PERCENT)

MAX TEMP APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.59120D+01 (+-0.1 PERCENT)

MIN TEMP APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
717	5.60448D+01	1 8	4.15300D-06	1.05500D+00	0.0	0.0	0.0				
717	5.60448D+01	1 8	4.15300D-06	1.05500D+00	0.0	0.0	0.0				
717	5.60448D+01	1 1	4.57440D-06	1.05500D+00	0.0	0.0	0.0	1 4	2.44710D-06		
								2 6	2.28605D-07	25 1.17728D+00	24 9.29721D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
717	5.60450D+01	1 7 5.91180D+01	3 8 5.03950D+01	5 8 4.20810D+01	11 8 4.74070D+01	13 8 4.57314D+01	
		15 8 4.65851D+01	17 8 4.72169D+01	19 8 4.75493D+01	21 8 4.77859D+01	24 1 4.27307D+02	
		25 1 4.31804D+02					
718	5.60906D+01	1 1 6.17568D-06	1.05500D+00 0.0	0.0	0.0		
718	5.60906D+01	1 1 6.17568D-06	1.05500D+00 0.0	0.0	0.0	1 3.22173D-06	
718	5.60906D+01	1 4 4.80488D-07	1.05500D+00 0.0	0.0	0.0	2 2.56916D-07	25 1.20045D+00 24 9.37783D-01
718	5.60910D+01	1 7 5.91150D+01	3 8 5.03950D+01	5 8 4.20820D+01	11 8 4.73960D+01	13 8 4.57299D+01	
		15 8 4.65826D+01	17 8 4.72134D+01	19 8 4.75475D+01	21 8 4.77982D+01	24 1 4.28501D+02	
		25 1 4.33004D+02					
719	5.61369D+01	1 2 4.85517D-06	1.05500D+00 0.0	0.0	0.0		
719	5.61369D+01	1 2 4.85517D-06	1.05500D+00 0.0	0.0	0.0	1 3.34162D-06	
719	5.61369D+01	1 5 5.26140D-07	1.05500D+00 0.0	0.0	0.0	2 2.89998D-07	25 1.21312D+00 24 9.37954D-01
719	5.61370D+01	1 7 5.91130D+01	3 8 5.03943D+01	5 8 4.20794D+01	11 8 4.73840D+01	13 8 4.57283D+01	
		15 8 4.65800D+01	17 8 4.72099D+01	19 8 4.75459D+01	21 8 4.78109D+01	24 1 4.29706D+02	
		25 1 4.34217D+02					
720	5.61839D+01	1 3 1.11511D-06	1.05500D+00 0.0	0.0	0.0		
720	5.61839D+01	1 3 1.11511D-06	1.05500D+00 0.0	0.0	0.0	1 3.42540D-06	
720	5.61839D+01	1 6 5.52028D-07	1.05500D+00 0.0	0.0	0.0	2 3.17878D-07	25 1.22543D+00 24 9.38166D-01
720	5.61840D+01	1 7 5.91110D+01	3 8 5.03937D+01	5 8 4.20785D+01	11 8 4.73730D+01	13 8 4.57267D+01	
		15 8 4.65775D+01	17 8 4.72063D+01	19 8 4.75444D+01	21 8 4.78240D+01	24 1 4.30923D+02	
		25 1 4.35443D+02					
721	5.62314D+01	1 3 6.86643D-06	1.05500D+00 0.0	0.0	0.0		
721	5.62314D+01	1 3 6.86643D-06	1.05500D+00 0.0	0.0	0.0	1 3.54094D-06	
721	5.62314D+01	1 7 3.98813D-07	1.05500D+00 0.0	0.0	0.0	2 3.45172D-07	25 1.23731D+00 24 9.38256D-01
721	5.62310D+01	1 7 5.91090D+01	3 8 5.03930D+01	5 8 4.20777D+01	11 8 4.73610D+01	13 8 4.57251D+01	
		15 8 4.65749D+01	17 8 4.72027D+01	19 8 4.75430D+01	21 8 4.78377D+01	24 1 4.32151D+02	
		25 1 4.36680D+02					
722	5.62796D+01	1 4 2.43441D-06	1.05500D+00 0.0	0.0	0.0		
722	5.62796D+01	1 4 2.43441D-06	1.05500D+00 0.0	0.0	0.0	1 3.68885D-06	
722	5.62796D+01	1 6 4.40039D-07	1.05500D+00 0.0	0.0	0.0	2 3.78316D-07	25 1.24888D+00 24 9.38253D-01
722	5.62800D+01	1 7 5.91060D+01	3 8 5.03924D+01	5 8 4.20768D+01	11 8 4.73500D+01	13 8 4.57235D+01	
		15 8 4.65722D+01	17 8 4.71991D+01	19 8 4.75417D+01	21 8 4.78517D+01	24 1 4.33391D+02	
		25 1 4.37529D+02					
723	5.63283D+01	1 4 1.93610D-06	1.05500D+00 0.0	0.0	0.0		
723	5.63283D+01	1 4 1.93610D-06	1.05500D+00 0.0	0.0	0.0	1 3.73381D-06	
723	5.63283D+01	1 8 3.12030D-07	1.05500D+00 0.0	0.0	0.0	2 3.73857D-07	25 1.26063D+00 24 9.38236D-01
723	5.63280D+01	1 7 5.91040D+01	3 8 5.03917D+01	5 8 4.20760D+01	11 8 4.73380D+01	13 8 4.57219D+01	
		15 8 4.65695D+01	17 8 4.71955D+01	19 8 4.75406D+01	21 8 4.78662D+01	24 1 4.34643D+02	
		25 1 4.39190D+02					
724	5.63777D+01	1 4 4.85100D-06	1.05500D+00 0.0	0.0	0.0		
724	5.63777D+01	1 4 4.85100D-06	1.05500D+00 0.0	0.0	0.0	1 3.84086D-06	
724	5.63777D+01	1 8 7.20330D-07	1.05500D+00 0.0	0.0	0.0	2 3.88921D-07	25 1.27235D+00 24 9.38199D-01
724	5.63780D+01	1 7 5.91010D+01	3 8 5.03900D+01	5 8 4.20751D+01	11 8 4.73250D+01	13 8 4.57202D+01	
		15 8 4.65668D+01	17 8 4.71919D+01	19 8 4.75396D+01	21 8 4.78812D+01	24 1 4.35906D+02	
		25 1 4.40462D+02					
725	5.64277D+01	1 4 5.42890D-06	1.05500D+00 0.0	0.0	0.0		
725	5.64277D+01	1 4 5.42890D-06	1.05500D+00 0.0	0.0	0.0	1 3.90710D-06	
725	5.64277D+01	1 8 8.11116D-07	1.05500D+00 0.0	0.0	0.0	2 3.92606D-07	25 1.28423D+00 24 9.38162D-01
725	5.64280D+01	1 7 5.90990D+01	3 8 5.03903D+01	5 8 4.20742D+01	11 8 4.73130D+01	13 8 4.57185D+01	
		15 8 4.65641D+01	17 8 4.71883D+01	19 8 4.75388D+01	21 8 4.78967D+01	24 1 4.37181D+02	
		25 1 4.41746D+02					
726	5.64783D+01	1 4 [illegible]	06 1.05500D+00 0.0	0.0	0.0		
726	5.64783D+01	1 4 4.30050D-06	1.05500D+00 0.0	0.0	0.0	1 3.93097D-06	
726	5.64783D+01	1 8 7.76830D-07	1.05500D+00 0.0	0.0	0.0	2 3.89600D-07	25 1.29640D+00 24 9.38147D-01
726	5.64780D+01	1 7 5.90960D+01	3 8 5.03850D+01	[illegible]			

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                    15 8.655613D+01   17 8.718470D+01   19 8.753810+01   21 8.791260+01   24 1.384680+02
                    25 1.430430+02
727 5.65295D+01   1 1.213200-05 1.055000+00 0.0          0.0          0.0
727 5.65295D+01   2 1.106820-06 1.055000+00 0.0          0.0          0.0          1 5.953770-06
727 5.65295D+01   1 9.373010-07 1.055000+00 0.0          0.0          0.0          2 2.773950-07   25 1.303630+00   24 9.275700-01
  727     5.6530D+01     1 7.590340+01   3 8.038880+01   5 8.207230+01   11 8.472870+01   13 8.571490+01
                    15 8.655850+01   17 8.718110+01   19 8.753760+01   21 8.792900+01   24 1.397660+02
                    25 1.443460+02
728 5.65815D+01   1 9.440930-05 1.055000+00 0.0          0.0          0.0          1 2.566140-05
728 5.65815D+01   2 7.986940-06 1.055000+00 0.0          0.0          0.0          2 1.947150-06   24 1.299690+00   24 9.299020-01
728 5.65815D+01   1 6.454220-06 1.055000+00 0.0          0.0          0.0
  728     5.6581D+01     1 7.590910+01   3 8.038800+01   5 8.207130+01   11 8.472740+01   13 8.571310+01
                    15 8.655570+01   17 8.717750+01   19 8.753730+01   21 8.794600+01   24 1.410660+02
                    25 1.456030+02
729 5.66345D+01   1 5.359020-05 1.055000+00 0.0          0.0          0.0          1 2.270460-05
729 5.66345D+01   2 4.928020-06 1.055000+00 0.0          0.0          0.0          2 1.243630-06   24 1.300660+00   24 9.220240-01
729 5.66345D+01   1 4.291420-06 1.055000+00 0.0          0.0          0.0
  729     5.6635D+01     1 7.590880+01   3 8.038730+01   5 8.207030+01   11 8.472600+01   13 8.571130+01
                    15 8.655270+01   17 8.717380+01   19 8.753720+01   21 8.796350+01   24 1.423670+02
                    25 1.468450+02
730 5.66892D+01   1 3.657250-05 1.055000+00 0.0          0.0          0.0          1 2.193030-05
730 5.66892D+01   2 3.623270-06 1.055000+00 0.0          0.0          0.0          2 9.434510-07   24 1.308930+00   24 9.194060-01
730 5.66892D+01   1 3.422380-06 1.055000+00 0.0          0.0          0.0
  730     5.6683D+01     1 7.590850+01   3 8.038650+01   5 8.206930+01   11 8.472460+01   13 8.570940+01
                    15 8.654980+01   17 8.717010+01   19 8.753720+01   21 8.798190+01   24 1.436760+02
                    25 1.480950+02
731 5.67457D+01   1 2.961540-05 1.055000+00 0.0          0.0          0.0          1 2.182110-05
731 5.67457D+01   2 3.043560-06 1.055000+00 0.0          0.0          0.0          2 8.016750-07   24 1.320770+00   24 9.192750-01
731 5.67457D+01   1 3.038240-06 1.055000+00 0.0          0.0          0.0
  731     5.6746D+01     1 7.590820+01   3 8.038560+01   5 8.206820+01   11 8.472320+01   13 8.570740+01
                    15 8.654670+01   17 8.716630+01   19 8.753740+01   21 8.800130+01   24 1.449960+02
                    25 1.493590+02
732 5.68040D+01   1 2.661880-05 1.055000+00 0.0          0.0          0.0          1 2.185680-05
732 5.68040D+01   2 2.745830-06 1.055000+00 0.0          0.0          0.0          2 7.299580-07   24 1.334140+00   24 9.201230-01
732 5.68040D+01   1 2.882440-06 1.055000+00 0.0          0.0          0.0
  732     5.6804D+01     1 7.590790+01   3 8.038470+01   5 8.206710+01   11 8.472160+01   13 8.570530+01
                    15 8.654350+01   17 8.716250+01   19 8.753790+01   21 8.802150+01   24 1.463300+02
                    25 1.506430+02
733 5.68643D+01   1 2.490650-05 1.055000+00 0.0          0.0          0.0          1 2.176980-05
733 5.68643D+01   2 2.536540-06 1.055000+00 0.0          0.0          0.0          2 6.862040-07   24 1.348250+00   24 9.213750-01
733 5.68643D+01   1 2.823890-06 1.055000+00 0.0          0.0          0.0
  733     5.6864D+01     1 7.590760+01   3 8.038380+01   5 8.206590+01   11 8.472010+01   13 8.570320+01
                    15 8.654020+01   17 8.715860+01   19 8.753860+01   21 8.804280+01   24 1.476790+02
                    25 1.519460+02
734 5.69265D+01   1 2.422780-05 1.055000+00 0.0          0.0          0.0          1 2.161240-05
734 5.69265D+01   2 2.402050-06 1.055000+00 0.0          0.0          0.0          2 6.567650-07   24 1.362710+00   24 9.227540-01
734 5.69265D+01   1 2.798270-06 1.055000+00 0.0          0.0          0.0
  734     5.6926D+01     1 7.590730+01   3 8.038290+01   5 8.206470+01   11 8.471840+01   13 8.570100+01
                    15 8.653680+01   17 8.715470+01   19 8.753960+01   21 8.806500+01   24 1.490410+02
                    25 1.532700+02
735 5.69904D+01   1 2.327660-05 1.055000+00 0.0          0.0          0.0          1 2.122110-05
735 5.69904D+01   2 2.250190-06 1.055000+00 0.0          0.0          0.0          2 6.342180-07   24 1.377350+00   24 9.241280-01
735 5.69904D+01   1 2.811930-06 1.055000+00 0.0          0.0          0.0
  735     5.6990D+01     1 7.590690+01   3 8.038190+01   5 8.206350+01   11 8.471670+01   13 8.569870+01
                    15 8.653330+01   17 8.715070+01   19 8.754090+01   21 8.808810+01   24 1.504190+02
                    25 1.546140+02
736 5.70562D+01   1 1.881010-05 1.055000+00 0.0          0.0          0.0          1 1.997310-05
736 5.70562D+01   2 1.849890-06 1.055000+00 0.0          0.0          0.0          2 5.238310-07   24 1.392570+00   24 9.257960-01
736 5.70562D+01   1 2.410290-06 1.055000+00 0.0          0.0          0.0
  736     5.7056D+01     1 7.590660+01   3 8.038090+01   5 8.206220+01   11 8.471490+01   13 8.569630+01
                    15 8.652980+01   17 8.714670+01   19 8.754260+01   21 8.811220+01   24 1.518110+02
                    25 1.559810+02
737 5.71237D+01   1 1.925960-05 1.055000+00 0.0          0.0          0.0          1 1.930170-05
737 5.71237D+01   2 1.796000-06 1.055000+00 0.0          0.0          0.0          2 5.136440-07   24 1.407890+00   24 9.273970-01
737 5.71237D+01   1 2.422860-06 1.055000+00 0.0          0.0          0.0
  737     5.7124D+01     1 7.590620+01   3 8.037980+01   5 8.206080+01   11 8.471310+01   13 8.569390+01
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                    15 8.65261D+01   17 8.71427D+01   19 8.75445D+01   21 8.81373D+01   24 1.53219D+02
                    25 1.57368D+02
738 5.71928D+01   1 1.93081D-05 1.05500D+00 0.0        0.0        0.0
738 5.71928D+01   2 1.72560D-06 1.05500D+00 0.0        0.0        0.0          1 1.85422D-05
738 5.71928D+01   1 2.39839D-06 1.05500D+00 0.0        0.0        0.0          2 4.97637D-07   24 1.42295D+00   24 9.28703D-01
  738     5.7193D+01    1 7.59058D+01    3 8.03788D+01    5 8.20594D+01   11 8.47112D+01   13 8.56914D+01
                    15 8.65224D+01   17 8.71387D+01   19 8.75468D+01   21 8.81632D+01   24 1.54642D+02
                    25 1.58774D+02
739 5.72635D+01   1 1.88084D-05 1.05500D+00 0.0        0.0        0.0
739 5.72635D+01   2 1.63595D-06 1.05500D+00 0.0        0.0        0.0          1 1.76848D-05
739 5.72635D+01   1 2.41388D-06 1.05500D+00 0.0        0.0        0.0          2 4.89047D-07   24 1.43785D+00   24 9.29789D-01
  739     5.7264D+01    1 7.59054D+01    3 8.03776D+01    5 8.20580D+01   11 8.47093D+01   13 8.56888D+01
                    15 8.65186D+01   17 8.71347D+01   19 8.75495D+01   21 8.81900D+01   24 1.56080D+02
                    25 1.60200D+02
740 5.73358D+01   1 1.78053D-05 1.05500D+00 0.0        0.0        0.0
740 5.73358D+01   2 1.59677D-06 1.05500D+00 0.0        0.0        0.0          1 1.67106D-05
740 5.73358D+01   1 2.25567D-06 1.05500D+00 0.0        0.0        0.0          2 4.52040D-07   24 1.45277D+00   24 9.30788D-01
  740     5.7336D+01    1 7.59050D+01    3 8.03765D+01    5 8.20565D+01   11 8.47073D+01   13 8.56862D+01
                    15 8.65147D+01   17 8.71308D+01   19 8.75525D+01   21 8.82176D+01   24 1.57533D+02
                    25 1.61644D+02
741 5.74095D+01   1 1.74281D-05 1.05500D+00 0.0        0.0        0.0
741 5.74095D+01   2 1.61310D-06 1.05500D+00 0.0        0.0        0.0          1 1.58282D-05
741 5.74095D+01   1 2.25205D-06 1.05500D+00 0.0        0.0        0.0          2 4.42299D-07   24 1.46765D+00   24 9.31644D-01
  741     5.7410D+01    1 7.59046D+01    3 8.03753D+01    5 8.20550D+01   11 8.47052D+01   13 8.56835D+01
                    15 8.65108D+01   17 8.71268D+01   19 8.75560D+01   21 8.82460D+01   24 1.59000D+02
                    25 1.63106D+02
742 5.74847D+01   1 1.66654D-05 1.05500D+00 0.0        0.0        0.0
742 5.74847D+01   2 1.57965D-06 1.05500D+00 0.0        0.0        0.0          1 1.48344D-05
742 5.74847D+01   1 2.16594D-06 1.05500D+00 0.0        0.0        0.0          2 4.18555D-07   24 1.48255D+00   24 9.32418D-01
  742     5.7485D+01    1 7.59042D+01    3 8.03741D+01    5 8.20535D+01   11 8.47031D+01   13 8.56807D+01
                    15 8.65068D+01   17 8.71230D+01   19 8.75598D+01   21 8.82752D+01   24 1.60483D+02
                    25 1.64586D+02
743 5.75613D+01   1 1.21755D-04 1.05500D+00 0.0        0.0        0.0
743 5.75613D+01   3 1.54892D-06 1.05500D+00 0.0        0.0        0.0          1 3.21461D-05
743 5.75613D+01   2 1.43503D-06 1.05500D+00 0.0        0.0        0.0          2 2.32864D-06   24 1.48614D+00   24 9.26044D-01
  743     5.7561D+01    1 7.59037D+01    3 8.03724D+01    5 8.20519D+01   11 8.47009D+01   13 8.56779D+01
                    15 8.65028D+01   17 8.71192D+01   19 8.75641D+01   21 8.83051D+01   24 1.61969D+02
                    25 1.66029D+02
744 5.76399D+01   1 3.18549D-04 1.05500D+00 0.0        0.0        0.0
744 5.76399D+01   3 4.05518D-06 1.05500D+00 0.0        0.0        0.0          1 7.15631D-05
744 5.76399D+01   2 3.95655D-06 1.05500D+00 0.0        0.0        0.0          2 5.16859D-06   24 1.49150D+00   24 9.09882D-01
  744     5.7640D+01    1 7.59033D+01    3 8.03715D+01    5 8.20502D+01   11 8.46987D+01   13 8.56749D+01
                    15 8.64986D+01   17 8.71154D+01   19 8.75689D+01   21 8.83361D+01   24 1.63428D+02
                    25 1.67344D+02
745 5.77228D+01   1 1.67020D-04 1.05500D+00 0.0        0.0        0.0
745 5.77228D+01   3 2.18959D-06 1.05500D+00 0.0        0.0        0.0          1 6.46196D-05
745 5.77228D+01   2 2.59335D-06 1.05500D+00 0.0        0.0        0.0          2 3.69509D-06   24 1.43874D+00   24 8.80350D-01
  745     5.7723D+01    1 7.59028D+01    3 8.03701D+01    5 8.20483D+01   11 8.46963D+01   13 8.56718D+01
                    15 8.64943D+01   17 8.71117D+01   19 8.75743D+01   21 8.83689D+01   24 1.64867D+02
                    25 1.68635D+02
746 5.78122D+01   1 1.35732D-04 1.05500D+00 0.0        0.0        0.0
746 5.78122D+01   3 1.81313D-06 1.05500D+00 0.0        0.0        0.0          1 6.58618D-05
746 5.78122D+01   2 2.51362D-06 1.05500D+00 0.0        0.0        0.0          2 3.18704D-06   24 1.44973D+00   24 8.79333D-01
  746     5.7812D+01    1 7.59023D+01    3 8.03686D+01    5 8.20465D+01   11 8.46937D+01   13 8.56685D+01
                    15 8.64897D+01   17 8.71078D+01   19 8.75806D+01   21 8.84046D+01   24 1.66317D+02
                    25 1.69951D+02
747 5.79061D+01   1 1.15057D-04 1.05500D+00 0.0        0.0        0.0
747 5.79061D+01   3 1.54893D-06 1.05500D+00 0.0        0.0        0.0          1 6.44932D-05
747 5.79061D+01   2 2.33924D-06 1.05500D+00 0.0        0.0        0.0          2 2.76026D-06   24 1.42815D+00   24 8.58690D-01
  747     5.7906D+01    1 7.59017D+01    3 8.03[illegible]+01    5 8.20445D+01   11 8.46909D+01   13 8.56649D+01
                    15 8.64849D+01   17 8.71[illegible]+01   19 8.75877D+01   21 8.84422D+01   24 1.67745D+02
                    25 1.71270D+02
748 5.80000D+01   1 8.69034D-05 1.05500D+00 0.0        0.0        0.0
748 5.80000D+01   2 8.59882D-06 1.05500D+00 0.0        0.0        0.0          1 5.67662D-05
748 5.80000D+01   2 1.75104D-06 1.05500D+00 0.0        0.0        0.0          2 2.69937D-06   24 1.35238D+00   24 8.06273D-01
  748     5.8000D+01    1 7.59012D+01    3 8.03654D+01    5 8.20424D+01   11 8.46892D+01   13 8.56618D+01
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15 8.648010+01 17 8.710030+01 19 8.759520+01 21 8.847990+01 24 1.690970+02
25 1.725400+02

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.18 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 748 TIME STEPS. TIME = 5.800000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75190
	2	0.03	78113
2	3	0.06	80137
	4	0.08	81120
3	5	0.10	82101
	6	0.57	82150
	7	1.04	82195
	8	1.51	83139
	9	1.98	83183
	10	2.45	84126
4	11	2.92	84169
	12	3.14	85119
5	13	3.35	85166
	14	3.57	86109
6	15	3.79	86148
	16	4.01	86182
7	17	4.23	87110
	18	4.45	87135
8	19	4.67	87160
	20	4.89	87193
9	21	5.10	88148
	22	5.18	112158
	23	5.25	138188
10	24	5.32	169110
11	25	5.35	172154

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 9.38909160D-02

ELAPSED CPU TIME IS 8.95 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.72540D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.59012D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
749	5.81033D+01	1	1.07131D-04	1.05500D+00	0.0	0.0	0.0					
749	5.81033D+01	3	1.71544D-06	1.05500D+00	0.0	0.0	0.0	1	5.89449D-05			
749	5.81033D+01	2	2.40115D-06	1.05500D+00	0.0	0.0	0.0	2	2.47850D-06	24 1.41834D+00	24	8.38769D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
749	5.8103D+01	1 7.59005D+01	3 8.03636D+01	5 8.20401D+01	11 8.46851D+01	13 8.56575D+01	
		15 8.64749D+01	17 8.70965D+01	19 8.76041D+01	21 8.85215D+01	24 1.70516D+02	
		25 1.73886D+02					
750	5.82169D+01	1 1.06764D-04	1.05500D+00	0.0	0.0	0.0	
750	5.82169D+01	3 1.98466D-06	1.05500D+00	0.0	0.0	1 6.04862D-05	
750	5.82169D+01	2 2.73087D-06	1.05500D+00	0.0	0.0	2 2.45930D-06	24 1.49255D+00	24	8.75315D-01
750	5.82170D+01	1 7.58998D+01	3 8.03616D+01	5 8.20376D+01	11 8.46817D+01	13 8.56531D+01	
		15 8.64693D+01	17 8.70927D+01	19 8.76145D+01	21 8.85671D+01	24 1.72008D+02	
		25 1.75319D+02					
751	5.83402D+01	1 1.01553D-04	1.05500D+00	0.0	0.0	0.0	
751	5.83402D+01	3 2.17355D-06	1.05500D+00	0.0	0.0	1 5.91542D-05	
751	5.83402D+01	2 2.92825D-06	1.05500D+00	0.0	0.0	2 2.34934D-06	24 1.55832D+00	24	9.05955D-01
751	5.83400D+01	1 7.58991D+01	3 8.03594D+01	5 8.20348D+01	11 8.46779D+01	13 8.56484D+01	
		15 8.64632D+01	17 8.70890D+01	19 8.76264D+01	21 8.86164D+01	24 1.73567D+02	
		25 1.76833D+02					
752	5.84695D+01	1 8.45768D-05	1.05500D+00	0.0	0.0	0.0	
752	5.84695D+01	3 1.97822D-06	1.05500D+00	0.0	0.0	1 5.29616D-05	
752	5.84695D+01	2 2.60234D-06	1.05500D+00	0.0	0.0	2 1.95497D-06	24 1.58308D+00	24	9.12085D-01
752	5.84690D+01	1 7.58983D+01	3 8.03571D+01	5 8.20319D+01	11 8.46739D+01	13 8.56435D+01	
		15 8.64570D+01	17 8.70855D+01	19 8.76398D+01	21 8.86678D+01	24 1.75150D+02	
		25 1.78389D+02					
753	5.86042D+01	1 2.66535D-04	1.05500D+00	0.0	0.0	0.0	
753	5.86042D+01	3 7.69169D-06	1.05500D+00	0.0	0.0	1 6.80962D-05	
753	5.86042D+01	2 7.55456D-06	1.05500D+00	0.0	0.0	2 5.41515D-06	24 1.58883D+00	24	9.07127D-01
753	5.86040D+01	1 7.58974D+01	3 8.03546D+01	5 8.20288D+01	11 8.46698D+01	13 8.56383D+01	
		15 8.64507D+01	17 8.70824D+01	19 8.76545D+01	21 8.87210D+01	24 1.76739D+02	
		25 1.79922D+02					
754	5.87452D+01	1 6.76728D-04	1.05500D+00	0.0	0.0	0.0	
754	5.87452D+01	4 1.88857D-06	1.05500D+00	0.0	0.0	1 1.18662D-04	
754	5.87452D+01	3 3.85318D-06	1.05500D+00	0.0	0.0	2 1.35150D-05	
754	5.87452D+01	2 3.48767D-06	1.05500D+00	0.0	0.0	3 2.35351D-06	24 1.53864D+00	24	8.70576D-01
754	5.87450D+01	1 7.58965D+01	3 8.03520D+01	5 8.20255D+01	11 8.46654D+01	13 8.56328D+01	
		15 8.64442D+01	17 8.70796D+01	19 8.76706D+01	21 8.87761D+01	24 1.78277D+02	
		25 1.81310D+02					
755	5.88991D+01	1 2.81681D-04	1.05500D+00	0.0	0.0	0.0	
755	5.88991D+01	3 7.44109D-06	1.05500D+00	0.0	0.0	1 1.02231D-04	
755	5.88991D+01	3 2.21741D-06	1.05500D+00	0.0	0.0	2 6.77610D-06	24 1.52090D+00	24	8.53112D-01
755	5.88990D+01	1 7.58955D+01	3 8.03492D+01	5 8.20219D+01	11 8.46605D+01	13 8.56269D+01	
		15 8.64373D+01	17 8.70772D+01	19 8.76892D+01	21 8.88357D+01	24 1.79288D+02	
		25 1.82733D+02					
756	5.90684D+01	1 3.20658D-04	1.05500D+00	0.0	0.0	0.0	
756	5.90684D+01	4 7.30226D-07	1.05500D+00	0.0	0.0	1 1.02671D-04	
756	5.90684D+01	3 2.89869D-06	1.05500D+00	0.0	0.0	2 7.06459D-06	24 1.54726D+00	24	8.60552D-01
756	5.90680D+01	1 7.58944D+01	3 8.03460D+01	5 8.20178D+01	11 8.46551D+01	13 8.56204D+01	
		15 8.64299D+01	17 8.70753D+01	19 8.77106D+01	21 8.89005D+01	24 1.81345D+02	
		25 1.84207D+02					
757	5.92546D+01	1 2.71461D-04	1.05500D+00	0.0	0.0	0.0	
757	5.92546D+01	4 4.78769D-07	1.05500D+00	0.0	0.0	1 9.52216D-05	
757	5.92546D+01	3 2.96782D-06	1.05500D+00	0.0	0.0	2 6.02593D-06	24 1.59733D+00	24	8.80824D-01
757	5.9255D+01	1 7.58932D+01	3 8.03424D+01	5 8.20133D+01	11 8.46491D+01	13 8.56132D+01	
		15 8.64221D+01	17 8.70740D+01	19 8.77351D+01	21 8.89705D+01	24 1.82943D+02	
		25 1.85757D+02					
758	5.94555D+01	1 2.19358D-04	1.05500D+00	0.0	0.0	0.0	
758	5.94555D+01	3 9.74818D-06	1.05500D+00	0.0	0.0	1 8.16195D-05	
758	5.94555D+01	3 2.75800D-06	1.05500D+00	0.0	0.0	2 5.09336D-06	24 1.64347D+00	24	8.98354D-01

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 758      5.94550D+01     1 7.58918D+01     3 8.03385D+0*     5 8.20084D+01    11 8.46426D+01    13 8.56054D+01
                          15 8.64140D+01    17 8.70737D+01    19 8.77628D+01    21 8.90447D+01    24 1.84586D+02
                          25 1.87377D+02
 759 5.96679D+01     1 2.62798D-04 1.05500D+00 0.0          0.0          0.0
 759 5.96679D+01     4 1.56311D-07 1.05500D+00 0.0          0.0          0.0               1 7.37930D-05
 759 5.96679D+01     3 3.51920D-06 1.05500D+00 0.0          0.0          0.0               2 5.58502D-06    24 1.67311D+00    24 9.06413D-01
 759      5.96680D+01     1 7.58904D+01     3 8.03344D+01     5 8.20032D+01    11 8.46356D+01    13 8.55973D+01
                          15 8.64059D+01    17 8.70744D+01    19 8.77931D+01    21 8.91215D+01    24 1.86259D+02
                          25 1.89032D+02
 760 5.98339D+01     1 1.19317D-04 1.05500D+00 0.0          0.0          0.0
 760 5.98339D+01     3 4.36403D-06 1.05500D+00 0.0          0.0          0.0               1 4.19567D-05
 760 5.98339D+01     2 4.91074D-06 1.05500D+00 0.0          0.0          0.0               2 2.63335D-06    24 1.26827D+00    24 6.80917D-01
 760      5.98340D+01     1 7.58891D+01     3 8.03311D+01     5 8.19990D+01    11 8.46304D+01    13 8.55910D+01
                          15 8.63998D+01    17 8.70758D+01    19 8.78176D+01    21 8.91805D+01    24 1.87528D+02
                          25 1.90292D+02
 761 6.00000D+01     1 1.34071D-04 1.05500D+00 0.0          0.0          0.0
 761 6.00000D+01     3 5.09003D-06 1.05500D+00 0.0          0.0          0.0               1 3.45174D-05
 761 6.00000D+01     2 5.35251D-06 1.05500D+00 0.0          0.0          0.0               2 2.87556D-06    24 1.23447D+00    24 6.58285D-01
 761      6.00000D+01     1 7.58879D+01     3 8.03277D+01     5 8.19948D+01    11 8.46246D+01    13 8.55847D+01
                          15 8.63941D+01    17 8.70778D+01    19 8.78425D+01    21 8.92386D+01    24 1.88762D+02
                          25 1.91513D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.19 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 761 TIME STEPS, TIME = 6.000000+01

GROSS GRID			1
			I
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	75189
	2	0.03	78111
2	3	0.06	80133
	4	0.08	81116
3	5	0.10	81199
	6	0.57	82145
	7	1.04	82190
	8	1.51	83134
	9	1.98	83178
	10	2.45	84121
4	11	2.92	84162
	12	3.14	85112
5	13	3.35	85158
	14	3.57	86101
6	15	3.79	86139
	16	4.01	86175
7	17	4.23	87108
	18	4.45	87142
8	19	4.67	87184
	20	4.89	88141
9	21	5.10	89124
	22	5.18	121111
	23	5.25	154101
10	24	5.32	188176
11	25	5.35	191151

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.66074749D-01

ELAPSED CPU TIME IS 9.12 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.91513D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58879D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
762	6.01827D+01	1	1.38604D-04	1.055000D+00	0.0	0.0	0.0						
762	6.01827D+01	3	5.77764D-06	1.055000D+00	0.0	0.0	0.0	1	3.54469D-05				
762	6.01827D+01	2	6.31654D-06	1.055000D+00	0.0	0.0	0.0	2	2.98868D-06	24	1.31844D+00	24	6.98469D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	********** NODE NUMBERS AND TEMPERATURES **********					
762	6.0183D+01	1 7.58866D+01	3 8.03240D+01	5 8.19902D+01	11 8.46185D+01	13 8.55778D+01	
		15 8.63881D+01	17 8.70808D+01	19 8.78706D+01	21 8.93016D+01	24 1.90080D+02	
		25 1.92821D+02					
763	6.03836D+01	1 1.04854D-04	1.055000D+00	0.0	0.0	0.0	
763	6.03836D+01	3 4.72991D-06	1.055000D+00	0.0	0.0	0.0	1 3.28935D-05
763	6.03836D+01	2 5.61219D-06	1.055000D+00	0.0	0.0	0.0	2 2.35297D-06 24 1.41349D+00 24 7.43625D-01
763	6.0384D+01	1 7.58852D+01	3 8.03199D+01	5 8.19851D+01	11 8.46118D+01	13 8.55704D+01	
		15 8.63819D+01	17 8.70849D+01	19 8.79020D+01	21 8.93698D+01	24 1.91494D+02	
		25 1.94234D+02					
764	6.06047D+01	1 1.04342D-04	1.055000D+00	0.0	0.0	0.0	
764	6.06047D+01	3 5.49162D-06	1.055000D+00	0.0	0.0	0.0	1 3.07464D-05
764	6.06047D+01	2 6.09323D-06	1.055000D+00	0.0	0.0	0.0	2 2.28997D-06 25 1.53107D+00 24 7.96321D-01
764	6.0605D+01	1 7.58837D+01	3 8.03154D+01	5 8.19794D+01	11 8.46044D+01	13 8.55622D+01	
		15 8.63756D+01	17 8.70905D+01	19 8.79372D+01	21 8.94438D+01	24 1.93019D+02	
		25 1.95765D+02					
765	6.08478D+01	1 4.02363D-03	1.055000D+00	0.0	0.0	0.0	
765	6.08478D+01	4 5.31060D-06	1.055000D+00	0.0	0.0	0.0	1 3.50848D-04
765	6.08478D+01	4 1.37326D-06	1.055000D+00	0.0	0.0	0.0	2 8.51517D-05
765	6.08478D+01	4 3.53204D-07	1.055000D+00	0.0	0.0	0.0	3 2.19058D-05
765	6.08478D+01	3 4.45449D-06	1.055000D+00	0.0	0.0	0.0	4 5.50488D-06 24 1.29433D+00 23 6.91154D-01
765	6.0848D+01	1 7.58819D+01	3 8.03104D+01	5 8.19731D+01	11 8.45962D+01	13 8.55535D+01	
		15 8.63693D+01	17 8.70977D+01	19 8.79765D+01	21 8.95239D+01	24 1.94313D+02	
		25 1.96654D+02					
766	6.11153D+01	1 1.00323D-03	1.055000D+00	0.0	0.0	0.0	
766	6.11153D+01	4 2.44678D-06	1.055000D+00	0.0	0.0	0.0	1 2.68537D-04
766	6.11153D+01	4 1.01100D-06	1.055000D+00	0.0	0.0	0.0	2 2.55005D-05
766	6.11153D+01	3 6.44316D-06	1.055000D+00	0.0	0.0	0.0	3 6.79253D-06 23 9.41571D-01 23 5.95375D-01
766	6.1115D+01	1 7.58800D+01	3 8.03049D+01	5 8.19662D+01	11 8.45872D+01	13 8.55440D+01	
		15 8.63632D+01	17 8.71071D+01	19 8.80205D+01	21 8.96101D+01	24 1.95203D+02	
		25 1.97410D+02					
767	6.14095D+01	1 1.25689D-03	1.055000D+00	0.0	0.0	0.0	
767	6.14095D+01	4 6.39601D-06	1.055000D+00	0.0	0.0	0.0	1 2.41323D-04
767	6.14095D+01	4 2.01305D-06	1.055000D+00	0.0	0.0	0.0	2 2.81780D-05
767	6.14095D+01	3 8.74077D-06	1.055000D+00	0.0	0.0	0.0	3 7.89948D-06 23 7.51306D-01 23 4.72255D-01
767	6.1410D+01	1 7.58779D+01	3 8.02988D+01	5 8.19587D+01	11 8.45774D+01	13 8.55339D+01	
		15 8.63574D+01	17 8.71188D+01	19 8.80694D+01	21 8.97018D+01	24 1.95920D+02	
		25 1.98014D+02					
768	6.17048D+01	1 3.38224D-03	1.055000D+00	0.0	0.0	0.0	
768	6.17048D+01	5 1.33312D-06	1.055000D+00	0.0	0.0	0.0	1 3.71349D-04
768	6.17048D+01	4 5.32534D-06	1.055000D+00	0.0	0.0	0.0	2 7.38967D-05
768	6.17048D+01	4 1.54127D-06	1.055000D+00	0.0	0.0	0.0	3 2.12121D-05
768	6.17048D+01	3 6.61797D-06	1.055000D+00	0.0	0.0	0.0	4 5.96294D-06 23 5.01487D-01 23 3.13742D-01
768	6.1705D+01	1 7.58757D+01	3 8.02927D+01	5 8.19511D+01	11 8.45676D+01	13 8.55240D+01	
		15 8.63525D+01	17 8.71321D+01	19 8.81191D+01	21 8.97896D+01	24 1.96232D+02	
		25 1.98050D+02					
769	6.20000D+01	1 1.26881D-02	1.055000D+00	0.0	0.0	0.0	
769	6.20000D+01	5 5.00109D-06	1.055000D+00	0.0	0.0	0.0	1 1.12687D-03
769	6.20000D+01	5 1.45885D-06	1.055000D+00	0.0	0.0	0.0	2 2.77269D-04
769	6.20000D+01	4 5.67840D-06	1.055000D+00	0.0	0.0	0.0	3 7.96374D-05
769	6.20000D+01	4 1.63480D-06	1.055000D+00	0.0	0.0	0.0	4 2.27303D-05
769	6.20000D+01	3 6.99434D-06	1.055000D+00	0.0	0.0	0.0	5 6.36939D-06 25 2.11387D+00 25 1.06734D+00
769	6.19675D+01	1 1.18524D-04	1.055000D+00	0.0	0.0	0.0	
769	6.19675D+01	3 9.71977D-06	1.055000D+00	0.0	0.0	0.0	1 2.62787D-05
769	6.19675D+01	2 5.51377D-06	1.055000D+00	0.0	0.0	0.0	2 1.87672D-06 25 1.89627D+00 25 9.57473D-01
769	6.1968D+01	1 7.58737D+01	3 8.02872D+01	5 8.19443D+01	11 8.45590D+01	13 8.55156D+01	

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                        15 8.634890+01    17 8.714510+01    19 8.8.634D+01    21 8.986340+01    24 1.953760+02
                        25 1.96154D+02
770 6.200000+01     1 2.23201D-05 1.055000+00 0.0           0.0          0.0
770 6.200000+01     2 2.770930-06 1.055000+00 0.0           0.0          0.0              1 5.44651D-05
770 6.200000+01     1 2.440530-06 1.055000+00 0.0           0.0          0.0              2 1.029940-06    25 2.985160 01    25 1.521850-01
  770      6.20000+01     1 7.587310+01     3 8.028660+01     5 8.194350+01    11 8.455790+01    13 8.551460+01
                        15 8.634860+01    17 8.714670+01    19 8.816890+01    21 8.987220+01    24 1.951050+02
                        25 1.958550+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ O
W9XNP110 20.58.19 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 770 TIME STEPS, TIME = 6.20000D+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75187
	2	0.03	78108
2	3	0.06	80129
	4	0.08	81112
3	5	0.10	81194
	6	0.57	82140
	7	1.04	82185
	8	1.51	83129
	9	1.98	83172
	10	2.45	84114
4	11	2.92	84156
	12	3.14	85105
5	13	3.35	85151
	14	3.57	85194
6	15	3.79	86135
	16	4.01	86174
7	17	4.23	87115
	18	4.45	87160
8	19	4.67	88117
	20	4.89	88190
9	21	5.10	89187
	22	5.18	125107
	23	5.25	160133
10	24	5.32	195110
11	25	5.35	195186

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.24589734D-02

ELAPSED CPU TIME IS 9.31 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.95855D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58731D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	OMG (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
771	6.20325D+01	1	4.65000D-06	1.05500D+00	0.0	0.0	0.0				
771	6.20325D+01	1	4.65000D-06	1.05500D+00	0.0	0.0	0.0	1	7.68736D-06		
771	6.20325D+01	1	3.02921D-07	1.05500D+00	0.0	0.0	0.0	2	3.54249D-07	25 2.97118D-01	25 1.51703D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
771	6.2032D+01	1 7.58728D+01	3 8.02859D+01	5 8.19427D+01	11 8.45569D+01	13 8.55135D+01	
		15 8.63482D+01	17 8.71484D+01	19 8.81744D+01	21 8.98809D+01	24 1.94862D+02	
		25 1.95558D+02					
772	6.20649D+01	1 2.51280D-06	1.05500D+00	0.0	0.0	0.0	
772	6.20649D+01	1 2.51280D-06	1.05500D+00	0.0	0.0	0.0	1 6.92616D-06
772	6.20649D+01	1 2.16083D-07	1.05500D+00	0.0	0.0	0.0	2 2.76419D-07 25 2.97987D-01 25 1.52378D-01
772	6.2065D+01	1 7.58725D+01	3 8.02852D+01	5 8.19418D+01	11 8.45558D+01	13 8.55125D+01	
		15 8.63478D+01	17 8.71501D+01	19 8.81798D+01	21 8.98896D+01	24 1.94610D+02	
		25 1.95260D+02					
773	6.20974D+01	1 2.09733D-06	1.05500D+00	0.0	0.0	0.0	
773	6.20974D+01	1 2.09733D-06	1.05500D+00	0.0	0.0	0.0	1 6.72048D-06
773	6.20974D+01	1 2.10029D-07	1.05500D+00	0.0	0.0	0.0	2 2.49454D-07 25 3.00376D-01 25 1.53834D-01
773	6.2097D+01	1 7.58722D+01	3 8.02845D+01	5 8.19410D+01	11 8.45547D+01	13 8.55115D+01	
		15 8.63475D+01	17 8.71519D+01	19 8.81853D+01	21 8.98981D+01	24 1.94349D+02	
		25 1.94960D+02					
774	6.21331D+01	1 2.42877D-06	1.05500D+00	0.0	0.0	0.0	
774	6.21331D+01	1 2.42877D-06	1.05500D+00	0.0	0.0	0.0	1 7.10021D-06
774	6.21331D+01	1 2.44978D-07	1.05500D+00	0.0	0.0	0.0	2 2.56278D-07 25 3.32660D-01 25 1.70630D-01
774	6.2133D+01	1 7.58719D+01	3 8.02837D+01	5 8.19401D+01	11 8.45536D+01	13 8.55104D+01	
		15 8.63471D+01	17 8.71538D+01	19 8.81913D+01	21 8.99074D+01	24 1.94055D+02	
		25 1.94627D+02					
775	6.21724D+01	1 2.96134D-06	1.05500D+00	0.0	0.0	0.0	
775	6.21724D+01	1 2.96134D-06	1.05500D+00	0.0	0.0	0.0	1 8.14010D-06
775	6.21724D+01	1 3.96975D-07	1.05500D+00	0.0	0.0	0.0	2 3.12713D-07 25 3.69458D-01 25 1.89829D-01
775	6.2172D+01	1 7.58716D+01	3 8.02829D+01	5 8.19391D+01	11 8.45523D+01	13 8.55092D+01	
		15 8.63467D+01	17 8.71559D+01	19 8.81980D+01	21 8.99174D+01	24 1.93723D+02	
		25 1.94257D+02					
776	6.22156D+01	1 3.62141D-06	1.05500D+00	0.0	0.0	0.0	
776	6.22156D+01	1 3.62141D-06	1.05500D+00	0.0	0.0	0.0	1 9.23916D-06
776	6.22156D+01	1 6.50465D-07	1.05500D+00	0.0	0.0	0.0	2 4.24744D-07 25 4.11122D-01 25 2.11638D-01
776	6.2216D+01	1 7.58713D+01	3 8.02820D+01	5 8.19380D+01	11 8.45509D+01	13 8.55079D+01	
		15 8.63463D+01	17 8.71582D+01	19 8.82052D+01	21 8.99283D+01	24 1.93350D+02	
		25 1.93846D+02					
777	6.22631D+01	1 4.43574D-06	1.05500D+00	0.0	0.0	0.0	
777	6.22631D+01	1 4.43574D-06	1.05500D+00	0.0	0.0	0.0	1 1.03016D-05
777	6.22631D+01	1 8.87786D-07	1.05500D+00	0.0	0.0	0.0	2 5.18854D-07 25 4.57643D-01 25 2.36086D-01
777	6.2263D+01	1 7.58709D+01	3 8.02810D+01	5 8.19368D+01	11 8.45494D+01	13 8.55064D+01	
		15 8.63459D+01	17 8.71609D+01	19 8.82132D+01	21 8.99400D+01	24 1.92931D+02	
		25 1.93389D+02					
778	6.23154D+01	1 5.43557D-06	1.05500D+00	0.0	0.0	0.0	
778	6.23154D+01	1 5.43557D-06	1.05500D+00	0.0	0.0	0.0	1 1.14212D-05
778	6.23154D+01	1 1.17512D-06	1.05500D+00	0.0	0.0	0.0	2 6.26274D-07 25 5.09642D-01 25 2.63533D-01
778	6.2315D+01	1 7.58705D+01	3 8.02799D+01	5 8.19354D+01	11 8.45477D+01	13 8.55049D+01	
		15 8.63454D+01	17 8.71638D+01	19 8.82220D+01	21 8.99526D+01	24 1.92459D+02	
		25 1.92879D+02					
779	6.23729D+01	1 6.66016D-06	1.05500D+00	0.0	0.0	0.0	
779	6.23729D+01	1 6.66016D-06	1.05500D+00	0.0	0.0	0.0	1 1.25638D-05
779	6.23729D+01	1 1.51889D-06	1.05500D+00	0.0	0.0	0.0	2 7.45690D-07 25 5.67692D-01 25 2.94326D-01
779	6.2373D+01	1 7.58701D+01	3 8.02787D+01	5 8.19340D+01	11 8.45459D+01	13 8.55031D+01	
		15 8.63450D+01	17 8.71670D+01	19 8.82317D+01	21 8.99660D+01	24 1.91930D+02	
		25 1.92311D+02					
780	6.24361D+01	1 8.14064D-06	1.05500D+00	0.0	0.0	0.0	
780	6.24361D+01	1 8.14064D-06	1.05500D+00	0.0	0.0	0.0	1 1.36369D-05
780	6.24361D+01	1 1.83968D-06	1.05500D+00	0.0	0.0	0.0	2 8.53301D-07 25 6.32136D-01 25 3.28704D-01
780	6.2436D+01	1 7.58697D+01	3 8.02774D+01	5 8.19324D+01	11 8.45439D+01	13 8.55013D+01	

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                    15 8 .63445D+01   17 8 .71707D+01   19 8 .82423D+01   21 8 .99803D+01   24 1 .91337D+02
                    25 1 .91679D+02
781 6.25057D+01   1 9 .88753D-06 1 .05500D+00 0 0        0 0          0 0
781 6.25057D+01   1 9 .88753D-06 1 .05500D+00 0 0        0 0          0 0          1 1 .46975D-05
781 6.25057D+01   1 2 .23557D-06 1 .05500D+00 0 0        0 0          0 0          2 9 .82394D-07   25 7 .03781D-01   25 3 .67166D-01
  781     6.2506D+01    1 7 .58692D+01    3 8 .02760D+01    5 8 .19306D+01   11 8 .45417D+01   13 8 .54992D+01
                    15 8 .63441D+01   17 8 .71747D+01   19 8 .82539D+01   21 8 .99955D+01   24 1 .90673D+02
                    25 1 .90975D+02
782 6.25822D+01   1 7 .57969D-05 1 .05500D+00 0 0        0 0          0 0
782 6.25822D+01   2 8 .17400D-06 1 .05500D+00 0 0        0 0          0 0          1 2 .76428D-05
782 6.25822D+01   1 9 .34805D-06 1 .05500D+00 0 0        0 0          0 0          2 1 .84178D-06   25 8 .21301D-01   25 4 .30056D-01
  782     6.2582D+01    1 7 .58686D+01    3 8 .02744D+01    5 8 .19287D+01   11 8 .45392D+01   13 8 .54970D+01
                    15 8 .63436D+01   17 8 .71792D+01   19 8 .82666D+01   21 9 .00114D+01   24 1 .89920D+02
                    25 1 .90154D+02
783 6.26664D+01   1 1 .06132D-04 1 .05500D+00 0 0        0 0          0 0
783 6.26664D+01   3 1 .50158D-06 1 .05500D+00 0 0        0 0          0 0          1 3 .68807D-05
783 6.26664D+01   2 1 .68050D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .43902D-06   25 3 .64892D-01   25 5 .07426D-01
  783     6.2666D+01    1 7 .58680D+01    3 8 .02727D+01    5 8 .19266D+01   11 8 .45366D+01   13 8 .54946D+01
                    15 8 .63432D+01   17 8 .71843D+01   19 8 .82805D+01   21 9 .00281D+01   24 1 .89054D+02
                    25 1 .89189D+02
784 6.27590D+01   1 7 .07205D-05 1 .05500D+00 0 0        0 0          0 0
784 6.27590D+01   2 7 .30950D-06 1 .05500D+00 0 0        0 0          0 0          1 3 .75502D-05
784 6.27590D+01   2 1 .39162D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .25097D-06   25 1 .10315D+00   25 5 .83095D-01
  784     6.2759D+01    1 7 .58673D+01    3 8 .02708D+01    5 8 .19243D+01   11 8 .45337D+01   13 8 .54920D+01
                    15 8 .63428D+01   17 8 .71899D+01   19 8 .82957D+01   21 9 .00453D+01   24 1 .88043D+02
                    25 1 .88086D+02
785 6.28609D+01   1 6 .90668D-05 1 .05500D+00 0 0        0 0          0 0
785 6.28609D+01   2 7 .55950D-06 1 .05500D+00 0 0        0 0          0 0          1 3 .97786D-05
785 6.28609D+01   2 1 .59285D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .21926D-06   25 1 .25073D+00   25 6 .64977D-01
  785     6.2861D+01    1 7 .58666D+01    3 8 .02688D+01    5 8 .19218D+01   11 8 .45306D+01   13 8 .54892D+01
                    15 8 .63425D+01   17 8 .71962D+01   19 8 .83122D+01   21 9 .00630D+01   24 1 .86891D+02
                    25 1 .86835D+02
786 6.29730D+01   1 7 .50484D-05 1 .05500D+00 0 0        0 0          0 0
786 6.29730D+01   2 9 .00244D-06 1 .05500D+00 0 0        0 0          0 0          1 4 .20177D-05
786 6.29730D+01   2 1 .90983D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .31586D-06   25 1 .41168D+00   25 7 .55576D-01
  786     6.2973D+01    1 7 .58658D+01    3 8 .02666D+01    5 8 .19191D+01   11 8 .45271D+01   13 8 .54862D+01
                    15 8 .63423D+01   17 8 .72033D+01   19 8 .83302D+01   21 9 .00809D+01   24 1 .85566D+02
                    25 1 .85424D+02
787 6.30962D+01   1 1 .07121D-04 1 .05500D+00 0 0        0 0          0 0
787 6.30962D+01   3 2 .42283D-06 1 .05500D+00 0 0        0 0          0 0          1 4 .72067D-05
787 6.30962D+01   2 2 .94399D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .48017D-06   25 1 .59633D+00   25 8 .60910D-01
  787     6.3096D+01    1 7 .58650D+01    3 8 .02641D+01    5 8 .19161D+01   11 8 .45234D+01   13 8 .54829D+01
                    15 8 .63422D+01   17 8 .72112D+01   19 8 .83497D+01   21 9 .00988D+01   24 1 .84057D+02
                    25 1 .83827D+02
788 6.32318D+01   1 1 .11575D-04 1 .05500D+00 0 0        0 0          0 0
788 6.32318D+01   3 2 .83225D-06 1 .05500D+00 0 0        0 0          0 0          1 4 .93154D-05
788 6.32318D+01   2 3 .46624D-06 1 .05500D+00 0 0        0 0          0 0          2 2 .56572D-06   25 1 .79684D+00   25 9 .77459D-01
  788     6.3232D+01    1 7 .58641D+01    3 8 .02615D+01    5 8 .19128D+01   11 8 .45193D+01   13 8 .54794D+01
                    15 8 .63423D+01   17 8 .72200D+01   19 8 .83708D+01   21 9 .01162D+01   24 1 .82345D+02
                    25 1 .82031D+02
789 6.33674D+01   1 1 .43948D-04 1 .05500D+00 0 0        0 0          0 0
789 6.33674D+01   3 3 .85960D-06 1 .05500D+00 0 0        0 0          0 0          1 4 .98797D-05
789 6.33674D+01   2 4 .24035D-06 1 .05500D+00 0 0        0 0          0 0          2 3 .16006D-06   25 1 .84694D+00   25 1 .04463D+00
789 6.33588D+01   1 3 .27763D-05 1 .05500D+00 0 0        0 0          0 0
789 6.33588D+01   2 5 .04709D-06 1 .05500D+00 0 0        0 0          0 0          1 4 .41890D-06
789 6.33588D+01   1 5 .32542D-06 1 .05500D+00 0 0        0 0          0 0          2 6 .33753D-07   25 1 .74035D+00   25 9 .56077D-01
  789     6.3359D+01    1 7 .58631D+01    3 8 .02590D+01    5 8 .19098D+01   11 8 .45156D+01   13 8 .54762D+01
                    15 8 .63425D+01   17 8 .72284D+01   19 8 .83901D+01   21 9 .01305D+01   24 1 .80692D+02
                    25 1 .80290D+02
790 6.34857D+01   1 5 .03215D-05 1 .05500D+00 0 0        0 0          0 0
790 6.34857D+01   2 6 .01543D-06 1 .05500D+00 0 0        0 0          0 0          1 3 .50854D-05
790 6.34857D+01   2 1 .55219D-06 1 .05500D+00 0 0        0 0          0 0          2 1 .61687D-06   25 1 .76211D+00   25 9 .77374D-01
  790     6.3486D+01    1 7 .58623D+01    3 8 .02566D+01    5 8 .19068D+01   11 8 .45119D+01   13 8 .54731D+01
                    15 8 .63429D+01   17 8 .72369D+01   19 8 .84089D+01   21 9 .01428D+01   24 1 .78999D+02
                    25 1 .78528D+02
791 6.36127D+01   1 4 .25103D-04 1 .05500D+00 0 0        0 0          0 0
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791 6.36127D+01     4 1.17313D-06 1.05500D+00 0.0          0.0          0.0                1 7.63204D-05
791 6.36127D+01     3 1.83437D-06 1.05500D+00 0.0          0.0          0.0                2 5.49434D-06   25 1.90750D+00   25 1.06846D+00
791 6.35986D+01     1 2.22515D-05 1.05500D+00 0.0          0.0          0.0
791 6.35986D+01     2 3.30280D-06 1.05500D+00 0.0          0.0          0.0                1 3.33044D-06
791 6.35986D+01     1 3.10477D-06 1.05500D+00 0.0          0.0          0.0                2 4.40507D-07   25 1.70388D+00   25 9.54406D-01
    791    6.35990D+01    1 7.58615D+01    3 8.02544D+01    5 8.19042D+01   11 8.45086D+01   13 8.54704D+01
                          15 8.63434D+01   17 8.72445D+01   19 8.84253D+01   21 9.01521D+01   24 1.77433D+02
                          25 1.76824D+02
792 6.37115D+01     1 5.15498D-04 1.05500D+00 0.0          0.0          0.0
792 6.37115D+01     4 1.36826D-06 1.05500D+00 0.0          0.0          0.0                1 1.03094D-04
792 6.37115D+01     3 1.76084D-06 1.05500D+00 0.0          0.0          0.0                2 1.05126D-05
792 6.37115D+01     2 1.59001D-06 1.05500D+00 0.0          0.0          0.0                3 1.55719D-06   25 1.91134D+00   25 1.08093D+00
792 6.36978D+01     1 3.08067D-05 1.05500D+00 0.0          0.0          0.0
792 6.36978D+01     2 4.21542D-06 1.05500D+00 0.0          0.0          0.0                1 4.92220D-06
792 6.36978D+01     1 3.86296D-06 1.05500D+00 0.0          0.0          0.0                2 6.28407D-07   25 1.69193D+00   25 9.56842D-01
    792    6.36980D+01    1 7.58607D+01    3 8.02525D+01    5 8.19019D+01   11 8.45058D+01   13 8.54681D+01
                          15 8.63439D+01   17 8.72513D+01   19 8.84393D+01   21 9.01591D+01   24 1.75952D+02
                          25 1.75132D+02
793 6.37970D+01     1 1.17399D-04 1.05500D+00 0.0          0.0          0.0
793 6.37970D+01     3 1.51348D-06 1.05500D+00 0.0          0.0          0.0                1 6.30568D-05
793 6.37970D+01     2 2.61490D-06 1.05500D+00 0.0          0.0          0.0                2 3.02683D-06   25 1.75795D+00   25 1.00378D+00
793 6.37917D+01     1 1.55993D-05 1.05500D+00 0.0          0.0          0.0
793 6.37917D+01     2 1.96643D-06 1.05500D+00 0.0          0.0          0.0                1 2.48192D-06
793 6.37917D+01     1 1.95656D-06 1.05500D+00 0.0          0.0          0.0                2 3.23130D-07   25 1.67042D+00   25 9.53807D-01
    793    6.3792D+01     1 7.58601D+01    3 8.02508D+01    5 8.18998D+01   11 8.45032D+01   13 8.54660D+01
                          15 8.63444D+01   17 8.72577D+01   19 8.84523D+01   21 9.01646D+01   24 1.74445D+02
                          25 1.73462D+02
794 6.38856D+01     1 8.54522D-05 1.05500D+00 0.0          0.0          0.0
794 6.38856D+01     2 7.81173D-06 1.05500D+00 0.0          0.0          0.0                1 5.15309D-05
794 6.38856D+01     2 1.66778D-06 1.05500D+00 0.0          0.0          0.0                2 2.75900D-06   25 1.72031D+00   25 9.91749D-01
    794    6.3886D+01     1 7.58595D+01    3 8.02490D+01    5 8.18977D+01   11 8.45006D+01   13 8.54640D+01
                          15 8.63451D+01   17 8.72642D+01   19 8.84650D+01   21 9.01691D+01   24 1.72858D+02
                          25 1.71742D+02
795 6.39428D+01     1 7.19408D-05 1.05500D+00 0.0          0.0          0.0
795 6.39428D+01     2 6.27438D-06 1.05500D+00 0.0          0.0          0.0                1 3.48628D-05
795 6.39428D+01     1 6.88784D-06 1.05500D+00 0.0          0.0          0.0                2 1.82148D-06   25 1.10862D+00   25 6.45518D-01
    795    6.3943D+01     1 7.56590D+01    3 8.02480D+01    5 8.18964D+01   11 8.44990D+01   13 8.54627D+01
                          15 8.63455D+01   17 8.72682D+01   19 8.84726D+01   21 9.01713D+01   24 1.71852D+02
                          25 1.70633D+02
796 6.40000D+01     1 1.19194D-05 1.05500D+00 0.0          0.0          0.0
796 6.40000D+01     2 1.50033D-06 1.05500D+00 0.0          0.0          0.0                1 1.46392D-05
796 6.40000D+01     1 1.63990D-07 1.05500D+00 0.0          0.0          0.0                2 1.88260D-07   25 1.10745D+00   25 6.49022D-01
    796    6.40000D+01    1 7.58586D+01    3 8.02469D+01    5 8.18951D+01   11 8.44974D+01   13 8.54615D+01
                          15 8.63460D+01   17 8.72721D+01   19 8.84801D+01   21 9.01731D+01   24 1.70819D+02
                          25 1.69525D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20 58 20 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 796 TIME STEPS, TIME = 6.400000+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75186
	2	0.03	78105
2	3	0.06	80125
	4	0.08	81107
3	5	0.10	81190
	6	0.57	82135
	7	1.04	82179
	8	1.51	83123
	9	1.98	83166
	10	2.45	84108
4	11	2.92	84150
	12	3.14	84199
5	13	3.35	85146
	14	3.57	85191
6	15	3.79	86135
	16	4.01	86179
7	17	4.23	87127
	18	4.45	87182
8	19	4.67	88148
	20	4.89	89127
9	21	5.10	90117
	22	5.18	119142
	23	5.25	146197
10	24	5.32	170182
11	25	5.35	169153

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 5.72126637D-02

ELAPSED CPU TIME IS 9.63 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.708190+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.585860+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
797	6.405720+01	1	7.680190-06	1.055000+00	0.0	0.0	0.0					
797	6.405720+01	1	7.680190-06	1.055000+00	0.0	0.0	0.0	1	1.488620-05			
797	6.405720+01	1	2.285060-06	1.055000+00	0.0	0.0	0.0	2	1.067700-06	25 1.117730+00	25	6.593260-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
797	6.405720+01	1 7.585820+01	3 8.024590+01	5 8.189390+01	11 8.449590+01	13 8.546030+01	
		15 8.634650+01	17 8.727610+01	19 8.848740+01	21 9.017440+01	24 1.697660+02	
		25 1.684080+02					
798	6.412010+01	1 9.238630-06	1.055000+00	0.0	0.0		
798	6.412010+01	1 9.238650-06	1.055000+00	0.0	0.0	1 1.450900-05	
798	6.412010+01	1 1.689060-06	1.055000+00	0.0	0.0	2 8.825210-07	25 1.236580+00 25 7.342800-01
798	6.41200+01	1 7.585780+01	3 8.024470+01	5 8.189250+01	11 8.449420+01	13 8.545900+01	
		15 8.634700+01	17 8.728050+01	19 8.849530+01	21 9.017550+01	24 1.685900+02	
		25 1.671710+02					
799	6.418940+01	1 1.292310-05	1.055000+00	0.0	0.0		
799	6.418940+01	2 1.229290-06	1.055000+00	0.0	0.0	1 1.736330-05	
799	6.418940+01	1 1.857340-06	1.055000+00	0.0	0.0	2 3.986560-07	25 1.371340+00 25 8.203210-01
799	6.41890+01	1 7.585740+01	3 8.024350+01	5 8.189100+01	11 8.449240+01	13 8.545760+01	
		15 8.634770+01	17 8.728530+01	19 8.850390+01	21 9.017600+01	24 1.672780+02	
		25 1.658000+02					
800	6.426550+01	1 2.008710-05	1.055000+00	0.0	0.0		
800	6.426550+01	2 1.867670-06	1.055000+00	0.0	0.0	1 1.963950-05	
800	6.426550+01	1 2.733560-06	1.055000+00	0.0	0.0	2 5.414730-07	25 1.522340+00 25 9.181800-01
800	6.42660+01	1 7.585690+01	3 8.024210+01	5 8.188930+01	11 8.449040+01	13 8.545610+01	
		15 8.634840+01	17 8.729060+01	19 8.851310+01	21 9.017580+01	24 1.658170+02	
		25 1.642770+02					
801	6.434430+01	1 3.498930-05	1.055000+00	0.0	0.0		
801	6.434430+01	2 3.479950-06	1.055000+00	0.0	0.0	1 2.210650-05	
801	6.434430+01	1 4.332570-06	1.055000+00	0.0	0.0	2 8.409710-07	25 1.595870+00 25 9.714490-01
801	6.43440+01	1 7.585640+01	3 8.024070+01	5 8.188770+01	11 8.448830+01	13 8.545460+01	
		15 8.634930+01	17 8.729610+01	19 8.852230+01	21 9.017480+01	24 1.642860+02	
		25 1.626820+02					
802	6.442310+01	1 3.529370-05	1.055000+00	0.0	0.0		
802	6.442310+01	2 3.435620-06	1.055000+00	0.0	0.0	1 2.175630-05	
802	6.442310+01	1 4.349440-06	1.055000+00	0.0	0.0	2 8.369890-07	25 1.616790+00 25 9.938390-01
802	6.44230+01	1 7.585590+01	3 8.023940+01	5 8.188600+01	11 8.448630+01	13 8.545310+01	
		15 8.635020+01	17 8.730150+01	19 8.853140+01	21 9.017290+01	24 1.627340+02	
		25 1.610650+02					
803	6.450190+01	1 2.741960-05	1.055000+00	0.0	0.0		
803	6.450190+01	2 2.554190-06	1.055000+00	0.0	0.0	1 1.986730-05	
803	6.450190+01	1 3.543950-06	1.055000+00	0.0	0.0	2 6.757190-07	25 1.633680+00 25 1.014300+00
803	6.449690+01	1 1.207110-05	1.055000+00	0.0	0.0		
803	6.449690+01	2 1.225770-06	1.055000+00	0.0	0.0	1 2.222400-06	
803	6.449690+01	1 1.141440-06	1.055000+00	0.0	0.0	2 2.466210-07	25 1.536370+00 25 9.538840-01
803	6.44970+01	1 7.585540+01	3 8.023810+01	5 8.188440+01	11 8.448110+01	13 8.545170+01	
		15 8.635100+01	17 8.730660+01	19 8.853960+01	21 9.017040+01	24 1.612620+02	
		25 1.595280+02					
804	6.457070+01	1 3.042970-05	1.055000+00	0.0	0.0		
804	6.457070+01	2 2.686640-06	1.055000+00	0.0	0.0	1 1.912850-05	
804	6.457070+01	1 3.554680-06	1.055000+00	0.0	0.0	2 7.362010-07	25 1.555890+00 25 9.753050-01
804	6.45710+01	1 7.585500+01	3 8.023680+01	5 8.188290+01	11 8.448260+01	13 8.545040+01	
		15 8.635200+01	17 8.731170+01	19 8.854750+01	21 9.016720+01	24 1.597700+02	
		25 1.579730+02					
805	6.464450+01	1 4.695160-05	1.055000+00	0.0	0.0		
805	6.464450+01	2 4.322430-06	1.055000+00	0.0	0.0	1 2.174730-05	
805	6.464450+01	1 5.193550-06	1.055000+00	0.0	0.0	2 1.083170-06	25 1.583770+00 25 1.002560+00
805	6.464060+01	1 9.065610-06	1.055000+00	0.0	0.0		
805	6.464060+01	1 9.065510-06	1.055000+00	0.0	0.0	1 1.847980-06	
805	6.464060+01	1 1.403440-06	1.055000+00	0.0	0.0	2 4.797030-07	25 1.505520+00 25 9.530290-01
805	6.46410+01	1 7.585450+01	3 8.023560+01	5 8.188150+01	11 8.448080+01	13 8.544910+01	

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                    15 8 .635290D+01   17 8 .731660D+01   19 8 .855480D+01   21 9 .016340D+01   24 1 .583360D+02
                    25 1 .554670D+02
806 6 .471050D+01   1 2 .032810-05 1 .055000+00 0 0        0 0          0 0
806 6 .471050D+01   2 1 .817480-06 1 .055000+00 0 0        0 0          0 0          1 1 .745720-05
806 6 .471050D+01   1 2 .562830-06 1 .055000+00 0 0        0 0          0 0          2 5 .568590-07   25 1 .520880+00   25 9 .720110-01
  806     6.4711D+01    1 7.585410+01    3 8 .023450+01    5 8 .188010+01   11 8 .447910+01   13 8 .544790+01
                    15 8 .635380+01   17 8 .732140+01   19 8 .856190+01   21 9 .015890+01   24 1 .568810+02
                    25 1 .549460+02
807 6 .478050+01   1 2 .159420-05 1 .055000+00 0 0        0 0          0 0
807 6 .478050+01   2 1 .840770-06 1 .055000+00 0 0        0 0          0 0          1 1 .675590-05
807 6 .478050+01   1 2 .589670-06 1 .055000+00 0 0        0 0          0 0          2 5 .619340-07   25 1 .536180+00   25 9 .914260-01
  807     6.4780D+01    1 7.585370+01    3 8 .023330+01    5 8 .187870+01   11 8 .447740+01   13 8 .544670+01
                    15 8 .635480+01   17 8 .732620+01   19 8 .856880+01   21 9 .015380+01   24 1 .554070+02
                    25 1 .534100+02
808 6 .485040+01   1 2 .037720-05 1 .055000+00 0 0        0 0          0 0
808 6 .485040+01   2 1 .725860-06 1 .055000+00 0 0        0 0          0 0          1 1 .594430-05
808 6 .485040+01   1 2 .439080-06 1 .055000+00 0 0        0 0          0 0          2 5 .274840-07   25 1 .550370+00   25 1 .010600+00
808 6 .484620+01   1 9 .064920-06 1 .055000+00 0 0        0 0          0 0
808 6 .484620+01   2 9 .064920-06 1 .055000+00 0 0        0 0          0 0          1 1 .861660-06
808 6 .484620+01   1 1 .428430-06 1 .055000+00 0 0        0 0          0 0          2 4 .839220-07   25 1 .462440+00   25 9 .532910-01
  808     6.4846D+01    1 7.585330+01    3 8 .023220+01    5 8 .187740+01   11 8 .447580+01   13 8 .544570+01
                    15 8 .635570+01   17 8 .733060+01   19 8 .857510+01   21 9 .014840+01   24 1 .540050+02
                    25 1 .519480+02
809 6 .491190+01   1 1 .026130-05 1 .055000+00 0 0        0 0          0 0
809 6 .491190+01   2 1 .059330-06 1 .055000+00 0 0        0 0          0 0          1 1 .309540-05
809 6 .491190+01   1 1 .340030-06 1 .055000+00 0 0        0 0          0 0          2 3 .045800-07   25 1 .471540+00   25 9 .684520-01
  809     6.4912D+01    1 7.585290+01    3 8 .023110+01    5 8 .187610+01   11 8 .447430+01   13 8 .544460+01
                    15 8 .635670+01   17 8 .733510+01   19 8 .858110+01   21 9 .014240+01   24 1 .525880+02
                    25 1 .504760+02
810 6 .497770+01   1 1 .371930-05 1 .055000+00 0 0        0 0          0 0
810 6 .497770+01   2 1 .254560-06 1 .055000+00 0 0        0 0          0 0          1 1 .280050-05
810 6 .497770+01   1 1 .533220-06 1 .055000+00 0 0        0 0          0 0          2 3 .544220-07   25 1 .481970+00   25 9 .848560-01
  810     6.4978D+01    1 7.585250+01    3 8 .023010+01    5 8 .187480+01   11 8 .447280+01   13 8 .544360+01
                    15 8 .635760+01   17 8 .733950+01   19 8 .858690+01   21 9 .013580+01   24 1 .511580+02
                    25 1 .489940+02
811 6 .504340+01   1 1 .973310-05 1 .055000+00 0 0        0 0          0 0
811 6 .504340+01   2 1 .658450-06 1 .055000+00 0 0        0 0          0 0          1 1 .346150-05
811 6 .504340+01   1 2 .006720-06 1 .055000+00 0 0        0 0          0 0          2 4 .714030-07   25 1 .495440+00   25 1 .003690+00
811 6 .503990+01   1 7 .183670-06 1 .055000+00 0 0        0 0          0 0
811 6 .503990+01   1 7 .183670-06 1 .055000+00 0 0        0 0          0 0          1 1 .532890-05
811 6 .503990+01   1 1 .083110-06 1 .055000+00 0 0        0 0          0 0          2 3 .831740-07   25 1 .419590+00   25 9 .527840-01
  811     6.5040D+01    1 7.585210+01    3 8 .022910+01    5 8 .187360+01   11 8 .447130+01   13 8 .544260+01
                    15 8 .635860+01   17 8 .734370+01   19 8 .859230+01   21 9 .012910+01   24 1 .497920+02
                    25 1 .475740+02
812 6 .510210+01   1 1 .182200-05 1 .055000+00 0 0        0 0          0 0
812 6 .510210+01   2 1 .146950-06 1 .055000+00 0 0        0 0          0 0          1 1 .165110-05
812 6 .510210+01   1 1 .303200-06 1 .055000+00 0 0        0 0          0 0          2 3 .190010-07   25 1 .429260+00   25 9 .685040-01
  812     6.5102D+01    1 7.585160+01    3 8 .022810+01    5 8 .187240+01   11 8 .446990+01   13 8 .544170+01
                    15 8 .635960+01   17 8 .734780+01   19 8 .859740+01   21 9 .012180+01   24 1 .484140+02
                    25 1 .461450+02
813 6 .516430+01   1 1 .302680-05 1 .055000+00 0 0        0 0          0 0
813 6 .516430+01   2 1 .211400-06 1 .055000+00 0 0        0 0          0 0          1 1 .141030-05
813 6 .516430+01   1 1 .389140-06 1 .055000+00 0 0        0 0          0 0          2 3 .401690-07   25 1 .439270+00   25 9 .848240-01
  813     6.5164D+01    1 7.585140+01    3 8 .022710+01    5 8 .187120+01   11 8 .446850+01   13 8 .544080+01
                    15 8 .636060+01   17 8 .735200+01   19 8 .860230+01   21 9 .011400+01   24 1 .470250+02
                    25 1 .447060+02
814 6 .522650+01   1 1 .261470-05 1 .055000+00 0 0        0 0          0 0
814 6 .522650+01   2 1 .168330-06 1 .055000+00 0 0        0 0          0 0          1 1 .102930-05
814 6 .522650+01   1 1 .254550-06 1 .055000+00 0 0        0 0          0 0          2 3 .127240-07   25 1 .448880+00   25 1 .001260+00
814 6 .522330+01   1 6 .030660-06 1 .055000+00 0 0        0 0          0 0
814 6 .522330+01   1 6 .030660-06 1 .055000+00 0 0        0 0          0 0          1 1 .332450-06
814 6 .522330+01   1 9 .117130-07 1 .055000+00 0 0        0 0          0 0          2 3 .277150-07   25 1 .378290+00   25 9 .524780-01
  814     6.5223D+01    1 7.585110+01    3 8 .022620+01    5 8 .187010+01   11 8 .446720+01   13 8 .543990+01
                    15 8 .636160+01   17 8 .735580+01   19 8 .860680+01   21 9 .010620+01   24 1 .456960+02
                    25 1 .433280+02
815 6 .528240+01   1 6 .983150-06 1 .055000+00 0 0        0 0          0 0
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 815 6.52824D+01     1 6.983150-06 1.055000+00 0.0          0.0          0.0          1 9.023130-06
 815 6.52824D+01     1 1.612460-05 1.055000+00 0.0          0.0          0.0          2 7.151220-07   25 1.384900+00   25 9.662480-01
   815      6.5282D+01     1 7.585070+01     3 8.022530+01     5 8.186900+01    11 8.436590+01    13 8.543910+01
                           15 8.636260+01    17 8.735970+01    19 8.861110+01    21 9.009790+01    24 1.443560+02
                           25 1.419430+02
 816 6.53414D+01     1 9.288450-06 1.055000+00 0.0          0.0          0.0
 816 6.53414D+01     1 9.288450-06 1.055000+00 0.0          0.0          0.0          1 8.902220-06
 816 6.53414D+01     1 1.308030-06 1.055000+00 0.0          0.0          0.0          2 7.940910-07   25 1.392470+00   25 9.810080-01
   816      6.5341D+01     1 7.585040+01     3 8.022440+01     5 8.186800+01    11 8.446160+01    13 8.543830+01
                           15 8.636360+01    17 8.736350+01    19 8.861530+01    21 9.008910+01    24 1.430080+02
                           25 1.405500+02
 817 6.54004D+01     1 1.009560-05 1.055000+00 0.0          0.0          0.0
 817 6.54004D+01     2 9.501840-07 1.055000+00 0.0          0.0          0.0          1 9.212820-06
 817 6.54004D+01     1 9.283040-07 1.055000+00 0.0          0.0          0.0          2 2.481540-07   25 1.400350+00   25 9.963330-01
   817      6.5400D+01     1 7.585010+01     3 8.022350+01     5 8.186690+01    11 8.446330+01    13 8.543750+01
                           15 8.636460+01    17 8.736730+01    19 8.861920+01    21 9.007990+01    24 1.416520+02
                           25 1.391500+02
 818 6.54595D+01     1 9.881930-06 1.055000+00 0.0          0.0          0.0
 818 6.54595D+01     1 9.881930-06 1.055000+00 0.0          0.0          0.0          1 8.583970-06
 818 6.54595D+01     1 1.905610-06 1.055000+00 0.0          0.0          0.0          2 7.905570-07   25 1.408040+00   25 1.013890+00
 818 6.54559D+01     1 6.718750-06 1.055000+00 0.0          0.0          0.0
 818 6.54559D+01     1 6.718750-06 1.055000+00 0.0          0.0          0.0          1 1.530770-06
 818 6.54559D+01     1 9.867740-07 1.055000+00 0.0          0.0          0.0          2 3.684610-07   25 1.326040+00   25 9.529560-01
   818      6.5456D+01     1 7.584980+01     3 8.022260+01     5 8.186590+01    11 8.446220+01    13 8.543680+01
                           15 8.636550+01    17 8.737090+01    19 8.862280+01    21 9.007090+01    24 1.403700+02
                           25 1.378240+02
 819 6.55113D+01     1 4.398270-06 1.055000+00 0.0          0.0          0.0
 819 6.55113D+01     1 4.398270-06 1.055000+00 0.0          0.0          0.0          1 7.258300-06
 819 6.55113D+01     1 1.113790-06 1.055000+00 0.0          0.0          0.0          2 5.084780-07   25 1.330780+00   25 9.655670-01
   819      6.5511D+01     1 7.584950+01     3 8.022180+01     5 8.186490+01    11 8.446100+01    13 8.543610+01
                           15 8.636660+01    17 8.737440+01    19 8.862610+01    21 9.006140+01    24 1.390800+02
                           25 1.364930+02
 820 6.55667D+01     1 2.542270-05 1.055000+00 0.0          0.0          0.0
 820 6.55667D+01     2 1.991390-06 1.055000+00 0.0          0.0          0.0          1 9.018720-06
 820 6.55667D+01     1 1.499750-06 1.055000+00 0.0          0.0          0.0          2 4.644010-07   25 1.316790+00   25 9.647310-01
   820      6.5567D+01     1 7.584920+01     3 8.022100+01     5 8.186390+01    11 8.445980+01    13 8.543540+01
                           15 8.636760+01    17 8.737780+01    19 8.862930+01    21 9.005160+01    24 1.377870+02
                           25 1.351760+02
 821 6.56221D+01     1 2.206720-05 1.055000+00 0.0          0.0          0.0
 821 6.56221D+01     2 1.763310-06 1.055000+00 0.0          0.0          0.0          1 8.200920-06
 821 6.56221D+01     1 1.448730-06 1.055000+00 0.0          0.0          0.0          2 4.425310-07   25 1.303420+00   25 9.642340-01
   821      6.5622D+01     1 7.584890+01     3 8.022020+01     5 8.186300+01    11 8.445870+01    13 8.543480+01
                           15 8.636860+01    17 8.738130+01    19 8.863240+01    21 9.004130+01    24 1.364960+02
                           25 1.338730+02
 822 6.56775D+01     1 8.396040-06 1.055000+00 0.0          0.0          0.0
 822 6.56775D+01     1 8.396040-06 1.055000+00 0.0          0.0          0.0          1 5.872710-06
 822 6.56775D+01     1 1.491560-06 1.055000+00 0.0          0.0          0.0          2 7.118490-07   25 1.297390+00   25 9.691250-01
   822      6.5678D+01     1 7.584860+01     3 8.021940+01     5 8.186200+01    11 8.445760+01    13 8.543410+01
                           15 8.636960+01    17 8.738470+01    19 8.863520+01    21 9.003070+01    24 1.352090+02
                           25 1.325750+02
 823 6.57330D+01     1 3.746970-06 1.055000+00 0.0          0.0          0.0
 823 6.57330D+01     1 3.746970-06 1.055000+00 0.0          0.0          0.0          1 4.451450-06
 823 6.57330D+01     1 7.104300-07 1.055000+00 0.0          0.0          0.0          2 3.901410-07   25 1.294460+00   25 9.763980-01
   823      6.5733D+01     1 7.584830+01     3 8.021860+01     5 8.186110+01    11 8.445650+01    13 8.543350+01
                           15 8.637070+01    17 8.738810+01    19 8.863790+01    21 9.001970+01    24 1.339270+02
                           25 1.312810+02
 824 6.57884D+01     1 3.044850-06 1.055000+00 0.0          0.0          0.0
 824 6.57884D+01     1 3.044850-06 1.055000+00 0.0          0.0          0.0          1 3.286780-06
 824 6.57884D+01     1 2.632250-07 1.055000+00 0.0          0.0          0.0          2 1.908440-07   25 1.293410+00   25 9.852200-01
   824      6.5788D+01     1 7.584800+01     3 8.021780+01     5 8.186020+01    11 8.445540+01    13 8.543290+01
                           15 8.637170+01    17 8.739140+01    19 8.864040+01    21 9.000830+01    24 1.326480+02
                           25 1.299880+02
 825 6.58438D+01     1 2.211160-06 1.055000+00 0.0          0.0          0.0
 825 6.58438D+01     1 2.211160-06 1.055000+00 0.0          0.0          0.0          1 2.345470-06
 825 6.58438D+01     1 2.152120-07 1.055000+00 0.0          0.0          0.0          2 1.567440-07   25 1.293460+00   25 9.950660-01
   825      6.5844D+01     1 7.584770+01     3 8.021700+01     5 8.185920+01    11 8.445430+01    13 8.543230+01
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                        15 8.63728D+01    17 8.73947D+01    19 8.86428D+01    21 8.99965D+01    24 1.31374D+02
                        25 1.28694D+02
826 6.58992D+01     1 1.72470D-06 1.05500D+00 0.0          0.0          0.0
826 6.58992D+01     1 1.72470D-06 1.05500D+00 0.0          0.0          0.0          1 2.02136D-06
826 6.58992D+01     1 2.08815D-07 1.05500D+00 0.0          0.0          0.0          2 1.64065D-07    25 1.29399D+00    25 1.00548D+00
826 6.58992D+01     1 5.62592D-06 1.05500D+00 0.0          0.0          0.0
826 6.58962D+01     1 5.62592D-06 1.05500D+00 0.0          0.0          0.0          1 1.39330D-06
826 6.58962D+01     1 8.65049D-07 1.05500D+00 0.0          0.0          0.0          2 3.19216D-07    25 1.22606D+00    25 9.52691D-01
  826      6.5896D+01     1 7.58471D+01     3 8.02163D+01     5 8.18584D+01    11 8.44533D+01    13 8.54717D+01
                        15 8.63738D+01    17 8.73978D+01    19 8.86448D+01    21 8.99851D+01    24 1.30166D+02
                        25 1.27468D+02
827 6.59481D+01     1 3.82871D-07 1.05500D+00 0.0          0.0          0.0
827 6.59481D+01     1 3.82871D-07 1.05500D+00 0.0          0.0          0.0          1 1.15717D-06
827 6.59481D+01     1 7.98940D-08 1.05500D+00 0.0          0.0          0.0          2 6.13115D-08    25 1.21555D+00    25 9.53922D-01
  827      6.5948D+01     1 7.58472D+01     3 8.02156D+01     5 8.18575D+01    11 8.44523D+01    13 8.54312D+01
                        15 8.63748D+01    17 8.74008D+01    19 8.86467D+01    21 8.99734D+01    24 1.28970D+02
                        25 1.26252D+02
828 6.60000D+01     1 1.28194D-06 1.05500D+00 0.0          0.0          0.0
828 6.60000D+01     1 1.28194D-06 1.05500D+00 0.0          0.0          0.0          1 1.33102D-06
828 6.60000D+01     1 2.07559D-07 1.05500D+00 0.0          0.0          0.0          2 1.03556D-07    25 1.21678D+00    25 9.63766D-01
  828      6.6000D+01     1 7.58469D+01     3 8.02149D+01     5 8.18567D+01    11 8.44514D+01    13 8.54307D+01
                        15 8.63759D+01    17 8.74038D+01    19 8.86484D+01    21 8.99614D+01    24 1.27775D+02
                        25 1.25035D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 2
W9XNP110 20.58.21 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 828 TIME STEPS, TIME = 6.600000D+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75185
	2	0.03	78103
2	3	0.06	80121
	4	0.08	81104
3	5	0.10	81186
	6	0.57	82130
	7	1.04	82174
	8	1.51	83118
	9	1.98	83161
	10	2.45	84103
4	11	2.92	84145
	12	3.14	84195
5	13	3.35	85143
	14	3.57	85290
6	15	3.79	86138
	16	4.01	86187
7	17	4.23	87140
	18	4.45	88100
8	19	4.67	88165
	20	4.69	89133
9	21	5.10	89196
	22	5.18	106115
	23	5.25	119164
10	24	5.32	127177
11	25	5.35	125104

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 5.192100520-02

ELAPSED CPU TIME IS 10.02 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.27775D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.58469D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	P A	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
829	6.60519D+01	1	7.57410D-06	1.05500D+00	0.0	0.0	0.0						
829	6.60519D+01	1	7.57410D-06	1.05500D+00	0.0	0.0	0.0	1	2.71955D-06				
829	6.60519D+01	1	1.12354D-06	1.05500D+00	0.0	0.0	0.0	2	4.42762D-07	25	1.22148D+00	25	9.76910D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES			
P29	6.60520+01	1 7.58467D+01	3 8.02142D+01	5 8.18559D+01	11 8.[illegible]504D+01 13 8.54302D+01
		15 8.63769D+01	17 8.74067D+01	19 8.86500D+01	21 8.99491D+01 24 1.26178D+02
		25 1.23814D+02			
830	6.61038D+01	1 5.51925D-06	1.05500D+00 0.0	0.0	0.0
830	6.61038D+01	1 5.51925D-06	1.05500D+00 0.0	0.0	0.0 1 2.75013D-06
830	6.61038D+01	1 8.88.88D-07	1.05500D+00 0.0	0.0	0.0 2 3.61895D-07 25 1.22522D+00 25 9.89564D-01
830	6.6104D+01	1 7.58464D+01	3 8.02135D+01	5 8.18551D+01	11 8.44495D+01 13 8.54297D+01
		15 8.63779D+01	17 8.74096D+01	19 8.86514D+01	21 8.99365D+01 24 1.25379D+02
		25 1.22589D+02			
831	6.61558D+01	1 5.33165D-06	1.05500D+00 0.0	0.0	0.0
831	6.61558D+01	1 5.33165D-06	1.05500D+00 0.0	0.0	0.0 1 2.99924D-06
831	6.61558D+01	1 8.78080D-07	1.05500D+00 0.0	0.0	0.0 2 3.71238D-07 25 1.22899D+00 25 1.00253D+00
831	6.61530D+01	1 4.46143D-06	1.05500D+00 0.0	0.0	0.0
831	6.61530D+01	1 4.46143D-06	1.05500D+00 0.0	0.0	0.0 1 1.07084D-06
831	6.61530D+01	1 6.45474D-07	1.05500D+00 0.0	0.0	0.0 2 2.54944D-07 25 1.16736D+00 25 9.52255D-01
831	6.6153D+01	1 7.58462D+01	3 8.02129D+01	5 8.18543D+01	11 8.44486D+01 13 8.54292D+01
		15 8.63789D+01	17 8.74124D+01	19 8.86526D+01	21 8.99243D+01 24 1.24240D+02
		25 1.21421D+02			
832	6.62022D+01	1 2.25054D-06	1.05500D+00 0.0	0.0	0.0
832	6.62022D+01	1 2.25054D-06	1.05500D+00 0.0	0.0	0.0 1 2.75837D-06
832	6.62022D+01	1 4.84876D-07	1.05500D+00 0.0	0.0	0.0 2 2.37854D-07 25 1.16966D+00 25 9.63309D-01
832	6.62020+01	1 7.58459D+01	3 8.02123D+01	5 8.18536D+01	11 8.44477D+01 13 8.54288D+01
		15 8.63799D+01	17 8.74150D+01	19 8.86536D+01	21 8.99119D+01 24 1.23098D+02
		25 1.20252D+02			
833	6.62514D+01	1 3.27514D-06	1.05500D+00 0.0	0.0	0.0
833	6.62514D+01	1 3.27514D-06	1.05500D+00 0.0	0.0	0.0 1 2.95224D-06
833	6.62514D+01	1 6.58952D-07	1.05500D+00 0.0	0.0	0.0 2 2.95954D-07 25 1.17247D+00 25 9.75017D-01
833	6.6251D+01	1 7.58457D+01	3 8.02116D+01	5 8.18528D+01	11 8.44468D+01 13 8.54284D+01
		15 8.63809D+01	17 8.74177D+01	19 8.86545D+01	21 8.98991D+01 24 1.21953D+02
		25 1.19079D+02			
834	6.63006D+01	1 4.25418D-06	1.05500D+00 0.0	0.0	0.0
834	6.63006D+01	1 4.25418D-06	1.05500D+00 0.0	0.0	0.0 1 3.20918D-06
834	6.63006D+01	1 7.41007D-07	1.05500D+00 0.0	0.0	0.0 2 3.35833D-07 25 1.17587D+00 25 9.87473D-01
834	6.6301D+01	1 7.58455D+01	3 8.02110D+01	5 8.18521D+01	11 8.44456D+01 13 8.54280D+01
		15 8.63819D+01	17 8.74203D+01	19 8.86553D+01	21 8.98856D+01 24 1.20805D+02
		25 1.17903D+02			
835	6.63498D+01	1 4.62771D-06	1.05500D+00 0.0	0.0	0.0
835	6.63498D+01	1 4.62771D-06	1.05500D+00 0.0	0.0	0.0 1 3.41085D-06
835	6.63498D+01	1 8.26148D-07	1.05500D+00 0.0	0.0	0.0 2 3.66571D-07 25 1.17949D+00 25 1.00039D+00
835	6.63474D+01	1 3.74295D-06	1.05500D+00 0.0	0.0	0.0
835	6.63474D+01	1 3.74295D-06	1.05500D+00 0.0	0.0	0.0 1 9.53941D-07
835	6.63474D+01	1 5.21635D-07	1.05500D+00 0.0	0.0	0.0 2 2.14206D-07 25 1.12244D+00 25 9.51999D-01
835	6.6347D+01	1 7.58453D+01	3 8.02104D+01	5 8.18514D+01	11 8.44452D+01 13 8.54276D+01
		15 8.63829D+01	17 8.74228D+01	19 8.86558D+01	21 8.98736D+01 24 1.19712D+02
		25 1.16781D+02			
836	6.63941D+01	1 2.22190D-06	1.05500D+00 0.0	0.0	0.0
836	6.63941D+01	1 2.22190D-06	1.05500D+00 0.0	0.0	0.0 1 3.11325D-06
836	6.63941D+01	1 5.25923D-07	1.05500D+00 0.0	0.0	0.0 2 2.54696D-07 25 1.12485D+00 25 9.63212D-01
836	6.6394D+01	1 7.58450D+01	3 8.02098D+01	5 8.18507D+01	11 8.44444D+01 13 8.54272D+01
		15 8.63838D+01	17 8.74252D+01	19 8.86563D+01	21 8.98608D+01 24 1.18615D+02
		25 1.15656D+02			
837	6.64408D+01	1 3.20875D-06	1.05500D+00 0.0	0.0	0.0
837	6.64408D+01	1 3.20875D-06	1.05500D+00 0.0	0.0	0.0 1 3.27419D-06
837	6.64408D+01	1 6.51412D-07	1.05500D+00 0.0	0.0	0.0 2 2.99964D-07 25 1.12776D+00 25 9.75095D-01
837	6.6441D+01	1 7.58448D+01	3 8.02093D+01	5 8.18500D+01	11 8.44436D+01 13 8.54269D+01

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                    15 8.63848D+01   17 8.74275D+01   19 8.86566D+01   21 8.98477D+01   24 1.17515D+02
                    25 1.14528D+02
838 6.64875D+01   1 3.82443D-06 1.05500D+00 0.0          0.0          0.0
838 6.64875D+01   1 3.82443D-06 1.05500D+00 0.0          0.0          0.0          1 3.43428D-06
838 6.64875D+01   1 7.05332D-07 1.05500D+00 0.0          0.0          0.0          2 3.24264D-07   25 1.13501D+00   25 9.87541D-01
  838      6.6488D+01     1 7.58446D+01    3 8.02087D+01   5 8.18794D+01   11 8.44429D+01   13 8.54265D+01
                    15 8.63858D+01   17 8.74299D+01   19 8.86468D+01   21 8.98345D+01   24 1.16412D+02
                    25 1.13397D+02
839 6.65343D+01   1 1.22054D-05 1.05500D+00 0.0          0.0          0.0
839 6.65343D+01   2 9.87117D-07 1.05500D+00 0.0          0.0          0.0          1 4.35476D-06
839 6.65343D+01   1 5.69530D-07 1.05500D+00 0.0          0.0          0.0          2 2.17213D-07   25 1.12436D+00   25 9.91522D-01
  839      6.6534D+01     1 7.58444D+01    3 8.02081D+01   5 8.18487D+01   11 8.44421D+01   13 8.54262D+01
                    15 8.63867D+01   17 8.74322D+01   19 8.86569D+01   21 8.98210D+01   24 1.15308D+02
                    25 1.12273D+02
840 6.65810D+01   1 5.93937D-05 1.05500D+00 0.0          0.0          0.0
840 6.65810D+01   2 5.18259D-06 1.05500D+00 0.0          0.0          0.0          1 1.70875D-05
840 6.65810D+01   1 2.97630D-06 1.05500D+00 0.0          0.0          0.0          2 1.11268D-06   24 1.09939D+00   25 9.69131D-01
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                    15 8.63877D+01   17 8.74344D+01   19 8.86568D+01   21 8.98074D+01   24 1.14208D+02
                    25 1.11185D+02
841 6.66277D+01   1 3.08339D-05 1.05500D+00 0.0          0.0          0.0
841 6.66277D+01   2 2.95931D-06 1.05500D+00 0.0          0.0          0.0          1 1.32376D-05
841 6.66277D+01   1 1.78144D-06 1.05500D+00 0.0          0.0          0.0          2 6.51254D-07   24 1.08775D+00   25 9.59234D-01
  841      6.6628D+01     1 7.58440D+01    3 8.02070D+01   5 8.18474D+01   11 8.44406D+01   13 8.54255D+01
                    15 8.63887D+01   17 8.74366D+01   19 8.86566D+01   21 8.97933D+01   24 1.13121D+02
                    25 1.10118D+02
842 6.66744D+01   1 1.71285D-05 1.05500D+00 0.0          0.0          0.0
842 6.66744D+01   2 1.85344D-06 1.05500D+00 0.0          0.0          0.0          1 1.13500D-05
842 6.66744D+01   1 1.14536D-06 1.05500D+00 0.0          0.0          0.0          2 4.10530D-07   24 1.07441D+00   25 9.55712D-01
  842      6.6674D+01     1 7.58438D+01    3 8.02065D+01   5 8.18468D+01   11 8.44399D+01   13 8.54252D+01
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                    25 1.09066D+02
843 6.67211D+01   1 1.11789D-05 1.05500D+00 0.0          0.0          0.0
843 6.67211D+01   2 1.34043D-06 1.05500D+00 0.0          0.0          0.0          1 1.01846D-05
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  843      6.6721D+01     1 7.58436D+01    3 8.02060D+01   5 8.18462D+01   11 8.44392D+01   13 8.54249D+01
                    15 8.63906D+01   17 8.74410D+01   19 8.86559D+01   21 8.97650D+01   24 1.10985D+02
                    25 1.08024D+02
844 6.67679D+01   1 7.82491D-06 1.05500D+00 0.0          0.0          0.0
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  844      6.6768D+01     1 7.58434D+01    3 8.02054D+01   5 8.18455D+01   11 8.44385D+01   13 8.54247D+01
                    15 8.63916D+01   17 8.74431D+01   19 8.86553D+01   21 8.97505D+01   24 1.09935D+02
                    25 1.06990D+02
845 6.68146D+01   1 6.13688D-06 1.05500D+00 0.0          0.0          0.0
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845 6.68146D+01   1 1.46048D-06 1.05500D+00 0.0          0.0          0.0          2 7.46229D-07   24 1.03935D+00   25 9.53942D-01
  845      6.6815D+01     1 7.58432D+01    3 8.02049D+01   5 8.18449D+01   11 8.44378D+01   13 8.54244D+0
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                    25 1.05963D+02
846 6.68613D+01   1 4.99450D-06 1.05500D+00 0.0          0.0          0.0
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  846      6.6861D+01     1 7.58430D+01    3 8.02044D+01   5 8.18443D+01   11 8.44371D+01   13 8.54241D+01
                    15 8.63936D+01   17 8.74472D+01   19 8.86537D+01   21 8.97208D+01   24 1.07865D+02
                    25 1.04942D+02
847 6.69080D+01   1 3.94400D-06 1.05500D+00 0.0          0.0          0.0
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  847      6.6908D+01     1 7.58429D+01    3 8.02039D+01   5 8.18437D+01   11 8.44365D+01   13 8.54233D+01
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                    25 1.03925D+02
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                    25 1.02912D+02
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849 6.70015D+01   1 5.92818D-07 1.05500D+00 0.0          0.0          0.0          2 3.26784D-07   25 1.01016D+00   25 9.81581D-01
  849     6.7001D+01     1 7.58425D+01   3 8.02029D+01   5 8.18426D+01   11 8.44352D+01   13 8.54234D+01
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                    25 1.01902D+02
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                    25 1.00892D+02
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  851     6.7093D+01     1 7.53421D+01   3 8.02019D+01   5 8.18414D+01   11 8.44339D+01   13 8.54230D+01
                    15 8.63984D+01   17 8.74565D+01   19 8.86476D+01   21 8.95440D+01   24 1.02860D+02
                    25 9.99313D+01
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  852     6.7137D+01     1 7.58420D+01   3 8.02015D+01   5 8.18409D+01   11 8.44333D+01   13 8.54228D+01
                    15 8.63993D+01   17 8.74582D+01   19 8.86461D+01   21 8.96288D+01   24 1.01909D+02
                    25 9.89718D+01
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                    15 8.64002D+01   17 8.74598D+01   19 8.86444D+01   21 8.96134D+01   24 1.00961D+02
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                    25 9.70538D+01
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  855     6.7270D+01     1 7.58415D+01   3 8.02002D+01   5 8.18394D+01   11 8.44316D+01   13 8.54223D+01
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                    25 9.60860D+01
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  856     6.7311D+01     1 7.58413D+01   3 8.01998D+01   5 8.18389D+01   11 8.44311D+01   13 8.54221D+01
                    15 8.64029D+01   17 8.74644D+01   19 8.86389D+01   21 8.95676D+01   24 9.81792D+01
                    25 9.51709D+01
857 6.73528D+01   1 8.01138D-06 1.05500D+00 0.0          0.0          0.0
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  857     6.7353D+01     1 7.58412D+01   3 8.01994D+01   5 8.18384D+01   11 8.44306D+01   13 8.54220D+01
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                    25 9.42496D+01
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                    25 9.33231D+01
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  859     6.7435D+01    1 7.58409D+01    3 8.01986D+01    5 8.18375D+01   11 8.44296D+01   13 8.54217D+01
                    15 8.64054D+01   17 8.74683D+01   19 8.86328D+01   21 8.95227D+01   24 9.54912D+01
                    25 9.23919D+01
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  860     6.7477D+01    1 7.58407D+01    3 8.01982D+01    5 8.18371D+01   11 8.44291D+01   13 8.54216D+01
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                    15 8.64079D+01   17 8.74720D+01   19 8.86256D+01   21 8.94763D+01   24 9.28733D+01
                    25 9.00955D+01
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                    15 9.64088D+01   17 8.74733D+01   19 8.86228D+01   21 8.94595D+01   24 9.20456D+01
                    25 8.94575D+01
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  864     6.7654D+01    1 7.58402D+01    3 8.01966D+01    5 8.18353D+01   11 8.44271D+01   13 8.54211D+01
                    15 8.64098D+01   17 8.74745D+01   19 8.86197D+01   21 8.94414D+01   24 9.12338D+01
                    25 8.88419D+01
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865 6.77054D+01   3 8.47792D-07 1.05500D+00 0.0          0.0          0.0          1 7.71825D-05
865 6.77054D+01   1 7.27722D-06 1.05500D+00 0.0          0.0          0.0          2 1.63943D-06   24 7.97942D-01   24 8.74613D-01
  865     6.7705D+01    1 7.58400D+01    3 8.01962D+01    5 8.18348D+01   11 8.44266D+01   13 8.54210D+01
                    15 8.64108D+01   17 8.74758D+01   19 8.86163D+01   21 8.94218D+01   24 9.04358D+01
                    25 8.82403D+01
866 6.77613D+01   1 1.01590D-04 1.05500D+00 0.0          0.0          0.0
866 6.77613D+01   3 9.81623D-07 1.05500D+00 0.0          0.0          0.0          1 8.55378D-05
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                    25 8.76486D+01
867 6.78226D+01   1 1.18186D-04 1.05500D+00 0.0          0.0          0.0
867 6.78226D+01   3 1.19164D-06 1.05500D+00 0.0          0.0          0.0          1 9.56762D-05
867 6.78226D+01   2 7.76266D-07 1.05500D+00 0.0          0.0          0.0          2 2.22544D-06   24 7.73135D-01   24 8.62385D-01
  867     6.7823D+01    1 7.58396D+01    3 8.01952D+01    5 8.18336D+01   11 8.44254D+01   13 8.54208D+01
                    15 8.64130D+01   17 8.74785D+01   19 8.86078D+01   21 8.93768D+01   24 8.88777D+01
                    25 8.70643D+01
868 6.78900D+01   1 1.38639D-04 1.05500D+00 0.0          0.0          0.0
868 6.78900D+01   3 1.44821D-06 1.05500D+00 0.0          0.0          0.0          1 1.07476D-04
868 6.78900D+01   2 9.86723D-07 1.05500D+00 0.0          0.0          0.0          2 2.52860D-06   24 7.58594D-01   24 8.53526D-01
  868     6.7890D+01    1 7.58394D+01    3 8.01947D+01    5 8.18330D+01   11 8.44247D+01   13 8.54207D+01
                    15 8.64143D+01   17 8.74800D+01   19 8.86026D+01   21 8.93507D+01   24 8.81191D+01
                    25 8.64871D+01
869 6.79450D+01   1 5.55023D-05 1.05500D+00 0.0          0.0          0.0
869 6.79450D+01   2 6.79181D-06 1.05500D+00 0.0          0.0          0.0          1 7.37941D-05
869 6.79450D+01   1 4.85703D-06 1.05500D+00 0.0          0.0          0.0          2 1.40196D-06   23 5.70759D-01   24 6.32261D-01
  869     6.7945D+01    1 7.58393D+01    3 8.01942D+01    5 8.18325D+01   11 8.44242D+01   13 8.54206D+01
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PCC

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                        15 8 641530+01   17 8 748100+01   19 8 859820+01   21 8 93294D+01   24 8 756200+01
                        25 8 605479+01
870 6 800000+01     1 6 11605D-05 1 055000+00 0 0          0 0          0 0
870 6 800000+01     2 6 668900-06 1 055000+00 0 0          0 0          0 0          1 6 373690-05
870 6 800000+01     1 4.60429D-06 1 055000+00 0 0          0 0          0 0          2 1 35704D-06   23 5 340380-01   23 5 855600-01
  870      6.80000+01     1 7 583910+01   3 8 019380+01   5 8 183200+01   11 8 442360+01   13 8 542050+01
                        15 8 641630+01   17 8 748200+01   19 8 859360+01   21 8 930800+01   24 8 705240+01
                        25 8 565880+01
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 23 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 870 TIME STEPS, TIME = 6.80000D+01

CROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75184
	2	0.03	78102
2	3	0.06	80119
	4	0.08	81101
3	5	0.10	81183
	6	0.57	82127
	7	1.04	82171
	8	1.51	83114
	9	1.98	83157
	10	2.45	84100
4	11	2.92	84142
	12	3.14	84193
5	13	3.35	85142
	14	3.57	85191
6	15	3.79	86142
	16	4.01	86194
7	17	4.23	87148
	18	4.45	88104
8	19	4.67	88159
	20	4.89	89106
9	21	5.10	89131
	22	5.18	91101
	23	5.25	90167
10	24	5.32	87105
11	25	5.35	85166

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 5.50014486D-02

ELAPSED CPU TIME IS 10.47 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.10089D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 22

THE MINIMUM TEMPERATURE IS - 7.58391D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
871	6.80605D+01	1	6.42378D-05	1.05500D+00	0.0	0.0	0.0				
871	6.80605D+01	2	6.71484D-06	1.05500D+00	0.0	0.0	0.0	1	6.69708D-05		
871	6.80605D+01	1	5.31644D-06	1.05500D+00	0.0	0.0	0.0	2	1.40851D-06	23 5.46995D-01	23 6.03298D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
871	6.8061D+01	1 7.58389D+01	3 8.01933D+01	5 8.18315D+01	11 8.44231D+01	13 8.54205D+01
		15 8.64174D+01	17 8.74831D+01	19 8.85884D+01	21 8.92846D+01	24 8.65408D+01
		25 8.52580D+01				
872	6.81271D+01	1 7.85356D-05	1.05500D+00	0.0	0.0	0.0
872	6.81271D+01	2 7.52358D-06	1.05500D+00	0.0	0.0	0.0
872	6.81271D+01	1 6.80960D-06	1.05500D+00	0.0	0.0	0.0
872	6.8127D+01	1 7.58388D+01	3 8.01928D+01	5 8.18310D+01	11 8.44225D+01	13 8.54204D+01
		15 8.64186D+01	17 8.74841D+01	19 8.85824D+01	21 8.92589D+01	24 8.60301D+01
		25 8.48539D+01				
873	6.82003D+01	1 9.34624D-05	1.05500D+00	0.0	0.0	0.0
873	6.82003D+01	2 8.14345D-06	1.05500D+00	0.0	0.0	0.0
873	6.82003D+01	1 8.44927D-06	1.05500D+00	0.0	0.0	0.0
873	6.8200D+01	1 7.58386D+01	3 8.01923D+01	5 8.18304D+01	11 8.44219D+01	13 8.54204D+01
		15 8.64199D+01	17 8.74851D+01	19 8.85756D+01	21 8.92309D+01	24 8.59227D+01
		25 8.44476D+01				
874	6.82808D+01	1 1.10815D-04	1.05500D+00	0.0	0.0	0.0
874	6.82808D+01	2 8.62616D-06	1.05500D+00	0.0	0.0	0.0
874	6.82808D+01	2 8.67276D-07	1.05500D+00	0.0	0.0	0.0
874	6.8281D+01	1 7.58384D+01	3 8.01918D+01	5 8.18297D+01	11 8.44212D+01	13 8.54204D+01
		15 8.64213D+01	17 8.74860D+01	19 8.85677D+01	21 8.92004D+01	24 8.50200D+01
		25 8.40403D+01				
875	6.83694D+01	1 1.24423D-04	1.05500D+00	0.0	0.0	0.0
875	6.83694D+01	3 1.37040D-06	1.05500D+00	0.0	0.0	0.0
875	6.83694D+01	2 1.20563D-06	1.05500D+00	0.0	0.0	0.0
875	6.8369D+01	1 7.58381D+01	3 8.01912D+01	5 8.18290D+01	11 8.44205D+01	13 8.54204D+01
		15 8.64228D+01	17 8.74868D+01	19 8.85588D+01	21 8.91672D+01	24 8.45243D+01
		25 8.36318D+01				
876	6.84668D+01	1 1.43573D-04	1.05500D+00	0.0	0.0	0.0
876	6.84668D+01	3 1.55253D-06	1.05500D+00	0.0	0.0	0.0
876	6.84668D+01	2 1.53190D-06	1.05500D+00	0.0	0.0	0.0
876	6.8467D+01	1 7.58379D+01	3 8.01905D+01	5 8.18283D+01	11 8.44197D+01	13 8.54204D+01
		15 8.64244D+01	17 8.74875D+01	19 8.85485D+01	21 8.91314D+01	24 8.40363D+01
		25 8.32225D+01				
877	6.85740D+01	1 1.58070D-04	1.05500D+00	0.0	0.0	0.0
877	6.85740D+01	3 1.80925D-06	1.05500D+00	0.0	0.0	0.0
877	6.85740D+01	2 1.89387D-06	1.05500D+00	0.0	0.0	0.0
877	6.8574D+01	1 7.58377D+01	3 8.01899D+01	5 8.18276D+01	11 8.44190D+01	13 8.54204D+01
		15 8.64261D+01	17 8.74880D+01	19 8.85367D+01	21 8.90928D+01	24 8.35557D+01
		25 8.28114D+01				
878	6.86919D+01	1 1.71662D-04	1.05500D+00	0.0	0.0	0.0
878	6.86919D+01	3 2.27399D-06	1.05500D+00	0.0	0.0	0.0
878	6.86919D+01	2 2.28649D-06	1.05500D+00	0.0	0.0	0.0
878	6.8692D+01	1 7.58374D+01	3 8.01892D+01	5 8.18268D+01	11 8.44182D+01	13 8.54205D+01
		15 8.64279D+01	17 8.74882D+01	19 8.85233D+01	21 8.90514D+01	24 8.30812D+01
		25 8.23970D+01				
879	6.88216D+01	1 1.79855D-04	1.05500D+00	0.0	0.0	0.0
879	6.88216D+01	3 2.73555D-06	1.05500D+00	0.0	0.0	0.0
879	6.88216D+01	2 2.67565D-06	1.05500D+00	0.0	0.0	0.0
879	6.8822D+01	1 7.58371D+01	3 8.01884D+01	5 8.18260D+01	11 8.44174D+01	13 8.54206D+01
		15 8.64297D+01	17 8.74880D+01	19 8.85079D+01	21 8.90073D+01	24 8.26103D+01
		25 8.19764D+01				
880	6.89642D+01	1 1.83615D-04	1.05500D+00	0.0	0.0	0.0
880	6.89642D+01	3 3.19496D-06	1.05500D+00	0.0	0.0	0.0
880	6.89642D+01	2 3.05315D-06	1.05500D+00	0.0	0.0	0.0
880	6.8964D+01	1 7.58369D+01	3 8.01877D+01	5 8.18251D+01	11 8.44165D+01	13 8.54207D+01

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                    15 8.64316D+01   17 8.74873D+01   19 8.84903D+01   21 8.89603D+01   24 8.21394D+01
                    25 8.15460D+01
881 6.91212D+01   1 1.276520-04 1.05500D+00 0.0          0.0          0.0
881 6.91212D+01   3 2.37218D-06 1.05500D+00 0.0          0.0          0.0          1 8.50281D-05
881 6.91212D+01   2 2.49628D-06 1.05500D+00 0.0          0.0          0.0          2 1.88154D-06   24 4.78730-01   24 5.82829D-01
    881    6.9121D+01    1 7.58366D+01    3 8.01869D+01   5 8.18243D+01   11 8.44157D+01   13 8.54210D+01
                    15 8.64336D+01   17 8.74859D+01   19 8.84704D+01   21 8.89105D+01   24 8.16607D+01
                    25 8.10938D+01
882 6.92938D+01   1 1.25239D-04 1.05500D+00 0.0          0.0          0.0
882 6.92938D+01   3 2.79711D-06 1.05500D+00 0.0          0.0          0.0          1 7.48098D-05
882 6.92938D+01   2 2.61615D-06 1.05500D+00 0.0          0.0          0.0          2 1.74467D-06   24 4.96396D-01   24 6.07877D-01
    882    6.9294D+01    1 7.58363D+01    3 8.01861D+01   5 8.18234D+01   11 8.44149D+01   13 8.54212D+01
                    15 8.64355D+01   17 8.74837D+01   19 8.84478D+01   21 8.88579D+01   24 8.11643D+01
                    25 8.06146D+01
883 6.94837D+01   1 1.26055D-04 1.05500D+00 0.0          0.0          0.0
883 6.94837D+01   3 3.24811D-06 1.05500D+00 0.0          0.0          0.0          1 6.52097D-05
883 6.94837D+01   2 2.87547D-06 1.05500D+00 0.0          0.0          0.0          2 1.70777D-06   24 5.21771D-01   24 6.42858D-01
    883    6.9484D+01    1 7.58360D+01    3 8.01854D+01   5 8.18226D+01   11 8.44141D+01   13 8.54216D+01
                    15 8.64373D+01   17 8.74805D+01   19 8.84223D+01   21 8.88023D+01   24 8.06425D+01
                    25 8.01035D+01
884 6.96925D+01   1 1.01692D-04 1.05500D+00 0.0          0.0          0.0
884 6.96925D+01   3 2.75730D-06 1.05500D+00 0.0          0.0          0.0          1 5.37569D-05
884 6.96925D+01   2 2.47697D-06 1.05500D+00 0.0          0.0          0.0          2 1.32380D-06   24 5.54939D-01   24 6.88147D-01
    884    6.9693D+01    1 7.58357D+01    3 8.01846D+01   5 8.18218D+01   11 8.44134D+01   13 8.54220D+01
                    15 8.64390D+01   17 8.74760D+01   19 8.83938D+01   21 8.87438D+01   24 8.00875D+01
                    25 7.95528D+01
885 6.98463D+01   1 3.36292D-05 1.05500D+00 0.0          0.0          0.0
885 6.98463D+01   2 5.59843D-07 1.05500D+00 0.0          0.0          0.0          1 2.25390D-05
885 6.98463D+01   1 1.37496D-06 1.05500D+00 0.0          0.0          0.0          2 1.71369D-07   25 4.03637D-01   25 5.07383D-01
    885    6.9846D+01    1 7.58355D+01    3 8.01841D+01   5 8.18212D+01   11 8.44129D+01   13 8.54223D+01
                    15 8.64400D+01   17 8.74720D+01   19 8.83724D+01   21 8.87022D+01   24 7.96861D+01
                    25 7.91492D+01
886 7.00000D+01   1 2.57378D-05 1.05500D+00 0.0          0.0          0.0
886 7.00000D+01   2 3.62617D-06 1.05500D+00 0.0          0.0          0.0          1 1.45187D-05
886 7.00000D+01   1 2.94310D-06 1.05500D+00 0.0          0.0          0.0          2 3.73895D-07   25 3.99907D-01   25 5.05257D-01
    886    7.0000D+01    1 7.58353D+01    3 8.01836D+01   5 8.18207D+01   11 8.44125D+01   13 8.54226D+01
                    15 8.64408D+01   17 8.74676D+01   19 8.83509D+01   21 8.86618D+01   24 7.92881D+01
                    25 7.87493D+01
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ 0
W9XNP110 20.58.23 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 886 TIME STEPS, TIME = 7.00000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75184
	2	0.03	78101
2	3	0.06	80118
	4	0.08	81100
3	5	0.10	81182
	6	0.57	82126
	7	1.04	82169
	8	1.51	83112
	9	1.98	83156
	10	2.45	83193
4	11	2.92	84141
	12	3.14	84192
5	13	3.35	85142
	14	3.57	85193
6	15	3.79	86144
	16	4.01	86196
7	17	4.23	87147
	18	4.45	87195
8	19	4.67	88135
	20	4.89	88161
9	21	5.10	88166
	22	5.18	86102
	23	5.25	82199
10	24	5.32	79129
11	25	5.35	78175

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.53734465D-01

ELAPSED CPU TIME IS 10.66 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.86618D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.58353D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
887	7.01691D+01	1	3.22437D-05	1.05500D+00	0.0	0.0	0.0					
887	7.01691D+01	2	4.94810D-06	1.05500D+00	0.0	0.0	0.0	1	1.19580D-05			
887	7.01691D+01	1	3.74622D-06	1.05500D+00	0.0	0.0	0.0	2	4.47956D-07	25 4.43509D-01	25	5.63191D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES			
887	7.0169D+01	1 7.58351D+01	3 8.01832D+01	5 8.18203D+01	11 8.44121D+01
		13 8.54229D+01	15 8.64414D+01	17 8.74622D+01	19 8.83271D+01
		21 8.86185D+01	24 7.88513D+01	25 7.83058D+01	
888	7.03551D+01	1 1.42380D-05	1.05500D+00	0.0	0.0
888	7.03551D+01	2 1.84959D-06	1.05500D+00	0.0	0.0
888	7.03551D+01	1 1.84118D-06	1.05500D+00	0.0	0.0
888	7.0355D+01	1 7.58350D+01	3 8.01828D+01	5 8.18198D+01	11 8.44117D+01
		13 8.54233D+01	15 8.64417D+01	17 8.74556D+01	19 8.83008D+01
		21 8.85722D+01	24 7.83697D+01	25 7.78164D+01	
889	7.05597D+01	1 1.67498D-05	1.05500D+00	0.0	0.0
889	7.05597D+01	2 2.52291D-06	1.05500D+00	0.0	0.0
889	7.05597D+01	1 2.34034D-06	1.05500D+00	0.0	0.0
889	7.05600D+01	1 7.58348D+01	3 8.01824D+01	5 8.18194D+01	11 8.44114D+01
		13 8.54237D+01	15 8.64418D+01	17 8.74476D+01	19 8.82718D+01
		21 8.85225D+01	24 7.78386D+01	25 7.72763D+01	
890	7.07848D+01	1 1.94618D-05	1.05500D+00	0.0	0.0
890	7.07848D+01	2 3.13789D-06	1.05500D+00	0.0	0.0
890	7.07848D+01	1 3.20073D-06	1.05500D+00	0.0	0.0
890	7.0785D+01	1 7.58347D+01	3 8.01820D+01	5 8.18190D+01	11 8.44112D+01
		13 8.54240D+01	15 8.64414D+01	17 8.74380D+01	19 8.82399D+01
		21 8.84692D+01	24 7.72525D+01	25 7.68804D+01	
891	7.10324D+01	1 2.09799D-05	1.05500D+00	0.0	0.0
891	7.10324D+01	2 3.58008D-06	1.05500D+00	0.0	0.0
891	7.10324D+01	1 3.01511D-06	1.05500D+00	0.0	0.0
891	7.1032D+01	1 7.58345D+01	3 8.01816D+01	5 8.18187D+01	11 8.44110D+01
		13 8.54243D+01	15 8.64404D+01	17 8.74266D+01	19 8.82048D+01
		21 8.84121D+01	24 7.66059D+01	25 7.60230D+01	
892	7.13048D+01	1 5.44043D-06	1.05500D+00	0.0	0.0
892	7.13048D+01	1 5.44043D-06	1.05500D+00	0.0	0.0
892	7.13048D+01	1 1.20156D-06	1.05500D+00	0.0	0.0
892	7.1305D+01	1 7.58344D+01	3 8.01813D+01	5 8.18184D+01	11 8.44109D+01
		13 8.54246D+01	15 8.64387D+01	17 8.74130D+01	19 8.81662D+01
		21 8.83508D+01	24 7.58936D+01	25 7.52995D+01	
893	7.15771D+01	1 9.63522D-06	1.05500D+00	0.0	0.0
893	7.15771D+01	1 9.63522D-06	1.05500D+00	0.0	0.0
893	7.15771D+01	1 1.73975D-06	1.05500D+00	0.0	0.0
893	7.1577D+01	1 7.58343D+01	3 8.01811D+01	5 8.18182D+01	11 8.44108D+01
		13 8.54247D+01	15 8.64363D+01	17 8.73985D+01	19 8.81278D+01
		21 8.82908D+01	24 7.51807D+01	25 7.45753D+01	
894	7.17886D+01	1 7.97982D-06	1.05500D+00	0.0	0.0
894	7.17886D+01	1 7.97982D-06	1.05500D+00	0.0	0.0
894	7.17886D+01	1 1.26745D-06	1.05500D+00	0.0	0.0
894	7.1789D+01	1 7.58342D+01	3 8.01810D+01	5 8.18181D+01	11 8.44107D+01
		13 8.54246D+01	15 8.64340D+01	17 8.73867D+01	19 8.80981D+01
		21 8.82450D+01	24 7.46266D+01	25 7.40122D+01	
895	7.20000D+01	1 3.92057D-05	1.05500D+00	0.0	0.0
895	7.20000D+01	2 6.55577D-06	1.05500D+00	0.0	0.0
895	7.20000D+01	1 5.12345D-06	1.05500D+00	0.0	0.0
895	7.200D+01	1 7.58342D+01	3 8.01809D+01	5 8.18180D+01	11 8.44107D+01
		13 8.54244D+01	15 8.64313D+01	17 8.73744D+01	19 8.80685D+01
		21 8.81998D+01	24 7.40739D+01	25 7.34528D+01	

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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IBM3033/ O
W9XNP110 20.58.24 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 895 TIME STEPS, TIME = 7.200000D+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75183
	2	0.03	78101
2	3	0.06	80118
	4	0.08	81100
3	5	0.10	81182
	6	0.57	82125
	7	1.04	82168
	8	1.51	83112
	9	1.98	83155
	10	2.45	83198
4	11	2.92	84141
	12	3.14	84192
5	13	3.35	85142
	14	3.57	85193
6	15	3.79	86143
	16	4.01	86192
7	17	4.23	87137
	18	4.45	87177
8	19	4.67	88107
	20	4.89	88123
9	21	5.10	88120
	22	5.18	83194
	23	5.25	79132
10	24	5.32	74107
11	25	5.35	73145

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.11439664D-01

ELAPSED CPU TIME IS 10.76 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.82254D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.34528D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
896	7.22326D+01	1 1	602900D-04	1.055000D+00 0.0		0.0	0.0					
896	7.22326D+01	3 5	457340D-06	1.055000D+00 0.0		0.0	0.0	1 1	670540D-05			
896	7.22326D+01	2 3	698100D-06	1.055000D+00 0.0		0.0	0.0	2 1	802100D-06	25 6.01552D-01	25	8.18965D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
896	7.2233D+01	1 7.58342D+01	3 8.01809D+01	5 8.18179D+01	11 8.44106D+01	13 8.54241D+01
		15 8.64279D+01	17 8.73603D+01	19 8.80360D+01	21 8.81507D+01	24 7.34736D+01
		25 7.28512D+01				
897	7.24884D+01	1 1.12764D-04	1.055000D+00 0.0	0.0	0.0	
897	7.24884D+01	3 3.87569D-06	1.055000D+00 0.0	0.0	0.0	1 1.87166D-05
897	7.24884D+01	2 3.03201D-06	1.055000D+00 0.0	0.0	0.0	2 1.31360D-06 25 6.52181D-01 25 8.95224D-01
897	7.2488D+01	1 7.58341D+01	3 8.01808D+01	5 8.18179D+01	11 8.44106D+01	13 8.54236D+01
		15 8.64236D+01	17 8.73444D+01	19 8.80004D+01	21 8.80974D+01	24 7.28256D+01
		25 7.21990D+01				
898	7.27599D+01	1 1.45916D-04	1.055000D+00 0.0	0.0	0.0	
898	7.27599D+01	3 5.58461D-06	1.055000D+00 0.0	0.0	0.0	1 2.12539D-05
898	7.27599D+01	2 4.16861D-06	1.055000D+00 0.0	0.0	0.0	2 1.70331D-06 25 6.80953D-01 25 9.43160D-01
898	7.2760D+01	1 7.58341D+01	3 8.01807D+01	5 8.18178D+01	11 8.44104D+01	13 8.54228D+01
		15 8.64186D+01	17 8.73268D+01	19 8.79627D+01	21 8.80416D+01	24 7.21490D+01
		25 7.15181D+01				
899	7.30334D+01	1 1.91230D-04	1.055000D+00 0.0	0.0	0.0	
899	7.30334D+01	3 7.41846D-06	1.055000D+00 0.0	0.0	0.0	1 2.49998D-05
899	7.30334D+01	2 5.38307D-06	1.055000D+00 0.0	0.0	0.0	2 2.19766D-06 25 6.71645D-01 25 9.29127D-01
899	7.3033D+01	1 7.58341D+01	3 8.01807D+01	5 8.18177D+01	11 8.44102D+01	13 8.54218D+01
		15 8.64129D+01	17 8.73086D+01	19 8.79250D+01	21 8.79861D+01	24 7.14802D+01
		25 7.08464D+01				
900	7.33100D+01	1 4.81604D-04	1.055000D+00 0.0	0.0	0.0	
900	7.33100D+01	4 9.84848D-07	1.055000D+00 0.0	0.0	0.0	1 4.86718D-05
900	7.33100D+01	3 2.92141D-06	1.055000D+00 0.0	0.0	0.0	2 5.33523D-06 24 6.52532D-01 24 9.12885D-01
900	7.3310D+01	1 7.58341D+01	3 8.01806D+01	5 8.18175D+01	11 8.44099D+01	13 8.54205D+01
		15 8.64066D+01	17 8.72897D+01	19 8.78869D+01	21 8.79307D+01	24 7.06277D+01
		25 7.02015D+01				
901	7.35979D+01	1 3.13802D-04	1.055000D+00 0.0	0.0	0.0	
901	7.35979D+01	4 7.57015D-07	1.055000D+00 0.0	0.0	0.0	1 4.72373D-05
901	7.35979D+01	2 9.54840D-06	1.055000D+00 0.0	0.0	0.0	2 3.30467D-06 24 6.43872D-01 25 9.23663D-01
901	7.3598D+01	1 7.58340D+01	3 8.01804D+01	5 8.18173D+01	11 8.44095D+01	13 8.54189D+01
		15 8.63995D+01	17 8.72695D+01	19 8.78474D+01	21 8.78737D+01	24 7.01778D+01
		25 6.95531D+01				
902	7.37989D+01	1 1.16112D-04	1.055000D+00 0.0	0.0	0.0	
902	7.37989D+01	3 2.96607D-06	1.055000D+00 0.0	0.0	0.0	1 2.37149D-05
902	7.37989D+01	2 2.35887D-06	1.055000D+00 0.0	0.0	0.0	2 1.37534D-06 24 4.41591D-01 25 6.34474D-01
902	7.3799D+01	1 7.58340D+01	3 8.01803D+01	5 8.18171D+01	11 8.44091D+01	13 8.54175D+01
		15 8.63942D+01	17 8.72552D+01	19 8.78199D+01	21 8.78343D+01	24 6.97362D+01
		25 6.91118D+01				
903	7.40000D+01	1 1.31417D-04	1.055000D+00 0.0	0.0	0.0	
903	7.40000D+01	3 3.46067D-06	1.055000D+00 0.0	0.0	0.0	1 2.19186D-05
903	7.40000D+01	2 2.56895D-06	1.055000D+00 0.0	0.0	0.0	2 1.50657D-06 24 4.30781D-01 25 6.20145D-01
903	7.4000D+01	1 7.58339D+01	3 8.01801D+01	5 8.18168D+01	11 8.44086D+01	13 8.54161D+01
		15 8.63886D+01	17 8.72406D+01	19 8.77924D+01	21 8.77953D+01	24 6.93055D+01
		25 6.86832D+01				

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.24 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 903 TIME STEPS, TIME = 7.400000+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75183
	2	0.03	78101
2	3	0.06	80118
	4	0.08	81100
3	5	0.10	81182
	6	0.57	82125
	7	1.04	82168
	8	1.51	83112
	9	1.98	83155
	10	2.45	83198
4	11	2.92	84141
	12	3.14	84191
5	13	3.35	85142
	14	3.57	85191
6	15	3.79	86139
	16	4.01	86184
7	17	4.23	87124
	18	4.45	87157
8	19	4.67	87179
	20	4.89	87188
9	21	5.10	87180
	22	5.18	82101
	23	5.25	75193
10	24	5.32	69131
11	25	5.35	68168

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.01051776D-01

ELAPSED CPU TIME IS 10.87 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.78784D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20 21

THE MINIMUM TEMPERATURE IS - 6.86832D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

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NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
904	7.42212D+01	1	4.26331D-04	1.05500D+00	0.0	0.0	0.0						
904	7.42212D+01	4	9.00593D-08	1.05500D+00	0.0	0.0	0.0	1	4.92335D-05				
904	7.42212D+01	2	9.19547D-06	1.05500D+00	0.0	0.0	0.0	2	4.40918D-06	24	4.50029D-01	24	6.49342D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
904	7.4221D+01	1 7.58339D+01	3 8.01799D+01	5 8.18165D+01	11 8.44080D+01	13 8.54143D+01	
		15 8.63822D+01	17 8.72243D+01	19 8.77623D+01	21 8.77527D+01	24 6.88554D+01	
		25 6.82482D+01					
905	7.44644D+01	1 2.96234D-04	1.05500D+00	0.0	0.0	0.0	
905	7.44644D+01	3 9.15151D-06	1.05500D+00	0.0	0.0	0.0	
905	7.44644D+01	2 7.45613D-06	1.05500D+00	0.0	0.0	0.0	
905	7.4464D+01	1 7.58338D+01	3 8.01796D+01	5 8.18160D+01	11 8.44072D+01	13 8.54121D+01	
		15 8.63748D+01	17 8.72061D+01	19 8.77293D+01	21 8.77064D+01	24 6.83924D+01	
		25 6.77944D+01					
906	7.47320D+01	1 3.80537D-04	1.05500D+00	0.0	0.0	0.0	
906	7.47320D+01	4 5.95539D-07	1.05500D+00	0.0	0.0	0.0	
906	7.47320D+01	3 2.14337D-06	1.05500D+00	0.0	0.0	0.0	
906	7.4732D+01	1 7.58336D+01	3 8.01791D+01	5 8.18154D+01	11 8.44062D+01	13 8.54094D+01	
		15 8.63663D+01	17 8.71858D+01	19 8.76930D+01	21 8.76561D+01	24 6.79122D+01	
		25 6.73231D+01					
907	7.50264D+01	1 4.98710D-04	1.05500D+00	0.0	0.0	0.0	
907	7.50264D+01	4 1.34692D-06	1.05500D+00	0.0	0.0	0.0	
907	7.50264D+01	3 3.26002D-06	1.05500D+00	0.0	0.0	0.0	
907	7.5026D+01	1 7.58335D+01	3 8.01786D+01	5 8.18146D+01	11 8.44049D+01	13 8.54062D+01	
		15 8.63565D+01	17 8.71632D+01	19 8.76533D+01	21 8.76015D+01	24 6.74172D+01	
		25 6.68378D+01					
908	7.53502D+01	1 1.37304D-03	1.05500D+00	0.0	0.0	0.0	
908	7.53502D+01	4 5.64643D-06	1.05500D+00	0.0	0.0	0.0	
908	7.53502D+01	4 9.08310D-07	1.05500D+00	0.0	0.0	0.0	
908	7.53502D+01	2 6.74311D-06	1.05500D+00	0.0	0.0	0.0	
908	7.5350D+01	1 7.58332D+01	3 8.01778D+01	5 8.18136D+01	11 8.44031D+01	13 8.54022D+01	
		15 8.63451D+01	17 8.71379D+01	19 8.76098D+01	21 8.75421D+01	24 6.69350D+01	
		25 6.63873D+01					
909	7.56751D+01	1 7.13099D-04	1.05500D+00	0.0	0.0	0.0	
909	7.56751D+01	4 2.83723D-06	1.05500D+00	0.0	0.0	0.0	
909	7.56751D+01	3 5.54008D-06	1.05500D+00	0.0	0.0	0.0	
909	7.5675D+01	1 7.58329D+01	3 8.01769D+01	5 8.18122D+01	11 8.44010D+01	13 8.53978D+01	
		15 8.63332D+01	17 8.71122D+01	19 8.75664D+01	21 8.74811D+01	24 6.65150D+01	
		25 6.59795D+01					
910	7.60000D+01	1 8.49069D-04	1.05500D+00	0.0	0.0	0.0	
910	7.60000D+01	4 3.49263D-06	1.05500D+00	0.0	0.0	0.0	
910	7.60000D+01	3 6.19406D-06	1.05500D+00	0.0	0.0	0.0	
910	7.6000D+01	1 7.58326D+01	3 8.01758D+01	5 8.18107D+01	11 8.43987D+01	13 8.53930D+01	
		15 8.63208D+01	17 8.70862D+01	19 8.75232D+01	21 8.74270D+01	24 6.61398D+01	
		25 6.56218D+01					

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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.24 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 910 TIME STEPS, TIME = 7.600000D+01

GROSS GRID			1
			I
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75183
	2	0.03	78100
2	3	0.06	80118
	4	0.08	80199
3	5	0.10	81181
	6	0.57	82125
	7	1.04	82168
	8	1.51	83111
	9	1.98	83154
	10	2.45	83197
4	11	2.92	84140
	12	3.14	84190
5	13	3.35	85139
	14	3.57	85187
6	15	3.79	86132
	16	4.01	86173
7	17	4.23	87109
	18	4.45	87136
8	19	4.67	87152
	20	4.89	87155
9	21	5.10	87143
	22	5.18	80156
	23	5.25	73150
10	24	5.32	66114
11	25	5.35	65162

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.340000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.24907341D-01

ELAPSED CPU TIME IS 10.97 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.75541D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 6.56118D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
911	7.63574D+01	1	2.08502D-03	1.05500D+00	0.0	0.0	0.0					
911	7.63574D+01	5	1.46069D-06	1.05500D+00	0.0	0.0	0.0	1	1.83507D-04			
911	7.63574D+01	4	2.01343D-06	1.05500D+00	0.0	0.0	0.0	2	2.26003D-05			
911	7.63574D+01	3	2.85665D-06	1.05500D+00	0.0	0.0	0.0	3	3.60216D-06	24 3.23920D-01	24	4.89750D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
911	7.6357D+01	1 7.58321D+01	3 8.01743D+01	5 8.18087D+01	11 8.43957D+01	13 8.53872D+01
		15 8.63065D+01	17 8.70572D+01	19 8.74759D+01	21 8.73656D+01	24 6.58159D+01
		25 6.53426D+01				

912	7.67505D+01	1	1.37601D-03	1.05500D+00	0.0	0.0	0.0					
912	7.67505D+01	5	1.50557D-06	1.05500D+00	0.0	0.0	0.0	1	1.75727D-04			
912	7.67505D+01	4	1.93214D-06	1.05500D+00	0.0	0.0	0.0	2	1.55434D-05			
912	7.67505D+01	2	9.13176D-06	1.05500D+00	0.0	0.0	0.0	3	2.25422D-06	24 2.56614D-01	24	3.89896D-01
912	7.6751D+01	1	7.58315D+01	3 8.01725D+01	5 8.18062D+01	11 8.43919D+01	13 8.53802D+01					
		15 8.62902D+01	17 8.70249D+01	19 8.74244D+01	21 8.72997D+01	24 6.55593D+01						
		25 6.51082D+01										

913	7.71830D+01	1	5.72347D-02	1.05500D+00	0.0	0.0	0.0					
913	7.71830D+01	7	3.02344D-06	1.05500D+00	0.0	0.0	0.0	1	3.34117D-03			
913	7.71830D+01	6	3.03337D-06	1.05500D+00	0.0	0.0	0.0	2	5.92129D-04			
913	7.71830D+01	5	3.00827D-06	1.05500D+00	0.0	0.0	0.0	3	1.06580D-04			
913	7.71830D+01	4	3.29626D-06	1.05500D+00	0.0	0.0	0.0	4	1.89493D-05			
913	7.71830D+01	3	3.59718D-06	1.05500D+00	0.0	0.0	0.0	5	3.30028D-06	25 2.33511D+00	25	3.58651D+00
913	7.68651D+01	1	5.02154D-04	1.05500D+00	0.0	0.0	0.0					
913	7.68651D+01	4	8.62441D-07	1.05500D+00	0.0	0.0	0.0	1	2.18604D-04			
913	7.68651D+01	2	2.39525D-06	1.05500D+00	0.0	0.0	0.0	2	2.84701D-06	25 6.57768D-01	25	1.01027D+00
913	7.68583D+01	1	3.93042D-05	1.05500D+00	0.0	0.0	0.0					
913	7.68583D+01	2	5.00784D-06	1.05500D+00	0.0	0.0	0.0	1	8.88113D-06			
913	7.68583D+01	1	2.63027D-06	1.05500D+00	0.0	0.0	0.0	2	5.04235D-07	25 6.23201D-01	25	9.57178D-01
913	7.6858D+01	1	7.58312D+01	3 8.01720D+01	5 8.18055D+01	11 8.43908D+01	13 8.53782D+01					
		15 8.62856D+01	17 8.70160D+01	19 8.74103D+01	21 8.72820D+01	24 6.56893D+01						
		25 6.57314D+01										

914	7.69660D+01	1	5.67096D-04	1.05500D+00	0.0	0.0	0.0					
914	7.69660D+01	4	9.35654D-07	1.05500D+00	0.0	0.0	0.0	1	2.26148D-04			
914	7.69660D+01	2	1.87394D-06	1.05500D+00	0.0	0.0	0.0	2	2.42411D-06	25 5.88084D-01	25	8.94677D-01
914	7.6966D+01	1	7.58310D+01	3 8.01714D+01	5 8.18047D+01	11 8.43896D+01	13 8.53762D+01					
		15 8.62810D+01	17 8.70071D+01	19 8.73963D+01	21 8.72645D+01	24 6.60807D+01						
		25 6.63195D+01										

915	7.70737D+01	1	4.42958D-04	1.05500D+00	0.0	0.0	0.0					
915	7.70737D+01	3	4.28299D-06	1.05500D+00	0.0	0.0	0.0	1	1.94451D-04			
915	7.70737D+01	2	4.57916D-06	1.05500D+00	0.0	0.0	0.0	2	6.03967D-06	25 6.75270D-01	25	1.01821D+00
915	7.70665D+01	1	1.11555D-05	1.05500D+00	0.0	0.0	0.0					
915	7.70665D+01	2	1.28555D-06	1.05500D+00	0.0	0.0	0.0	1	4.15761D-06			
915	7.70665D+01	1	8.64364D-07	1.05500D+00	0.0	0.0	0.0	2	1.49689D-07	25 6.31440D-01	25	9.52119D-01
915	7.7066D+01	1	7.58308D+01	3 8.01708D+01	5 8.18040D+01	11 8.43885D+01	13 8.53742D+01					
		15 8.62766D+01	17 8.69988D+01	19 8.73833D+01	21 8.72485D+01	24 6.65605D+01						
		25 6.69509D+01										

916	7.71670D+01	1	3.19318D-04	1.05500D+00	0.0	0.0	0.0					
916	7.71670D+01	3	3.17768D-06	1.05500D+00	0.0	0.0	0.0	1	1.50504D-04			
916	7.71670D+01	2	3.02130D-06	1.05500D+00	0.0	0.0	0.0	2	4.37719D-06	25 6.98610D-01	25	1.04347D+00
916	7.71580D+01	1	1.59014D-05	1.05500D+00	0.0	0.0	0.0					
916	7.71580D+01	2	1.62956D-06	1.05500D+00	0.0	0.0	0.0	1	4.76861D-06			
916	7.71580D+01	1	1.05610D-06	1.05500D+00	0.0	0.0	0.0	2	2.04474D-07	25 6.38504D-01	25	9.53690D-01
916	7.7158D+01	1	7.58306D+01	3 8.01703D+01	5 8.18033D+01	11 8.43875D+01	13 8.53724D+01					
		15 8.62726D+01	17 8.69912D+01	19 8.73714D+01	21 8.72342D+01	24 6.70769D+01						
		25 6.75894D+01										

917	7.72495D+01	1	1.83142D-04	1.05500D+00	0.0	0.0	0.0					
917	7.72495D+01	3	1.89071D-06	1.05500D+00	0.0	0.0	0.0	1	1.08690D-04			
917	7.72495D+01	2	1.61622D-06	1.05500D+00	0.0	0.0	0.0	2	2.66164D-06	25 6.82999D-01	25	1.01051D+00
917	7.72440D+01	1	1.10348D-05	1.05500D+00	0.0	0.0	0.0					
917	7.72440D+01	2	1.04736D-06	1.05500D+00	0.0	0.0	0.0	1	2.79259D-06			

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917 7.72440D+01     1 6.50341D-07 1.05500D+00 0.0          0.0          0.0          2 1.36927D-07   25 6.44060D-01   25 9.52901D-01
  917      7.7244D+01     1 7.58304D+01     3 8.01697D+01     5 8.18026D+01   11 8.43865D+01    13 8.53707D+01
                          15 8.62688D+01    17 8.69840D+01    19 8.73603D+01   21 8.72211D+01    24 6.76211D+01
                          25 6.82335D+01
918 7.73300D+01     1 1.24748D-04 1.05500D+00 0.0          0.0          0.0
918 7.73300D+01     2 9.14796D-06 1.05500D+00 0.0          0.0          0.0          1 8.42986D-05
918 7.73300D+01     2 9.51183D-07 1.05500D+00 0.0          0.0          0.0          2 2.45583D-06   25 6.77198D-01   25 9.92472D-01
  918      7.7330D+01     1 7.58302D+01     3 8.01692D+01     5 8.18019D+01   11 8.43855D+01    13 8.53689D+01
                          15 8.62650D+01    17 8.69768D+01    19 8.73493D+01   21 8.72064D+01    24 6.82128D+01
                          25 6.89107D+01
919 7.74160D+01     1 1.12661D-04 1.05500D+00 0.0          0.0          0.0
919 7.74160D+01     2 8.62361D-06 1.05500D+00 0.0          0.0          0.0          1 7.43613D-05
919 7.74160D+01     1 9.99141D-06 1.05500D+00 0.0          0.0          0.0          2 1.86991D-06   25 7.06711D-01   25 1.02555D+00
919 7.74097D+01     1 1.33271D-05 1.05500D+00 0.0          0.0          0.0
919 7.74097D+01     2 1.21776D-06 1.05500D+00 0.0          0.0          0.0          1 3.12131D-06
919 7.74097D+01     1 8.04332D-07 1.05500D+00 0.0          0.0          0.0          2 1.79687D-07   25 6.57237D-01   25 9.53752D-01
  919      7.7410D+01     1 7.58301D+01     3 8.01687D+01     5 8.18012D+01   11 8.43845D+01    13 8.53673D+01
                          15 8.62614D+01    17 8.69701D+01    19 8.73391D+01   21 8.71971D+01    24 6.83973D+01
                          25 6.95679D+01
920 7.74894D+01     1 6.62541D-05 1.05500D+00 0.0          0.0          0.0
920 7.74894D+01     2 5.37717D-06 1.05500D+00 0.0          0.0          0.0          1 5.57915D-05
920 7.74894D+01     1 5.91052D-06 1.05500D+00 0.0          0.0          0.0          2 1.17842D-06   25 6.77366D-01   25 9.73676D-01
  920      7.7489D+01     1 7.58299D+01     3 8.01682D+01     5 8.18005D+01   11 8.43835D+01    13 8.53656D+01
                          15 8.62578D+01    17 8.69635D+01    19 8.73289D+01   21 8.71863D+01    24 6.94122D+01
                          25 7.02453D+01
921 7.75690D+01     1 6.20311D-04 1.05500D+00 0.0          0.0          0.0
921 7.75690D+01     3 6.11718D-06 1.05500D+00 0.0          0.0          0.0          1 1.42239D-04
921 7.75690D+01     2 3.65756D-06 1.05500D+00 0.0          0.0          0.0          2 7.32192D-06   25 8.19564D-01   25 1.16672D+00
921 7.75542D+01     1 4.77360D-05 1.05500D+00 0.0          0.0          0.0
921 7.75542D+01     2 3.70719D-06 1.05500D+00 0.0          0.0          0.0          1 1.50276D-05
921 7.75542D+01     1 2.81127D-06 1.05500D+00 0.0          0.0          0.0          2 7.48079D-07   25 6.53160D-01   25 9.29828D-01
  921      7.7554D+01     1 7.58297D+01     3 8.01678D+01     5 8.17999D+01   11 8.43827D+01    13 8.53642D+01
                          15 8.62549D+01    17 8.69580D+01    19 8.73206D+01   21 8.71779D+01    24 6.99479D+01
                          25 7.08985D+01
922 7.76191D+01     1 7.27565D-04 1.05500D+00 0.0          0.0          0.0
922 7.76191D+01     3 6.85614D-06 1.05500D+00 0.0          0.0          0.0          1 1.89174D-04
922 7.76191D+01     2 3.23331D-06 1.05500D+00 0.0          0.0          0.0          2 8.76554D-06   25 8.62673D-01   25 1.21677D+00
922 7.76049D+01     1 5.98339D-06 1.05500D+00 0.0          0.0          0.0
922 7.76049D+01     1 5.98339D-06 1.05500D+00 0.0          0.0          0.0          1 7.43712D-06
922 7.76049D+01     1 4.76690D-07 1.05500D+00 0.0          0.0          0.0          2 4.85768D-07   25 6.71922D-01   25 9.47725D-01
  922      7.7605D+01     1 7.58296D+01     3 8.01674D+01     5 8.17995D+01   11 8.43820D+01    13 8.53631D+01
                          15 8.62526D+01    17 8.69538D+01    19 8.73142D+01   21 8.71715D+01    24 7.04202D+01
                          25 7.15704D+01
923 7.76556D+01     1 1.71027D-04 1.05500D+00 0.0          0.0          0.0
923 7.76556D+01     3 1.48566D-06 1.05500D+00 0.0          0.0          0.0          1 9.99951D-05
923 7.76556D+01     2 8.84242D-07 1.05500D+00 0.0          0.0          0.0          2 2.54048D-06   25 7.50873D-01   25 1.04914D+00
923 7.76508D+01     1 3.70302D-06 1.05500D+00 0.0          0.0          0.0
923 7.76508D+01     1 3.70302D-06 1.05500D+00 0.0          0.0          0.0          1 2.50423D-06
923 7.76508D+01     1 2.96906D-07 1.05500D+00 0.0          0.0          0.0          2 2.23778D-07   25 6.80474D-01   25 9.50776D-01
  923      7.7651D+01     1 7.58295D+01     3 8.01671D+01     5 8.17991D+01   11 8.43814D+01    13 8.53621D+01
                          15 8.62505D+01    17 8.69499D+01    19 8.73084D+01   21 8.71659D+01    24 7.09091D+01
                          25 7.22508D+01
924 7.76966D+01     1 8.38736D-05 1.05500D+00 0.0          0.0          0.0
924 7.76966D+01     2 9.94017D-06 1.05500D+00 0.0          0.0          0.0          1 7.58830D-05
924 7.76966D+01     1 5.00597D-06 1.05500D+00 0.0          0.0          0.0          2 1.80724D-06   25 7.31061D-01   25 1.01184D+00
924 7.76938D+01     1 3.47404D-06 1.05500D+00 0.0          0.0          0.0
924 7.76938D+01     1 3.47404D-06 1.05500D+00 0.0          0.0          0.0          1 1.91339D-06
924 7.76938D+01     1 3.33092D-07 1.05500D+00 0.0          0.0          0.0          2 2.10558D-07   25 6.87204D-01   25 9.51137D-01
  924      7.7694D+01     1 7.58294D+01     3 8.01668D+01     5 8.17987D+01   11 8.43808D+01    13 8.53611D+01
                          15 8.62485D+01    17 8.69463D+01    19 8.73030D+01   21 8.71608D+01    24 7.14213D+01
                          25 7.29381D+01
925 7.77369D+01     1 5.20693D-05 1.05500D+00 0.0          0.0          0.0
925 7.77369D+01     2 6.84037D-06 1.05500D+00 0.0          0.0          0.0          1 6.26972D-05
925 7.77369D+01     1 3.32223D-06 1.05500D+00 0.0          0.0          0.0          2 1.24657D-06   25 7.25091D-01   25 9.94119D-01
  925      7.7737D+01     1 7.58293D+01     3 8.01665D+01     5 8.17983D+01   11 8.43803D+01    13 8.53602D+01
                          15 8.62465D+01    17 8.69427D+01    19 8.72976D+01   21 8.71559D+01    24 7.19824D+01
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                    25 7.36631D+01
926 7.77800D+01     1 4.54875D-05 1.05500D+00 0.0          0.0          0.0
926 7.77800D+01     2 6.05705D-06 1.05500D+00 0.0          0.0          0.0          1 5.89813D-05
926 7.77800D+01     1 2.91464D-06 1.05500D+00 0.0          0.0          0.0          2 1.09038D-06   25 7.59095D-01   25 1.03050D+00
926 7.77766D+01     1 4.19134D-06 1.05500D+00 0.0          0.0          0.0
926 7.77766D+01     1 4.19134D-06 1.05500D+00 0.0          0.0          0.0          1 2.20139D-06
926 7.77766D+01     1 4.21896D-07 1.05500D+00 0.0          0.0          0.0          2 2.41254D-07   25 7.01130D-01   25 9.51806D-01
  926      7.7777D+01     1 7.58292D+01     3 8.01662D+01     5 8.17979D+01    11 8.43797D+01    13 8.53593D+01
                         15 8.62447D+01    17 8.69393D+01    19 8.72926D+01    21 8.71516D+01    24 7.25395D+01
                    25 7.43643D+01
927 7.78163D+01     1 2.67601D-05 1.05500D+00 0.0          0.0          0.0
927 7.78163D+01     2 4.03398D-06 1.05500D+00 0.0          0.0          0.0          1 4.71721D-05
927 7.78163D+01     1 1.84057D-06 1.05500D+00 0.0          0.0          0.0          2 7.30683D-07   25 7.26368D-01   25 9.76770D-01
  927      7.7816D+01     1 7.58291D+01     3 8.01659D+01     5 8.17975D+01    11 8.43792D+01    13 8.53584D+01
                         15 8.62428D+01    17 8.69360D+01    19 8.72876D+01    21 8.71473D+01    24 7.31322D+01
                    25 7.50906D+01
928 7.78560D+01     1 2.54194D-05 1.05500D+00 0.0          0.0          0.0
928 7.78560D+01     2 3.75708D-06 1.05500D+00 0.0          0.0          0.0          1 4.46306D-05
928 7.78560D+01     1 1.75804D-06 1.05500D+00 0.0          0.0          0.0          2 6.91557D-07   25 7.49894D-01   25 9.98652D-01
  928      7.7856D+01     1 7.58290D+01     3 8.01656D+01     5 8.17972D+01    11 8.43786D+01    13 8.53575D+01
                         15 8.62410D+01    17 8.69326D+01    19 8.72827D+01    21 8.71433D+01    24 7.37575D+01
                    25 7.58405D+01
929 7.78957D+01     1 2.29633D-05 1.05500D+00 0.0          0.0          0.0
929 7.78957D+01     2 3.40237D-06 1.05500D+00 0.0          0.0          0.0          1 4.19968D-05
929 7.78957D+01     1 1.55825D-06 1.05500D+00 0.0          0.0          0.0          2 6.19643D-07   25 7.71424D-01   25 1.01717D+00
929 7.78931D+01     1 3.26293D-06 1.05500D+00 0.0          0.0          0.0
929 7.78931D+01     1 3.26293D-06 1.05500D+00 0.0          0.0          0.0          1 1.64603D-06
929 7.78931D+01     1 3.57555D-07 1.05500D+00 0.0          0.0          0.0          2 1.86971D-07   25 7.21767D-01   25 9.51691D-01
  929      7.7893D+01     1 7.58289D+01     3 8.01654D+01     5 8.17968D+01    11 8.43781D+01    13 8.53567D+01
                         15 8.62392D+01    17 8.69295D+01    19 8.72781D+01    21 8.71397D+01    24 7.43687D+01
                    25 7.65623D+01
930 7.79302D+01     1 1.51399D-05 1.05500D+00 0.0          0.0          0.0
930 7.79302D+01     2 2.37914D-06 1.05500D+00 0.0          0.0          0.0          1 3.44602D-05
930 7.79302D+01     1 1.04073D-06 1.05500D+00 0.0          0.0          0.0          2 4.42783D-07   25 7.38424D-01   25 9.64475D-01
  930      7.7930D+01     1 7.58288D+01     3 8.01651D+01     5 8.17964D+01    11 8.43776D+01    13 8.53558D+01
                         15 8.62375D+01    17 8.69264D+01    19 8.72735D+01    21 8.71362D+01    24 7.50043D+01
                    25 7.73007D+01
931 7.79651D+01     1 1.41338D-05 1.05500D+00 0.0          0.0          0.0
931 7.79651D+01     2 2.18637D-06 1.05500D+00 0.0          0.0          0.0          1 3.07209D-05
931 7.79651D+01     1 8.91091D-07 1.05500D+00 0.0          0.0          0.0          2 4.12845D-07   25 7.11247D-01   25 9.20104D-01
  931      7.7965D+01     1 7.58287D+01     3 8.01648D+01     5 8.17961D+01    11 8.43771D+01    13 8.53550D+01
                         15 8.62359D+01    17 8.69234D+01    19 8.72692D+01    21 8.71331D+01    24 7.56234D+01
                    25 7.80120D+01
932 7.80000D+01     1 1.09566D-05 1.05500D+00 0.0          0.0          0.0
932 7.80000D+01     2 1.51750D-06 1.05500D+00 0.0          0.0          0.0          1 2.71522D-05
932 7.80000D+01     1 7.10764D-07 1.05500D+00 0.0          0.0          0.0          2 3.20493D-07   25 7.23674D-01   25 9.27645D-01
  932      7.8000D+01     1 7.58286D+01     3 8.01646D+01     5 8.17958D+01    11 8.43766D+01    13 8.53542D+01
                         15 8.62342D+01    17 8.69205D+01    19 8.72650D+01    21 8.71302D+01    24 7.62610D+01
                    25 7.87356D+01
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 26 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 932 TIME STEPS, TIME = 7.80000D+01

GROSS GRID			1
			1
FINE GRID			1
		DISTANCE	0.0
1	1	0.0	75183
	2	0.03	78100
2	3	0.06	80116
	4	0.08	80198
3	5	0.10	81180
	6	0.57	82123
	7	1.04	82167
	8	1.51	83110
	9	1.98	83153
	10	2.45	83195
4	11	2.92	84138
	12	3.14	84187
5	13	3.35	85135
	14	3.57	85181
6	15	3.79	86123
	16	4.01	86161
7	17	4.23	86192
	18	4.45	87115
8	19	4.67	87126
	20	4.89	87126
9	21	5.10	87113
	22	5.18	81165
	23	5.25	77139
10	24	5.32	76126
11	25	5.35	78174

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	76.310000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.491714920-02

ELAPSED CPU TIME IS 11.38 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.72650D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 19 20

THE MINIMUM TEMPERATURE IS - 7.58286D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

DCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
933	7.80345D+01	1	1.14559D-05	1.05500D+00	0.0	0.0	0.0				
933	7.80349D+01	2	1.77324D-06	1.05500D+00	0.0	0.0	0.0	1	2.65129D-05		
933	7.80349D+01	1	7.21731D-07	1.05500D+00	0.0	0.0	0.0	2	3.38374D-07	25 7.36828D-01	25 9.35825D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
933	7.8035D+01	1 7.58285D+01	3 8.01643D+01	5 8.17954D+01	11 8.43761D+01	13 8.53534D+01	
		15 8.62326D+01	17 8.69175D+01	19 8.72607D+01	21 8.71274D+01	24 7.69158D+01	
		25 7.94725D+01					
934	7.80704D+01	1 1.01887D-05	1.05500D+00	0.0	0.0	0.0	
934	7.80704D+01	2 1.56947D-06	1.05500D+00	0.0	0.0	0.0	1 2.52639D-05
934	7.80704D+01	1 6.59369D-07	1.05500D+00	0.0	0.0	0.0	2 3.02944D-07 25 7.59771D-01 25 9.56017D-01
934	7.8070D+01	1 7.58284D+01	3 8.01640D+01	5 8.17950D+01	11 8.43756D+01	13 8.53526D+01	
		15 8.62309D+01	17 8.69145D+01	19 8.72564D+01	21 8.71248D+01	24 7.75970D+01	
		25 8.02322D+01					
935	7.81058D+01	1 9.73527D-06	1.05500D+00	0.0	0.0	0.0	
935	7.81058D+01	1 9.73527D-06	1.05500D+00	0.0	0.0	0.0	1 2.40272D-05
935	7.81058D+01	1 2.28873D-06	1.05500D+00	0.0	0.0	0.0	2 1.01717D-06 25 7.71114D-01 25 9.61103D-01
935	7.8106D+01	1 7.58283D+01	3 8.01637D+01	5 8.17947D+01	11 8.43751D+01	13 8.53517D+01	
		15 8.62292D+01	17 8.69115D+01	19 8.72521D+01	21 8.71223D+01	24 7.82936D+01	
		25 8.10034D+01					
936	7.81413D+01	1 8.74368D-06	1.05500D+00	0.0	0.0	0.0	
936	7.81413D+01	1 8.74368D-06	1.05500D+00	0.0	0.0	0.0	1 2.24987D-05
936	7.81413D+01	1 2.07057D-06	1.05500D+00	0.0	0.0	0.0	2 9.39319D-07 25 7.81397D-01 25 9.64647D-01
936	7.8141D+01	1 7.58282D+01	3 8.01635D+01	5 8.17943D+01	11 8.43745D+01	13 8.53509D+01	
		15 8.62275D+01	17 8.69085D+01	19 8.72478D+01	21 8.71200D+01	24 7.90045D+01	
		25 8.17848D+01					
937	7.81767D+01	1 7.88909D-06	1.05500D+00	0.0	0.0	0.0	
937	7.81767D+01	1 7.88909D-06	1.05500D+00	0.0	0.0	0.0	1 2.11095D-05
937	7.81767D+01	1 1.87442D-06	1.05500D+00	0.0	0.0	0.0	2 8.62130D-07 25 7.90763D-01 25 9.66884D-01
937	7.8177D+01	1 7.58281D+01	3 8.01632D+01	5 8.17939D+01	11 8.43740D+01	13 8.53500D+01	
		15 8.62259D+01	17 8.69055D+01	19 8.72436D+01	21 8.71180D+01	24 7.97287D+01	
		25 8.25755D+01					
938	7.82121D+01	1 7.18793D-06	1.05500D+00	0.0	0.0	0.0	
938	7.82121D+01	1 7.18793D-06	1.05500D+00	0.0	0.0	0.0	1 1.98215D-05
938	7.82121D+01	1 1.73184D-06	1.05500D+00	0.0	0.0	0.0	2 8.05900D-07 25 7.99372D-01 25 9.68050D-01
938	7.8212D+01	1 7.58280D+01	3 8.01629D+01	5 8.17936D+01	11 8.43735D+01	13 8.53492D+01	
		15 8.62242D+01	17 8.69025D+01	19 8.72394D+01	21 8.71161D+01	24 8.04652D+01	
		25 8.33749D+01					
939	7.82476D+01	1 6.56660D-06	1.05500D+00	0.0	0.0	0.0	
939	7.82476D+01	1 6.56660D-06	1.05500D+00	0.0	0.0	0.0	1 1.86041D-05
939	7.82476D+01	1 1.56659D-06	1.05500D+00	0.0	0.0	0.0	2 7.44170D-07 25 8.07329D-01 25 9.68312D-01
939	7.8248D+01	1 7.58279D+01	3 8.01626D+01	5 8.17932D+01	11 8.43729D+01	13 8.53483D+01	
		15 8.62225D+01	17 8.68995D+01	19 8.72352D+01	21 8.71144D+01	24 8.12130D+01	
		25 8.41822D+01					
940	7.82830D+01	1 5.80775D-06	1.05500D+00	0.0	0.0	0.0	
940	7.82830D+01	1 5.80775D-06	1.05500D+00	0.0	0.0	0.0	1 1.73313D-05
940	7.82830D+01	1 1.36956D-06	1.05500D+00	0.0	0.0	0.0	2 6.64214D-07 25 8.14443D-01 25 9.67476D-01
940	7.8283D+01	1 7.58278D+01	3 8.01623D+01	5 8.17928D+01	11 8.43724D+01	13 8.53475D+01	
		15 8.62208D+01	17 8.68965D+01	19 8.72310D+01	21 8.71130D+01	24 8.19713D+01	
		25 8.49967D+01					
941	7.83185D+01	1 5.37163D-06	1.05500D+00	0.0	0.0	0.0	
941	7.83185D+01	1 5.37163D-06	1.05500D+00	0.0	0.0	0.0	1 1.62683D-05
941	7.83185D+01	1 1.27842D-06	1.05500D+00	0.0	0.0	0.0	2 6.29282D-07 25 8.21088D-01 25 9.66024D-01
941	7.8318D+01	1 7.58277D+01	3 8.01620D+01	5 8.17924D+01	11 8.43719D+01	13 8.53466D+01	
		15 8.62191D+01	17 8.68935D+01	19 8.72269D+01	21 8.71117D+01	24 8.27392D+01	
		25 8.58178D+01					
942	7.83539D+01	1 4.83315D-06	1.05500D+00	0.0	0.0	0.0	
942	7.83539D+01	1 4.83315D-06	1.05500D+00	0.0	0.0	0.0	1 1.51829D-05
942	7.83539D+01	1 1.12616D-06	1.05500D+00	0.0	0.0	0.0	2 5.69077D-07 25 8.27142D-01 25 9.63836D-01
942	7.8354D+01	1 7.58276D+01	3 8.01617D+01	5 8.17921D+01	11 8.43713D+01	13 8.53458D+01	

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                    15 8.62173D+01   17 8.68906D+01   19 8.72227D+01   21 8.71107D+01   24 8.35161D+01
                    25 8.66449D+01
943 7.83894D+01   1 4.24938D-06 1.05500D+00 0.0      0.0        0.0
943 7.83894D+01   1 4.24938D-06 1.05500D+00 0.0      0.0        0.0          1 1.40968D-05
943 7.83894D+01   1 1.01419D-06 1.05500D+00 0.0      0.0        0.0          2 5.17223D-07   25 8.32498D-01   25 9.60816D-01
  943     7.8389D+01    1 7.58275D+01    3 8.01314D+01   5 8.17917D+01   11 8.43708D+01   13 8.53449D+01
                    15 8.62156D+01   17 8.68876D+01   19 8.72186D+01   21 8.71099D+01   24 8.43011D+01
                    25 8.74774D+01
944 7.84248D+01   1 3.96693D-06 1.05500D+00 0.0      0.0        0.0
944 7.84248D+01   1 3.96693D-06 1.05500D+00 0.0      0.0        0.0          1 1.32111D-05
944 7.84248D+01   1 9.37566D-07 1.05500D+00 0.0      0.0        0.0          2 4.89287D-07   25 8.37561D-01   25 9.57460D-01
  944     7.8425D+01    1 7.58274D+01    3 8.01611D+01   5 8.17913D+01   11 8.43702D+01   13 8.53440D+01
                    15 8.62139D+01   17 8.68846D+01   19 8.72146D+01   21 8.71093D+01   24 8.50937D+01
                    25 8.83150D+01
945 7.84603D+01   1 3.50754D-06 1.05500D+00 0.0      0.0        0.0
945 7.84603D+01   1 3.50754D-06 1.05500D+00 0.0      0.0        0.0          1 1.22663D-05
945 7.84603D+01   1 8.33316D-07 1.05500D+00 0.0      0.0        0.0          2 4.42507D-07   25 8.42077D-01   25 9.53493D-01
  945     7.8460D+01    1 7.58273D+01    3 8.01608D+01   5 8.17909D+01   11 8.43696D+01   13 8.53431D+01
                    15 8.62122D+01   17 8.68816D+01   19 8.72106D+01   21 8.71090D+01   24 8.58932D+01
                    25 8.91570D+01
946 7.84957D+01   1 3.12324D-06 1.05500D+00 0.0      0.0        0.0
946 7.84957D+01   1 3.12324D-06 1.05500D+00 0.0      0.0        0.0          1 1.13887D-05
946 7.84957D+01   1 7.33045D-07 1.05500D+00 0.0      0.0        0.0          2 3.99897D-07   25 8.46142D-01   25 9.49047D-01
  946     7.8496D+01    1 7.58272D+01    3 8.01605D+01   5 8.17905D+01   11 8.43691D+01   13 8.53422D+01
                    15 8.62105D+01   17 8.68786D+01   19 8.72066D+01   21 8.71089D+01   24 8.66990D+01
                    25 9.00032D+01
947 7.85312D+01   1 1.54880D-05 1.05500D+00 0.0      0.0        0.0
947 7.85312D+01   2 1.69175D-06 1.05500D+00 0.0      0.0        0.0          1 1.48179D-05
947 7.85312D+01   1 6.49370D-07 1.05500D+00 0.0      0.0        0.0          2 3.21049D-07   25 8.58892D-01   25 9.54291D-01
  947     7.8531D+01    1 7.58271D+01    3 8.01602D+01   5 8.17901D+01   11 8.43685D+01   13 8.53414D+01
                    15 8.62087D+01   17 8.68756D+01   19 8.72026D+01   21 8.71090D+01   24 8.75124D+01
                    25 9.08621D+01
948 7.85667D+01   1 3.08612D-05 1.05500D+00 0.0      0.0        0.0
948 7.85667D+01   2 3.20783D-06 1.05500D+00 0.0      0.0        0.0          1 2.02566D-05
948 7.85667D+01   1 1.17244D-06 1.05500D+00 0.0      0.0        0.0          2 5.80977D-07   25 8.81008D-01   25 9.69611D-01
  948     7.8567D+01    1 7.58270D+01    3 8.01599D+01   5 8.17897D+01   11 8.43679D+01   13 8.53405D+01
                    15 8.62070D+01   17 8.68726D+01   19 8.71987D+01   21 8.71093D+01   24 8.83349D+01
                    25 9.17431D+01
949 7.86022D+01   1 1.91799D-05 1.05500D+00 0.0      0.0        0.0
949 7.86022D+01   2 2.20059D-06 1.05500D+00 0.0      0.0        0.0          1 1.83273D-05
949 7.86022D+01   1 8.66632D-07 1.05500D+00 0.0      0.0        0.0          2 4.07856D-07   25 8.97208D-01   25 9.77957D-01
  949     7.8602D+01    1 7.58269D+01    3 8.01596D+01   5 8.17893D+01   11 8.43673D+01   13 8.53396D+01
                    15 8.62053D+01   17 8.68696D+01   19 8.71948D+01   21 8.71099D+01   24 8.91688D+01
                    25 9.26403D+01
950 7.86376D+01   1 1.23982D-05 1.05500D+00 0.0      0.0        0.0
950 7.86376D+01   2 1.59012D-06 1.05500D+00 0.0      0.0        0.0          1 1.67980D-05
950 7.86376D+01   1 6.51314D-07 1.05500D+00 0.0      0.0        0.0          2 2.97359D-07   25 9.09696D-01   25 9.81966D-01
  950     7.8638D+01    1 7.58267D+01    3 8.01593D+01   5 8.17889D+01   11 8.43668D+01   13 8.53366D+01
                    15 8.62035D+01   17 8.68666D+01   19 8.71909D+01   21 8.71107D+01   24 9.00146D+01
                    25 9.35500D+01
951 7.86731D+01   1 8.92838D-06 1.05500D+00 0.0      0.0        0.0
951 7.86731D+01   1 8.92838D-06 1.05500D+00 0.0      0.0        0.0          1 1.54323D-05
951 7.86731D+01   1 1.92563D-06 1.05500D+00 0.0      0.0        0.0          2 8.85945D-07   25 9.20021D-01   25 9.83454D-01
  951     7.8673D+01    1 7.58266D+01    3 8.01590D+01   5 8.17884D+01   11 8.43662D+01   13 8.53377D+01
                    15 8.62018D+01   17 8.68636D+01   19 8.71871D+01   21 8.71117D+01   24 9.08724D+01
                    25 9.44700D+01
952 7.87086D+01   1 6.70619D-06 1.05500D+00 0.0      0.0        0.0
952 7.87086D+01   1 6.70619D-06 1.05500D+00 0.0      0.0        0.0          1 1.43627D-05
952 7.87086D+01   1 1.56814D-06 1.05500D+00 0.0      0.0        0.0          2 7.23685D-07   25 9.28750D-01   25 9.83116D-01
  952     7.8709D+01    1 7.58265D+01    3 8.01587D+01   5 8.17880D+01   11 8.43656D+01   13 8.53368D+01
                    15 8.62000D+01   17 8.68606D+01   19 8.71833D+01   21 8.71130D+01   24 9.17414D+01
                    25 9.53987D+01
953 7.87441D+01   1 5.41420D-06 1.05500D+00 0.0      0.0        0.0
953 7.87441D+01   1 5.41420D-06 1.05500D+00 0.0      0.0        0.0          1 1.34385D-05
953 7.87441D+01   1 1.35622D-06 1.05500D+00 0.0      0.0        0.0          2 6.18969D-07   25 9.36313D-01   25 9.81473D-01
  953     7.8744D+01    1 7.58264D+01    3 8.01583D+01   5 8.17876D+01   11 8.43650D+01   13 8.53359D+01
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                    15 8.61983D+01   17 8.68576D+01   19 8.71796D+01   21 8.71145D+01   24 9.26208D+01
                    25 9.63351D+01
954 7.87796D+01   1 4.80206D-06 1.05500D+00 0.0          0.0          0.0
954 7.87796D+01   1 4.80206D-06 1.05500D+00 0.0          0.0          0.0          1 1.26168D-05
954 7.87796D+01   1 1.21124D-06 1.05500D+00 0.0          0.0          0.0          2 5.44803D-07   25 9.43079D-01   25 9.78957D-01
  954      7.8780D+01     1 7.58263D+01     3 8.01580D+01     5 8.17872D+01    11 8.43644D+01    13 8.53350D+01
                    15 8.61965D+01   17 8.68547D+01   19 8.71759D+01   21 8.71162D+01   24 9.35100D+01
                    25 9.72781D+01
955 7.88151D+01   1 4.13909D-06 1.05500D+00 0.0          0.0          0.0
955 7.88151D+01   1 4.13909D-06 1.05500D+00 0.0          0.0          0.0          1 1.17418D-05
955 7.88151D+01   1 1.01406D-06 1.05500D+00 0.0          0.0          0.0          2 4.52956D-07   25 9.48981D-01   25 9.75534D-01
  955      7.8815D+01     1 7.58262D+01     3 8.01577D+01     5 8.17868D+01    11 8.43638D+01    13 8.53341D+01
                    15 8.61947D+01   17 8.68517D+01   19 8.71723D+01   21 8.71182D+01   24 9.44080D+01
                    25 9.82271D+01
956 7.88505D+01   1 3.74799D-06 1.05500D+00 0.0          0.0          0.0
956 7.88505D+01   1 3.74799D-06 1.05500D+00 0.0          0.0          0.0          1 1.10195D-05
956 7.88505D+01   1 9.17299D-07 1.05500D+00 0.0          0.0          0.0          2 4.10806D-07   25 9.54382D-01   25 9.71607D-01
  956      7.8851D+01     1 7.58261D+01     3 8.01573D+01     5 8.17863D+01    11 8.43632D+01    13 8.53331D+01
                    15 8.61930D+01   17 8.68487D+01   19 8.71687D+01   21 8.71204D+01   24 9.53142D+01
                    25 9.91815D+01
957 7.88860D+01   1 3.23383D-06 1.05500D+00 0.0          0.0          0.0
957 7.88860D+01   1 3.23383D-06 1.05500D+00 0.0          0.0          0.0          1 1.02294D-05
957 7.88860D+01   1 7.60891D-07 1.05500D+00 0.0          0.0          0.0          2 3.57001D-07   25 9.59105D-01   25 9.67020D-01
  957      7.8886D+01     1 7.58259D+01     3 8.01570D+01     5 8.17859D+01    11 8.43625D+01    13 8.53322D+01
                    15 8.61912D+01   17 8.68457D+01   19 8.71651D+01   21 8.71228D+01   24 9.62278D+01
                    25 1.00141D+02
958 7.89215D+01   1 2.80827D-06 1.05500D+00 0.0          0.0          0.0
958 7.89215D+01   1 2.80827D-06 1.05500D+00 0.0          0.0          0.0          1 9.49279D-06
958 7.89215D+01   1 6.78339D-07 1.05500D+00 0.0          0.0          0.0          2 3.26665D-07   25 9.63229D-01   25 9.61877D-01
  958      7.8921D+01     1 7.58258D+01     3 8.01567D+01     5 8.17855D+01    11 8.43619D+01    13 8.53312D+01
                    15 8.61894D+01   17 8.68428D+01   19 8.71616D+01   21 8.71255D+01   24 9.71481D+01
                    25 1.01104D+02
959 7.89570D+01   1 2.47562D-06 1.05500D+00 0.0          0.0          0.0
959 7.89570D+01   1 2.47562D-06 1.05500D+00 0.0          0.0          0.0          1 8.81584D-06
959 7.89570D+01   1 5.91859D-07 1.05500D+00 0.0          0.0          0.0          2 2.97662D-07   25 9.66905D-01   25 9.56348D-01
  959      7.8957D+01     1 7.58257D+01     3 8.01563D+01     5 8.17850D+01    11 8.43613D+01    13 8.53303D+01
                    15 8.61876D+01   17 8.68398D+01   19 8.71582D+01   21 8.71284D+01   24 9.80745D+01
                    25 1.02071D+02
960 7.89925D+01   1 2.29211D-06 1.05500D+00 0.0          0.0          0.0
960 7.89925D+01   1 2.29211D-06 1.05500D+00 0.0          0.0          0.0          1 8.25116D-06
960 7.89925D+01   1 5.67204D-07 1.05500D+00 0.0          0.0          0.0          2 2.91096D-07   25 9.70332D-01   25 9.50647D-01
  960      7.8992D+01     1 7.58256D+01     3 8.01560D+01     5 8.17846D+01    11 8.43607D+01    13 8.53293D+01
                    15 8.61859D+01   17 8.68368D+01   19 8.71548D+01   21 8.71316D+01   24 9.90065D+01
                    25 1.03041D+02
961 7.90279D+01   1 2.66022D-06 1.05500D+00 0.0          0.0          0.0
961 7.90279D+01   1 2.66022D-06 1.05500D+00 0.0          0.0          0.0          1 8.00105D-06
961 7.90279D+01   1 6.53353D-07 1.05500D+00 0.0          0.0          0.0          2 3.34431D-07   25 9.74201D-01   24 9.46447D-01
  961      7.9028D+01     1 7.58255D+01     3 8.01557D+01     5 8.17841D+01    11 8.43600D+01    13 8.53284D+01
                    15 8.61841D+01   17 8.68339D+01   19 8.71514D+01   21 8.71349D+01   24 9.99435D+01
                    25 1.04015D+02
962 7.90636D+01   1 2.24201D-06 1.05500D+00 0.0          0.0          0.0
962 7.90636D+01   1 2.24201D-06 1.05500D+00 0.0          0.0          0.0          1 7.50128D-06
962 7.90636D+01   1 5.56338D-07 1.05500D+00 0.0          0.0          0.0          2 2.91992D-07   25 9.81297D-01   24 9.45883D-01
  962      7.9064D+01     1 7.58253D+01     3 8.01553D+01     5 8.17837D+01    11 8.43594D+01    13 8.53274D+01
                    15 8.61823D+01   17 8.68309D+01   19 8.71481D+01   21 8.71385D+01   24 1.00889D+02
                    25 1.04997D+02
963 7.90993D+01   1 1.73866D-06 1.05500D+00 0.0          0.0          0.0
963 7.90993D+01   1 1.73866D-06 1.05500D+00 0.0          0.0          0.0          1 6.89047D-06
963 7.90993D+01   1 4.28409D-07 1.05500D+00 0.0          0.0          0.0          2 2.32304D-07   25 9.88245D-01   24 9.45489D-01
  963      7.9099D+01     1 7.58252D+01     3 8.01550D+01     5 8.17832D+01    11 8.43588D+01    13 8.53265D+01
                    15 8.61805D+01   17 8.68279D+01   19 8.71448D+01   21 8.71424D+01   24 1.01843D+02
                    25 1.05985D+02
964 7.91353D+01   1 1.54496D-06 1.05500D+00 0.0          0.0          0.0
964 7.91353D+01   1 1.54496D-06 1.05500D+00 0.0          0.0          0.0          1 6.44514D-06
964 7.91353D+01   1 3.67183D-07 1.05500D+00 0.0          0.0          0.0          2 2.09573D-07   25 9.95372D-01   24 9.45074D-01
  964      7.9135D+01     1 7.58251D+01     3 8.01546D+01     5 8.17827D+01    11 8.43581D+01    13 8.53255D+01
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                    15 8.61787D+01   17 8.68250D+01   19 8.71416D+01   21 8.71465D+01   24 1.02805D+02
                    25 1.06980D+02
965 7.91714D+01   1 1.20664D-06 1.05500D+00 0.0        0.0        0.0
965 7.91714D+01   1 1.20664D-06 1.05500D+00 0.0        0.0        0.0          1 5.92071D-06
965 7.91714D+01   1 2.85678D-07 1.05500D+00 0.0        0.0        0.0          2 1.73795D-07   25 1.00245D+00   24 9.44657D-01
  965     7.9171D+01    1 7.58250D+01   3 8.01542D+01   5 8.17823D+01   11 8.43574D+01   13 8.53245D+01
                    15 8.61768D+01   17 8.68220D+01   19 8.71385D+01   21 8.71509D+01   24 1.03776D+02
                    25 1.07983D+02
966 7.92077D+01   1 1.09283D-06 1.05500D+00 0.0        0.0        0.0
966 7.92077D+01   1 1.09283D-06 1.05500D+00 0.0        0.0        0.0          1 5.48870D-06
966 7.92077D+01   1 2.58318D-07 1.05500D+00 0.0        0.0        0.0          2 1.61888D-07   25 1.00973D+00   24 9.44252D-01
  966     7.9208D+01    1 7.58248D+01   3 8.01539D+01   5 8.17818D+01   11 8.43568D+01   13 8.53235D+01
                    15 8.61750D+01   17 8.68190D+01   19 8.71353D+01   21 8.71556D+01   24 1.04756D+02
                    25 1.08992D+02
967 7.92443D+01   1 1.12913D-06 1.05500D+00 0.0        0.0        0.0
967 7.92443D+01   1 1.12913D-06 1.05500D+00 0.0        0.0        0.0          1 5.03011D-06
967 7.92443D+01   1 1.86123D-07 1.05500D+00 0.0        0.0        0.0          2 1.33697D-07   25 1.01713D+00   24 9.43859D-01
  967     7.9244D+01    1 7.58247D+01   3 8.01535D+01   5 8.17813D+01   11 8.43561D+01   13 8.53225D+01
                    15 8.61731D+01   17 8.68160D+01   19 8.71322D+01   21 8.71605D+01   24 1.05745D+02
                    25 1.10009D+02
968 7.92811D+01   1 1.16041D-06 1.05500D+00 0.0        0.0        0.0
968 7.92811D+01   1 1.16041D-06 1.05500D+00 0.0        0.0        0.0          1 4.63903D-06
968 7.92811D+01   1 1.44876D-07 1.05500D+00 0.0        0.0        0.0          2 1.18639D-07   25 1.02478D+00   24 9.43499D-01
  968     7.9281D+01    1 7.58246D+01   3 8.01531D+01   5 8.17808D+01   11 8.43554D+01   13 8.53214D+01
                    15 8.61713D+01   17 8.68129D+01   19 8.71292D+01   21 8.71657D+01   24 1.06743D+02
                    25 1.11034D+02
969 7.93181D+01   1 1.17701D-06 1.05500D+00 0.0        0.0        0.0
969 7.93181D+01   1 1.17701D-06 1.05500D+00 0.0        0.0        0.0          1 4.24090D-06
969 7.93181D+01   1 1.04561D-07 1.05500D+00 0.0        0.0        0.0          2 1.13086D-07   25 1.03260D+00   24 9.43164D-01
  969     7.9318D+01    1 7.58244D+01   3 8.01527D+01   5 8.17803D+01   11 8.43547D+01   13 8.53204D+01
                    15 8.61694D+01   17 8.68099D+01   19 8.71262D+01   21 8.71712D+01   24 1.07750D+02
                    25 1.12067D+02
970 7.93554D+01   1 1.18981D-06 1.05500D+00 0.0        0.0        0.0
970 7.93554D+01   1 1.18981D-06 1.05500D+00 0.0        0.0        0.0          1 3.79337D-06
970 7.93554D+01   1 9.28660D-08 1.05500D+00 0.0        0.0        0.0          2 1.04662D-07   25 1.04043D+00   24 9.42824D-01
  970     7.9355D+01    1 7.58243D+01   3 8.01524D+01   5 8.17798D+01   11 8.43540D+01   13 8.53194D+01
                    15 8.61675D+01   17 8.68069D+01   19 8.71232D+01   21 8.71769D+01   24 1.08765D+02
                    25 1.13107D+02
971 7.93930D+01   1 1.21022D-06 1.05500D+00 0.0        0.0        0.0
971 7.93930D+01   1 1.21022D-06 1.05500D+00 0.0        0.0        0.0          1 3.48669D-06
971 7.93930D+01   1 9.15257D-08 1.05500D+00 0.0        0.0        0.0          2 1.07078D-07   25 1.04860D+00   24 9.42526D-01
  971     7.9393D+01    1 7.58242D+01   3 8.01520D+01   5 8.17793D+01   11 8.43533D+01   13 8.53183D+01
                    15 8.61655D+01   17 8.68038D+01   19 8.71203D+01   21 8.71830D+01   24 1.09791D+02
                    25 1.14156D+02
972 7.94309D+01   1 1.21467D-06 1.05500D+00 0.0        0.0        0.0
972 7.94309D+01   1 1.21467D-06 1.05500D+00 0.0        0.0        0.0          1 3.14441D-06
972 7.94309D+01   1 8.95417D-08 1.05500D+00 0.0        0.0        0.0          2 9.73720D-08   25 1.05698D+00   24 9.42246D-01
  972     7.9431D+01    1 7.58240D+01   3 8.01516D+01   5 8.17788D+01   11 8.43526D+01   13 8.53172D+01
                    15 8.61636D+01   17 8.68007D+01   19 8.71175D+01   21 8.71893D+01   24 1.10825D+02
                    25 1.15213D+02
973 7.94691D+01   1 1.20490D-06 1.05500D+00 0.0        0.0        0.0
973 7.94691D+01   1 1.20490D-06 1.05500D+00 0.0        0.0        0.0          1 2.95822D-06
973 7.94691D+01   1 8.68150D-08 1.05500D+00 0.0        0.0        0.0          2 1.10040D-07   25 1.06545D+00   24 9.41986D-01
  973     7.9469D+01    1 7.58239D+01   3 8.01512D+01   5 8.17783D+01   11 8.43518D+01   13 8.53161D+01
                    15 8.61616D+01   17 8.67976D+01   19 8.71147D+01   21 8.71960D+01   24 1.11869D+02
                    25 1.16278D+02
974 7.95077D+01   1 1.20132D-06 1.05500D+00 0.0        0.0        0.0
974 7.95077D+01   1 1.20132D-06 1.05500D+00 0.0        0.0        0.0          1 2.83230D-06
974 7.95077D+01   1 1.19478D-07 1.05500D+00 0.0        0.0        0.0          2 1.24670D-07   25 1.07396D+00   24 9.41722D-01
  974     7.9507D+01    1 7.58237D+01   3 8.01507D+01   5 8.17777D+01   11 8.43511D+01   13 8.53150D+01
                    15 8.61597D+01   17 8.67945D+01   19 8.71120D+01   21 8.72030D+01   24 1.12923D+02
                    25 1.17352D+02
975 7.95465D+01   1 1.03502D-05 1.05500D+00 0.0        0.0        0.0
975 7.95465D+01   2 9.51542D-07 1.05500D+00 0.0        0.0        0.0          1 4.97778D-06
975 7.95465D+01   1 4.40277D-07 1.05500D+00 0.0        0.0        0.0          2 1.91554D-07   25 1.07605D+00   24 9.40713D-01
  975     7.9547D+01    1 7.58236D+01   3 8.01503D+01   5 8.17772D+01   11 8.43503D+01   13 8.53139D+01
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                    15 8.61577D+01   17 8.67914D+01   19 8.71093D+01   21 8.72103D+01   24 1.13985D+02
                    25 1.18428D+02
976 7.95858D+01   1 1.08570D-05 1.05500D+00 0.0          0.0          0.0
976 7.95858D+01   2 1.04625D-06 1.05500D+00 0.0          0.0          0.0          1 5.73213D-06
976 7.95858D+01   1 5.03223D-07 1.05500D+00 0.0          0.0          0.0          2 2.13283D-07   25 1.07829D+00   24 9.39155D-01
  976     7.9586D+01    1 7.58234D+01    3 8.01499D+01    5 8.17767D+01   11 8.43496D+01   13 8.53128D+01
                    15 8.61556D+01   17 8.67883D+01   19 8.71067D+01   21 8.72179D+01   24 1.15055D+02
                    25 1.19507D+02
977 7.96255D+01   1 7.39401D-06 1.05500D+00 0.0          0.0          0.0
977 7.96255D+01   1 7.39401D-06 1.05500D+00 0.0          0.0          0.0          1 5.11627D-06
977 7.96255D+01   1 1.23967D-06 1.05500D+00 0.0          0.0          0.0          2 6.00895D-07   25 1.08435D+00   24 9.38015D-01
  977     7.9625D+01    1 7.58233D+01    3 8.01495D+01    5 8.17761D+01   11 8.43488D+01   13 8.53116D+01
                    15 8.61536D+01   17 8.67851D+01   19 8.71041D+01   21 8.72258D+01   24 1.16135D+02
                    25 1.20591D+02
978 7.96657D+01   1 5.62136D-06 1.05500D+00 0.0          0.0          0.0
978 7.96657D+01   1 5.62136D-06 1.05500D+00 0.0          0.0          0.0          1 4.64775D-06
978 7.96657D+01   1 1.01045D-06 1.05500D+00 0.0          0.0          0.0          2 5.10774D-07   25 1.09286D+00   24 9.37634D-01
  978     7.9666D+01    1 7.58231D+01    3 8.01490D+01    5 8.17755D+01   11 8.43480D+01   13 8.53105D+01
                    15 8.61515D+01   17 8.67819D+01   19 8.71016D+01   21 8.72342D+01   24 1.17223D+02
                    25 1.21684D+02
979 7.97065D+01   1 4.63452D-06 1.05500D+00 0.0          0.0          0.0
979 7.97065D+01   1 4.63452D-06 1.05500D+00 0.0          0.0          0.0          1 4.27733D-06
979 7.97065D+01   1 8.64694D-07 1.05500D+00 0.0          0.0          0.0          2 4.54291D-07   25 1.10252D+00   24 9.37430D-01
  979     7.9706D+01    1 7.58230D+01    3 8.01486D+01    5 8.17749D+01   11 8.43472D+01   13 8.53093D+01
                    15 8.61494D+01   17 8.67787D+01   19 8.70992D+01   21 8.72429D+01   24 1.18322D+02
                    25 1.22786D+02
980 7.97477D+01   1 4.34775D-06 1.05500D+00 0.0          0.0          0.0
980 7.97477D+01   1 4.34775D-06 1.05500D+00 0.0          0.0          0.0          1 3.98748D-06
980 7.97477D+01   1 8.79436D-07 1.05500D+00 0.0          0.0          0.0          2 4.49873D-07   25 1.11277D+00   24 9.37363D-01
  980     7.9748D+01    1 7.58228D+01    3 8.01481D+01    5 8.17743D+01   11 8.43463D+01   13 8.53080D+01
                    15 8.61473D+01   17 8.67754D+01   19 8.70968D+01   21 8.72520D+01   24 1.19431D+02
                    25 1.23893D+02
981 7.97896D+01   1 4.13857D-06 1.05500D+00 0.0          0.0          0.0
981 7.97896D+01   1 4.13857D-06 1.05500D+00 0.0          0.0          0.0          1 3.71142D-06
981 7.97896D+01   1 8.39724D-07 1.05500D+00 0.0          0.0          0.0          2 4.31114D-07   25 1.12339D+00   24 9.37377D-01
  981     7.9790D+01    1 7.58227D+01    3 8.01476D+01    5 8.17737D+01   11 8.43455D+01   13 8.53068D+01
                    15 8.61451D+01   17 8.67722D+01   19 8.70945D+01   21 8.72615D+01   24 1.20551D+02
                    25 1.25023D+02
982 7.98320D+01   1 3.84321D-06 1.05500D+00 0.0          0.0          0.0
982 7.98320D+01   1 3.84321D-06 1.05500D+00 0.0          0.0          0.0          1 3.66079D-06
982 7.98320D+01   1 7.79846D-07 1.05500D+00 0.0          0.0          0.0          2 4.04834D-07   25 1.13436D+00   24 9.37431D-01
  982     7.9832D+01    1 7.58225D+01    3 8.01471D+01    5 8.17731D+01   11 8.43446D+01   13 8.53056D+01
                    15 8.61429D+01   17 8.67689D+01   19 8.70923D+01   21 8.72714D+01   24 1.21681D+02
                    25 1.26157D+02
983 7.98750D+01   1 4.04125D-06 1.05500D+00 0.0          0.0          0.0
983 7.98750D+01   1 4.04125D-06 1.05500D+00 0.0          0.0          0.0          1 3.69226D-06
983 7.98750D+01   1 8.00383D-07 1.05500D+00 0.0          0.0          0.0          2 4.08688D-07   25 1.14531D+00   24 9.37483D-01
  983     7.9875D+01    1 7.58223D+01    3 8.01467D+01    5 8.17725D+01   11 8.43437D+01   13 8.53043D+01
                    15 8.61406D+01   17 8.67655D+01   19 8.70901D+01   21 8.72817D+01   24 1.22822D+02
                    25 1.27302D+02
984 7.99185D+01   1 3.90588D-06 1.05500D+00 0.0          0.0          0.0
984 7.99185D+01   1 3.90588D-06 1.05500D+00 0.0          0.0          0.0          1 3.64407D-06
984 7.99185D+01   1 7.89767D-07 1.05500D+00 0.0          0.0          0.0          2 3.98215D-07   25 1.15648D+00   24 9.37542D-01
  984     7.9919D+01    1 7.58221D+01    3 8.01461D+01    5 8.17718D+01   11 8.43428D+01   13 8.53030D+01
                    15 8.61384D+01   17 8.67622D+01   19 8.70881D+01   21 8.72924D+01   24 1.23973D+02
                    25 1.28459D+02
985 7.99593D+01   1 1.34907D-06 1.05500D+00 0.0          0.0          0.0
985 7.99593D+01   1 1.34907D-06 1.05500D+00 0.0          0.0          0.0          1 2.11793D-06
985 7.99593D+01   1 1.50566D-07 1.05500D+00 0.0          0.0          0.0          2 1.60905D-07   25 1.08103D+00   24 8.65761D-01
  985     7.9959D+01    1 7.58220D+01    3 8.01457D+01    5 8.17712D+01   11 8.43420D+01   13 8.53017D+01
                    15 8.61363D+01   17 8.67591D+01   19 8.70863D+01   21 8.73027D+01   24 1.25047D+02
                    25 1.29540D+02
986 8.00000D+01   1 1.34754D-06 1.05500D+00 0.0          0.0          0.0
986 8.00000D+01   1 1.34754D-06 1.05500D+00 0.0          0.0          0.0          1 2.04660D-06
986 8.00000D+01   1 7.43922D-07 1.05500D+00 0.0          0.0          0.0          2 3.61543D-07   25 1.07679D+00   24 8.55807D-01
  986     8.0000D+01    1 7.58218D+01    3 8.01452D+01    5 8.17706D+01   11 8.43411D+01   13 8.53005D+01
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PGC

15 8.61341D+01 17 8.67560D+01 19 8.70846D+01 21 8.73132D+01 24 1.26117D+02
25 1.30617D+02

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 986 TIME STEPS, TIME = 8.000000D+01

CROSS GRID			1
			1
FINE GRID			1
	DISTANCE		0.0
1	1	0.0	75182
	2	0.03	77198
2	3	0.06	80115
	4	0.08	80196
3	5	0.10	81177
	6	0.57	82121
	7	1.04	82164
	8	1.51	83107
	9	1.98	83150
	10	2.45	83192
4	11	2.92	84134
	12	3.14	84183
5	13	3.35	85130
	14	3.57	85174
6	15	3.79	86113
	16	4.01	86148
7	17	4.23	86176
	18	4.45	86196
8	19	4.67	87108
	20	4.89	87117
9	21	5.10	87121
	22	5.18	96108
	23	5.25	108100
10	24	5.32	126112
11	25	5.35	130162

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	78.640000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 4.072721070-02

ELAPSED CPU TIME IS 11.90 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.306*70+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58218D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
987	8.00448D+01	1	8.27397D-06	1.05500D+00	0.0	0.0	0.0						
987	8.00448D+01	1	8.27397D-06	1.05500D+00	0.0	0.0	0.0	1	4.21914D-06				
987	8.00448D+01	1	1.39158D-06	1.05500D+00	0.0	0.0	0.0	2	5.11113D-07	25	1.17758D+00	24	9.30070D-0

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
987	8.0045D+01	1 7.58216D+01	3 8.01[illegible]7D+01	5 8.17699D+01	11 8.43401D+01	13 8.52991D+01
		15 8.61318D+01	17 8.67[illegible]26D+01	19 8.70828D+01	21 8.73250D+01	24 1.27290D+02
		25 1.31794D+02				
988	8.00906D+01	1 1.80634D-06	1.05500D+00 0.0	0.0	0.0	1 3.26811D-06
988	8.00906D+01	1 1.80634D-06	1.05500D+00 0.0	0.0	0.0	2 2.77005D-07 25 1.20020D+00 24 9.37763D-01
988	8.00906D+01	1 5.15013D-07	1.05500D+00 0.0	0.0	0.0	
988	8.0091D+01	1 7.58214D+01	3 8.01441D+01	5 8.17692D+01	11 8.43392D+01	13 8.52977D+01
		15 8.61294D+01	17 8.67492D+01	19 8.70811D+01	21 8.73374D+01	24 1.28483D+02
		25 1.32994D+02				
989	8.01369D+01	1 2.38591D-06	1.05500D+00 0.0	0.0	0.0	1 3.32751D-06
989	8.01369D+01	1 2.38591D-06	1.05500D+00 0.0	0.0	0.0	2 2.89420D-07 25 1.21298D+00 24 9.37957D-01
989	8.01369D+01	1 5.57837D-07	1.05500D+00 0.0	0.0	0.0	
989	8.0137D+01	1 7.58212D+01	3 8.01436D+01	5 8.17685D+01	11 8.43382D+01	13 8.52963D+01
		15 8.61270D+01	17 8.67457D+01	19 8.70796D+01	21 8.73502D+01	24 1.29689D+02
		25 1.34207D+02				
990	8.01839D+01	1 3.10426D-06	1.05500D+00 0.0	0.0	0.0	1 3.42483D-06
990	8.01839D+01	1 3.10426D-06	1.05500D+00 0.0	0.0	0.0	2 3.26554D-07 25 1.22532D+00 24 9.38173D-01
990	8.01839D+01	1 6.90942D-07	1.05500D+00 0.0	0.0	0.0	
990	8.0184D+01	1 7.58210D+01	3 8.01430D+01	5 8.17678D+01	11 8.43372D+01	13 8.52949D+01
		15 8.61245D+01	17 8.67423D+01	19 8.70782D+01	21 8.73534D+01	24 1.30[illegible]50D+02
		25 1.35433D+02				
991	8.02314D+01	1 3.85645D-06	1.05500D+00 0.0	0.0	0.0	1 3.57946D-06
991	8.02314D+01	1 3.85645D-06	1.05500D+00 0.0	0.0	0.0	2 3.[illegible]25630-07 25 1.23707D+00 24 9.38257D-01
991	8.02314D+01	1 7.56004D-07	1.05500D+00 0.0	0.0	0.0	
991	8.0231D+01	1 7.58208D+01	3 8.01424D+01	5 8.17670D+01	11 8.43361D+01	13 8.52934D+01
		15 8.61220D+01	17 8.67388D+01	19 8.70769D+01	21 8.73771D+01	24 1.31[illegible]30D+02
		25 1.36670D+02				
992	8.02796D+01	1 4.11537D-06	1.05500D+00 0.0	0.0	0.0	1 3.67[illegible]06
992	8.02796D+01	1 4.11537D-06	1.05500D+00 0.0	0.0	0.0	2 3.71071D-07 25 1.24872D+00 24 9.38250D-01
992	8.02796D+01	1 8.21178D-07	1.05500D+00 0.0	0.0	0.0	
992	8.0280D+01	1 7.58206D+01	3 8.01418D+01	5 8.17662D+01	11 8.43351D+01	13 8.52919D+01
		15 8.61195D+01	17 8.67353D+01	19 8.70757D+01	21 8.73913D+01	24 1.33373D+02
		25 1.37918D+02				
993	8.03283D+01	1 4.33474D-06	1.05500D+00 0.0	0.0	0.0	1 3.76797D-06
993	8.03283D+01	1 4.33474D-06	1.05500D+00 0.0	0.0	0.0	2 3.82704D-07 25 1.26038D+00 24 9.38225D-01
993	8.03283D+01	1 8.55619D-07	1.05500D+00 0.0	0.0	0.0	
993	8.0328D+01	1 7.58204D+01	3 8.01412D+01	5 8.17655D+01	11 8.43340D+01	13 8.52904D+01
		15 8.61170D+01	17 8.67318D+01	19 8.70747D+01	21 8.74059D+01	24 1.34625D+02
		25 1.39179D+02				
994	8.03776D+01	1 4.32593D-06	1.05500D+00 0.0	0.0	0.0	1 3.81981D-06
994	8.03776D+01	1 4.32593D-06	1.05500D+00 0.0	0.0	0.0	2 3.79980D-07 25 1.27221D+00 24 9.38209D-01
994	8.03776D+01	1 8.44206D-07	1.05500D+00 0.0	0.0	0.0	
994	8.0376D+01	1 7.58202D+01	3 8.01406D+01	5 8.17647D+01	11 8.43329D+01	13 8.52888D+01
		15 8.61144D+01	17 8.67283D+01	19 8.70738D+01	21 8.74209D+01	24 1.35888D+02
		25 1.40451D+02				
995	8.04276D+01	1 4.52189D-06	1.05500D+00 0.0	0.0	0.0	1 3.90510D-06
995	8.042[illegible]+01	1 4.52189D-06	1.05500D+00 0.0	0.0	0.0	2 3.94963D-07 25 1.28412D+00 24 9.38169D-01
995	8.04276D+01	1 8.03948D-07	1.05500D+00 0.0	0.0	0.0	
995	8.0428D+01	1 7.58200D+01	3 8.01400D+01	5 8.17639D+01	11 8.43318D+01	13 8.52872D+01
		15 8.61118D+01	17 8.67248D+01	19 8.70731D+01	21 8.74365D+01	24 1.37162D+02
		25 1.41735D+02				
996	8.04782D+01	1 4.67668D-06	1.0[illegible]0+00 0.0	0.0	0.0	1 3.98055D-06
996	8.04782D+01	1 4.67668D-06	1.0[illegible]0+00 0.0	0.0	0.0	2 3.99139D-07 25 1.29610D+00 24 9.38139D-01
996	8.04782D+01	1 8.95844D-07	1.05500D+00 0.0	0.0	0.0	
996	8.0478D+01	1 7.58197D+01	3 8.01393D+01	5 8.17630D+01	11 8.[illegible]D+01	13 8.52856D+01

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                    15 8.61091D+01   17 8.67213D+01   19 8.70725D+01   21 8.74525D+01   24 1.38449D+02
                    25 1.43031D+02
 997 8.05295D+01     1 1.16940D-05 1.05500D+00 0.0          0.0          0.0
 997 8.05295D+01     2 1.07103D-06 1.05500D+00 0.0          0.0          0.0          1 5.87168D-06
 997 8.05295D+01     1 8.38874D-07 1.05500D+00 0.0          0.0          0.0          2 2.54347D-07   25 1.30357D+00   24 9.37581D-01
  997      8.0529D+01    1 7.58195D+01    3 8.01387D+01    5 8.17622D+01   11 8.43295D+01   13 8.52840D+01
                    15 8.61064D+01   17 8.67178D+01   19 8.70721D+01   21 8.74690D+01   24 1.39747D+02
                    25 1.44335D+02
 998 8.05814D+01     1 9.43525D-05 1.05500D+00 0.0          0.0          0.0
 998 8.05814D+01     2 7.98232D-06 1.05500D+00 0.0          0.0          0.0          1 2.56471D-05
 998 8.05814D+01     1 6.43791D-06 1.05500D+00 0.0          0.0          0.0          2 1.94393D-06   24 1.29954D+00   24 9.29922D-01
  998      8.0581D+01    1 7.58193D+01    3 8.01380D+01    5 8.17613D+01   11 8.43283D+01   13 8.52823D+01
                    15 8.61037D+01   17 8.67143D+01   19 8.70719D+01   21 8.74860D+01   24 1.41047D+02
                    25 1.45591D+02
 999 8.06344D+01     1 5.36954D-05 1.05500D+00 0.0          0.0          0.0
 999 8.06344D+01     2 4.93725D-06 1.05500D+00 0.0          0.0          0.0          1 2.27221D-05
 999 8.06344D+01     1 4.29016D-06 1.05500D+00 0.0          0.0          0.0          2 1.24441D-06   24 1.30051D+00   24 9.22043D-01
  999      8.0634D+01    1 7.58190D+01    3 8.01273D+01    5 8.17604D+01   11 8.43270D+01   13 8.52806D+01
                    15 8.61009D+01   17 8.67108D+01   19 8.70718D+01   21 8.75037D+01   24 1.42347D+02
                    25 1.46834D+02
1000 8.06891D+01     1 3.65325D-05 1.05500D+00 0.0          0.0          0.0
1000 8.06891D+01     2 3.62018D-06 1.05500D+00 0.0          0.0          0.0          1 2.19264D-05
1000 8.06891D+01     1 3.42168D-06 1.05500D+00 0.0          0.0          0.0          2 9.43372D-07   24 1.30876D+00   24 9.19414D-01
  1000      8.0689D+01    1 7.58188D+01    3 8.01366D+01    5 8.17595D+01   11 8.43258D+01   13 8.52789D+01
                    15 8.60981D+01   17 8.67072D+01   19 8.70719D+01   21 8.75222D+01   24 1.43656D+02
                    25 1.48083D+02
1001 8.07456D+01     1 2.96937D-05 1.05500D+00 0.0          0.0          0.0
1001 8.07456D+01     2 3.04977D-06 1.05500D+00 0.0          0.0          0.0          1 2.18428D-05
1001 8.07456D+01     1 3.05209D-06 1.05500D+00 0.0          0.0          0.0          2 8.05051D-07   24 1.32060D+00   24 9.19277D-01
  1001      8.0746D+01    1 7.58185D+01    3 8.01358D+01    5 8.17586D+01   11 8.43244D+01   13 8.52770D+01
                    15 8.60951D+01   17 8.67036D+01   19 8.70723D+01   21 8.75416D+01   24 1.44977D+02
                    25 1.49347D+02
1002 8.08039D+01     1 2.65705D-05 1.05500D+00 0.0          0.0          0.0
1002 8.08039D+01     2 2.74240D-06 1.05500D+00 0.0          0.0          0.0          1 2.18591D-05
1002 8.08039D+01     1 2.95205D-06 1.05500D+00 0.0          0.0          0.0          2 7.42529D-07   24 1.33397D+00   24 9.20124D-01
  1002      8.0804D+01    1 7.58182D+01    3 8.01351D+01    5 8.17576D+01   11 8.43231D+01   13 8.52751D+01
                    15 8.60921D+01   17 8.66999D+01   19 8.70729D+01   21 8.75620D+01   24 1.46311D+02
                    25 1.50631D+02
1003 8.08642D+01     1 2.51430D-05 1.05500D+00 0.0          0.0          0.0
1003 8.08642D+01     2 2.55410D-06 1.05500D+00 0.0          0.0          0.0          1 2.18206D-05
1003 8.08642D+01     1 2.82254D-06 1.05500D+00 0.0          0.0          0.0          2 6.87678D-07   24 1.34807D+00   24 9.21377D-01
  1003      8.0864D+01    1 7.58180D+01    3 8.01342D+01    5 8.17565D+01   11 8.43216D+01   13 8.52731D+01
                    15 8.60889D+01   17 8.66961D+01   19 8.70737D+01   21 8.75833D+01   24 1.47659D+02
                    25 1.51934D+02
1004 8.09263D+01     1 2.41220D-05 1.05500D+00 0.0          0.0          0.0
1004 8.09263D+01     2 2.39531D-06 1.05500D+00 0.0          0.0          0.0          1 2.16202D-05
1004 8.09263D+01     1 2.77783D-06 1.05500D+00 0.0          0.0          0.0          2 6.52913D-07   24 1.36250D+00   24 9.22736D-01
  1004      8.0926D+01    1 7.58177D+01    3 8.01334D+01    5 8.17554D+01   11 8.43201D+01   13 8.52711D+01
                    15 8.60857D+01   17 8.66923D+01   19 8.70749D+01   21 8.76056D+01   24 1.49021D+02
                    25 1.53258D+02
1005 8.09903D+01     1 2.30231D-05 1.05500D+00 0.0          0.0          0.0
1005 8.09903D+01     2 2.23229D-06 1.05500D+00 0.0          0.0          0.0          1 2.11958D-05
1005 8.09903D+01     1 2.74967D-06 1.05500D+00 0.0          0.0          0.0          2 6.22513D-07   24 1.37717D+00   24 9.24147D-01
  1005      8.0990D+01    1 7.58174D+01    3 8.01325D+01    5 8.17543D+01   11 8.43186D+01   13 8.52690D+01
                    15 8.60824D+01   17 8.66885D+01   19 8.70763D+01   21 8.76289D+01   24 1.50398D+02
                    25 1.54602D+02
1006 8.10560D+01     1 1.92055D-05 1.05500D+00 0.0          0.0          0.0
1006 8.10560D+01     2 1.87799D-06 1.05500D+00 0.0          0.0          0.0          1 2.00619D-05
1006 8.10560D+01     1 2.39046D-06 1.05500D+00 0.0          0.0          0.0          2 5.23287D-07   24 1.39235D+00   24 9.25776D-01
  1006      8.1056D+01    1 7.58170D+01    3 8.01316D+01    5 8.17531D+01   11 8.43170D+01   13 8.52668D+01
                    15 8.60790D+01   17 8.66846D+01   19 8.70780D+01   21 8.76531D+01   24 1.51791D+02
                    25 1.55968D+02
1007 8.11235D+01     1 1.87320D-05 1.05500D+00 0.0          0.0          0.0
1007 8.11235D+01     2 1.76092D-06 1.05500D+00 0.0          0.0          0.0          1 1.92488D-05
1007 8.11235D+01     1 2.35957D-06 1.05500D+00 0.0          0.0          0.0          2 5.00675D-07   24 1.40770D+00   24 9.27392D-01
  1007      8.1123D+01    1 7.58167D+01    3 8.01307D+01    5 8.17519D+01   11 8.43153D+01   13 8.52643D+01
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                    15 8.60755D+01    17 8.66807D+01    19 8.70801D+01    21 8.76783D+01    24 1.53198D+02
                    25 1.57355D+02
1008 8.11926D+01     1 1.84074D-05 1.055000+00 0.0          0.0          0.0
1008 8.11926D+01     2 1.73181D-06 1.055000+00 0.0          0.0          0.0          1 1.85709D-05
1008 8.11926D+01     1 2.46354D-06 1.055000+00 0.0          0.0          0.0          2 5.08304D-07   24 1.42278D+00   24 9.28717D-01
   1008      8.1193D+01     1 7.58164D+01     3 8.01297D+01     5 8.17507D+01    11 8.43136D+01    13 8.52622D+01
                    15 8.60719D+01    17 8.66769D+01    19 8.70825D+01    21 8.77183D+01    24 1.54621D+02
                    25 1.58761D+02
1009 8.12633D+01     1 1.87688D-05 1.055000+00 0.0          0.0          0.0
1009 8.12633D+01     2 1.63520D-06 1.055000+00 0.0          0.0          0.0          1 1.76858D-05
1009 8.12633D+01     1 2.39318D-06 1.055000+00 0.0          0.0          0.0          2 4.85978D-07   24 1.43769D+00   24 9.29816D-01
   1009      8.1263D+01     1 7.58160D+01     3 8.01287D+01     5 8.17494D+01    11 8.43118D+01    13 8.52598D+01
                    15 8.60681D+01    17 8.66731D+01    19 8.70853D+01    21 8.77312D+01    24 1.56059D+02
                    25 1.60186D+02
1010 8.13353D+01     1 1.79971D-05 1.055000+00 0.0          0.0          0.0
1010 8.13355D+01     2 1.61879D-06 1.055000+00 0.0          0.0          0.0          1 1.67575D-05
1010 8.13355D+01     1 2.32780D-06 1.055000+00 0.0          0.0          0.0          2 4.64040D-07   24 1.45257D+00   24 9.30783D-01
   1010      8.1336D+01     1 7.58156D+01     3 8.01276D+01     5 8.17481D+01    11 8.43100D+01    13 8.52573D+01
                    15 8.60646D+01    17 8.66693D+01    19 8.70885D+01    21 8.77589D+01    24 1.57511D+02
                    25 1.61630D+02
1011 8.14093D+01     1 1.75081D-05 1.055000+00 0.0          0.0          0.0
1011 8.14093D+01     2 1.62316D-06 1.055000+00 0.0          0.0          0.0          1 1.58601D-05
1011 8.14093D+01     1 2.25139D-06 1.055000+00 0.0          0.0          0.0          2 4.42871D-07   24 1.46744D+00   24 9.31639D-01
   1011      8.1409D+01     1 7.58153D+01     3 8.01266D+01     5 8.17467D+01    11 8.43081D+01    13 8.52548D+01
                    15 8.60609D+01    17 8.66655D+01    19 8.70921D+01    21 8.77875D+01    24 1.58979D+02
                    25 1.63092D+02
1012 8.14844D+01     1 1.68874D-05 1.055000+00 0.0          0.0          0.0
1012 8.14844D+01     2 1.60381D-06 1.055000+00 0.0          0.0          0.0          1 1.49605D-05
1012 8.14844D+01     1 2.21257D-06 1.055000+00 0.0          0.0          0.0          2 4.26592D-07   24 1.48229D+00   24 9.32384D-01
   1012      8.1484D+01     1 7.58149D+01     3 8.01255D+01     5 8.17453D+01    11 8.43062D+01    13 8.52522D+01
                    15 8.60571D+01    17 8.66618D+01    19 8.70961D+01    21 8.78168D+01    24 1.60461D+02
                    25 1.64571D+02
1013 8.15610D+01     1 1.20286D-04 1.055000+00 0.0          0.0          0.0
1013 8.15610D+01     3 1.53215D-06 1.055000+00 0.0          0.0          0.0          1 3.19332D-05
1013 8.15610D+01     2 1.42809D-06 1.055000+00 0.0          0.0          0.0          2 2.31495D-06   24 1.48607D+00   24 9.26122D-01
   1013      8.1561D+01     1 7.58145D+01     3 8.01243D+01     5 8.17438D+01    11 8.43042D+01    13 8.52496D+01
                    15 8.60532D+01    17 8.66582D+01    19 8.71006D+01    21 8.78469D+01    24 1.61947D+02
                    25 1.66015D+02
1014 8.16396D+01     1 3.18908D-04 1.055000+00 0.0          0.0          0.0
1014 8.16396D+01     3 4.06399D-06 1.055000+00 0.0          0.0          0.0          1 7.15645D-05
1014 8.16396D+01     2 3.95857D-06 1.055000+00 0.0          0.0          0.0          2 6.16787D-06   24 1.49160D+00   24 9.01009D-01
   1014      8.1640D+01     1 7.58141D+01     3 8.01231D+01     5 8.17423D+01    11 8.43022D+01    13 8.52469D+01
                    15 8.60493D+01    17 8.66546D+01    19 8.71055D+01    21 8.78780D+01    24 1.63406D+02
                    25 1.67330D+02
1015 8.17224D+01     1 1.67380D-04 1.055000+00 0.0          0.0          0.0
1015 8.17224D+01     3 2.19643D-06 1.055000+00 0.0          0.0          0.0          1 6.46604D-05
1015 8.17224D+01     2 2.60372D-06 1.055000+00 0.0          0.0          0.0          2 3.70801D-06   24 1.43861D+00   24 8.80386D-01
   1015      8.1722D+01     1 7.58136D+01     3 8.01219D+01     5 8.17407D+01    11 8.43000D+01    13 8.52440D+01
                    15 8.60452D+01    17 8.66510D+01    19 8.71110D+01    21 8.79110D+01    24 1.64845D+02
                    25 1.68621D+02
1016 8.18118D+01     1 1.35783D-04 1.055000+00 0.0          0.0          0.0
1016 8.18118D+01     3 1.81575D-06 1.055000+00 0.0          0.0          0.0          1 6.58879D-05
1016 8.18118D+01     2 2.51465D-06 1.055000+00 0.0          0.0          0.0          2 3.18704D-06   24 1.44952D+00   24 8.79325D-01
   1016      8.1812D+01     1 7.58132D+01     3 8.01205D+01     5 8.17390D+01    11 8.42976D+01    13 8.52409D+01
                    15 8.60408D+01    17 8.66473D+01    19 8.71175D+01    21 8.79468D+01    24 1.66295D+02
                    25 1.69937D+02
1017 8.19059D+01     1 1.63820D-04 1.055000+00 0.0          0.0          0.0
1017 8.19059D+01     3 1.56743D-06 1.055000+00 0.0          0.0          0.0          1 6.46474D-05
1017 8.19059D+01     2 2.37036D-06 1.055000+00 0.0          0.0          0.0          2 2.78613D-06   24 1.43122D+00   24 8.60656D-01
   1017      8.1906D+01     1 7.58127D+01     3 8.01191D+01     5 8.17374D+01    11 8.42951D+01    13 8.52375D+01
                    15 8.60362D+01    17 8.66437D+01    19 8.71248D+01    21 8.79847D+01    24 1.67726D+02
                    25 1.71258D+02
1018 8.20000D+01     1 8.69344D-05 1.055000+00 0.0          0.0          0.0
1018 8.20000D+01     2 8.60441D-06 1.055000+00 0.0          0.0          0.0          1 5.70138D-05
1018 8.20000D+01     2 1.76620D-06 1.055000+00 0.0          0.0          0.0          2 2.71110D-06   24 1.35518D+00   24 8.07973D-01
   1018      8.2000D+01     1 7.58121D+01     3 8.01176D+01     5 8.17352D+01    11 8.42925D+01    13 8.52342D+01
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15 8 .60316D+01 17 8 1 19 8 .71325D+01 21 8 .80226D+01 24 1 .69081D+02
25 1 .72531D+02

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1018 TIME STEPS, TIME = 8.20000D+01

GROSS GRID	FINE GRID	DISTANCE	0.0
1	1	0.0	75181
	2	0.03	77197
2	3	0.06	80112
	4	0.08	80193
3	5	0.10	81174
	6	0.57	82118
	7	1.04	82161
	8	1.51	83104
	9	1.98	83146
	10	2.45	83188
4	11	2.92	84129
	12	3.14	84178
5	13	3.35	85123
	14	3.57	85165
6	15	3.79	86103
	16	4.01	86136
7	17	4.23	86164
	18	4.45	86188
8	19	4.67	87113
	20	4.89	87147
9	21	5.10	88102
	22	5.18	112127
	23	5.25	138172
10	24	5.32	169108
11	25	5.35	172153

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 9.40772568D-02

ELAPSED CPU TIME IS 12.23 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.72531D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58121D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
1019	8.21035D+01	1	1.07906D-04	1.05500D+00	0.0	0.0	0.0						
1019	8.21035D+01	3	1.73920D-06	1.05500D+00	0.0	0.0	0.0	1	5.92421D-05				
1019	8.21035D+01	2	2.40344D-06	1.05500D+00	0.0	0.0	0.0	2	2.47812D-06	24	1.42106D+00	24	8.40460D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1019	8.21035D+01	1 7.58116D+01	3 8.01160D+01	5 8.17331D+01	11 8.42897D+01	13 8.52306D+01	
		15 8.60267D+01	17 8.66367D+01	19 8.71416D+01	21 8.80644D+01	24 1.70502D+02	
		25 1.73879D+02					
1020	8.22173D+01	1 1.06640D-04	1.05500D+00	0.0	0.0	0.0	
1020	8.22173D+01	3 1.99007D-06	1.05500D+00	0.0	0.0	0.0	1 6.06856D-05
1020	8.22173D+01	2 2.74047D-06	1.05500D+00	0.0	0.0	0.0	2 2.45835D-06 24 1.49538D+00 24 8.77043D-01
1020	8.22170+01	1 7.58109D+01	3 8.01141D+01	5 8.17308D+01	11 8.42866D+01	13 8.52265D+01	
		15 8.60213D+01	17 8.66332D+01	19 8.71522D+01	21 8.81104D+01	24 1.71997D+02	
		25 1.75315D+02					
1021	8.23406D+01	1 1.07804D-04	1.05500D+00	0.0	0.0	0.0	
1021	8.23406D+01	3 2.18826D-06	1.05500D+00	0.0	0.0	0.0	1 5.92379D-05
1021	8.23406D+01	2 2.93045D-06	1.05500D+00	0.0	0.0	0.0	2 2.34914D-06 24 1.55827D+00 24 9.05984D-01
1021	8.23410+01	1 7.58103D+01	3 8.01121D+01	5 8.17283D+01	11 8.42831D+01	13 8.52221D+01	
		15 8.60156D+01	17 8.66297D+01	19 8.71645D+01	21 8.81599D+01	24 1.73556D+02	
		25 1.76830D+02					
1022	8.24699D+01	1 8.48689D-05	1.05500D+00	0.0	0.0	0.0	
1022	8.24699D+01	3 1.59241D-06	1.05500D+00	0.0	0.0	0.0	1 5.30183D-05
1022	8.24699D+01	2 2.60512D-06	1.05500D+00	0.0	0.0	0.0	2 1.95559D-06 24 1.58300D+00 24 9.12100D-01
1022	8.24700+01	1 7.58095D+01	3 8.01100D+01	5 8.17256D+01	11 8.42795D+01	13 8.52175D+01	
		15 8.60097D+01	17 8.66265D+01	19 8.71781D+01	21 8.82116D+01	24 1.75139D+02	
		25 1.78385D+02					
1023	8.26046D+01	1 2.68473D-04	1.05500D+00	0.0	0.0	0.0	
1023	8.26046D+01	3 7.76887D-06	1.05500D+00	0.0	0.0	0.0	1 6.83671D-05
1023	8.26046D+01	2 7.64516D-06	1.05500D+00	0.0	0.0	0.0	2 5.47409D-06 24 1.58853D+00 24 9.07015D-01
1023	8.26050+01	1 7.58087D+01	3 8.01078D+01	5 8.17227D+01	11 8.42756D+01	13 8.52126D+01	
		15 8.60037D+01	17 8.66237D+01	19 8.71930D+01	21 8.82650D+01	24 1.76727D+02	
		25 1.79917D+02					
1024	8.27456D+01	1 6.75513D-04	1.05500D+00	0.0	0.0	0.0	
1024	8.27456D+01	4 1.88988D-06	1.05500D+00	0.0	0.0	0.0	1 1.18668D-04
1024	8.27456D+01	3 3.86610D-06	1.05500D+00	0.0	0.0	0.0	2 1.72320D-05
1024	8.27456D+01	2 3.49064D-06	1.05500D+00	0.0	0.0	0.0	3 2.35316D-06 24 1.53843D+00 24 8.70512D-01
1024	8.27460+01	1 7.58079D+01	3 8.01054D+01	5 8.17197D+01	11 8.42715D+01	13 8.52075D+01	
		15 8.59975D+01	17 8.66212D+01	19 8.72095D+01	21 8.83204D+01	24 1.78266D+02	
		25 1.81306D+02					
1025	8.28996D+01	1 2.83219D-04	1.05500D+00	0.0	0.0	0.0	
1025	8.28996D+01	3 7.52068D-06	1.05500D+00	0.0	0.0	0.0	1 1.02452D-04
1025	8.28996D+01	3 2.24375D-06	1.05500D+00	0.0	0.0	0.0	2 6.83709D-06 24 1.52080D+00 24 8.53110D-01
1025	8.29000+01	1 7.58070D+01	3 8.01028D+01	5 8.17164D+01	11 8.42670D+01	13 8.52020D+01	
		15 8.59909D+01	17 8.66172D+01	19 8.72284D+01	21 8.83803D+01	24 1.79786D+02	
		25 1.82728D+02					
1026	8.30689D+01	1 3.18536D-04	1.05500D+00	0.0	0.0	0.0	
1026	8.30689D+01	4 7.27013D-07	1.05500D+00	0.0	0.0	0.0	1 1.02600D-04
1026	8.30689D+01	3 2.89230D-06	1.05500D+00	0.0	0.0	0.0	2 7.02918D-06 24 1.54724D+00 24 8.60600D-01
1026	8.30690+01	1 7.58060D+01	3 8.00998D+01	5 8.17127D+01	11 8.42621D+01	13 8.51959D+01	
		15 8.59840D+01	17 8.66176D+01	19 8.72501D+01	21 8.84454D+01	24 1.81334D+02	
		25 1.84203D+02					
1027	8.32551D+01	1 2.72511D-04	1.05500D+00	0.0	0.0	0.0	
1027	8.32551D+01	4 4.81479D-07	1.05500D+00	0.0	0.0	0.0	1 9.53428D-05
1027	8.32551D+01	3 2.97252D-06	1.05500D+00	0.0	0.0	0.0	2 6.01888D-06 24 1.59746D+00 24 8.80951D-01
1027	8.32550+01	1 7.58049D+01	3 8.00965D+01	5 8.17085D+01	11 8.42565D+01	13 8.51892D+01	
		15 8.59766D+01	17 8.66168D+01	19 8.72750D+01	21 8.85158D+01	24 1.82931D+02	
		25 1.85753D+02					
1028	8.34560D+01	1 2.17680D-04	1.05500D+00	0.0	0.0	0.0	
1028	8.34560D+01	3 9.68446D-06	1.05500D+00	0.0	0.0	0.0	1 8.15679D-05
1028	8.34560D+01	3 2.72492D-06	1.05500D+00	0.0	0.0	0.0	2 5.02237D-06 24 1.64340D+00 24 8.98369D-01

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 1028      8.3456D+01     1 7.5803GD+01     3 8.0093GD+01     5 8.1704GD+01    11 8.4250GD+01    13 8.5181GD+01
                          15 8.5969GD+01    17 8.6616GD+01    19 8.7303GD+01    21 8.8590GD+01    24 1.8457GD+02
                          25 1.8737GD+02
1029 8.3668D+01     1 2.6526GD-04 1.0550GD+00 0.0             0.0               0.0
1029 8.3668D+01     4 1.5798GD-07 1.0550GD+00 0.0             0.0               0.0               1 7.4044GD-05
1029 8.3668D+01     3 3.5514GD-06 1.0550GD+00 0.0             0.0               0.0               2 5.6225GD-06    24 1.6728GD+00    24 9.0635GD-01
 1029      8.3668D+01     1 7.5802GD+01     3 8.0089GD+01     5 8.1693GD+01    11 8.4244GD+01    13 8.5174GD+01
                          15 8.5961GD+01    17 8.6618GD+01    19 8.7333GD+01    21 8.8667GD+01    24 1.8624GD+02
                          25 1.8902GD+02
1030 8.3834D+01     1 1.1679GD-04 1.0550GD+00 0.0             0.0               0.0
1030 8.3834D+01     3 4.2601GD-06 1.0550GD+00 0.0             0.0               0.0               1 4.1755GD-05
1030 8.3834D+01     2 4.7795GD-06 1.0550GD+00 0.0             0.0               0.0               2 2.5668GD-06    24 1.2661GD+00    24 5.7981GD-01
 1030      8.3834D+01     1 7.5801GD+01     3 8.0086GD+01     5 8.1695GD+01    11 8.4238GD+01    13 8.5168GD+01
                          15 8.5955GD+01    17 8.6619GD+01    19 8.7358GD+01    21 8.8726GD+01    24 1.8751GD+02
                          25 1.9028GD+02
1031 8.4000D+01     1 1.3324GD-04 1.0550GD+00 0.0             0.0               0.0
1031 8.4000D+01     3 5.0654GD-06 1.0550GD+00 0.0             0.0               0.0               1 3.4372GD-05
1031 8.4000D+01     2 5.3405GD-06 1.0550GD+00 0.0             0.0               0.0               2 2.8720GD-06    24 1.2326GD+00    24 5.5737GD-01
 1031      8.4000D+01     1 7.5800GD+01     3 8.0083GD+01     5 8.1691GD+01    11 8.4233GD+01    13 8.5162GD+01
                          15 8.5950GD+01    17 8.6622GD+01    19 8.7383GD+01    21 8.8785GD+01    24 1.8874GD+02
                          25 1.9150GD+02
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TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1031 TIME STEPS, TIME = 8.40000D+01

GROSS GRID 1
1
FINE GRID 1

		DISTANCE	0.0
1	1	0.0	75180
	2	0.03	77194
2	3	0.06	80108
	4	0.08	80189
3	5	0.10	81169
	6	0.57	82113
	7	1.04	82157
	8	1.51	82199
	9	1.98	83141
	10	2.45	83183
4	11	2.92	84123
	12	3.14	84171
5	13	3.35	85116
	14	3.57	85157
6	15	3.79	85135
	16	4.01	86129
7	17	4.23	86162
	18	4.45	86197
8	19	4.67	87138
	20	4.89	87196
9	21	5.10	88179
	22	5.18	120181
	23	5.25	153185
10	24	5.32	188175
11	25	5.35	191151

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 1.65814604D-01

ELAPSED CPU TIME IS 12.41 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.91505D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.58000D+01 (+-0.1 PERCENT)

M. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE	NODE
1032	8.41824D+01	1	1.38767D-04	1.05500D+00	0.0	0.0	0.0						
1032	8.41824D+01	3	5.79274D-06	1.05500D+00	0.0	0.0	0.0	1	3.53953D-05				
1032	8.41824D+01	2	6.28822D-06	1.05500D+00	0.0	0.0	0.0	2	2.97961D-06	24	1.31662D+00	24	6.97560D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1032	8.4182D+01	1 7.57988D+01	3 8.00796D+01	5 8.16871D+01	11 8.42281D+01	13 8.51561D+01	
		15 8.59448D+01	17 8.66256D+01	19 8.74122D+01	21 8.88483D+01	24 1.90063D+02	
		25 1.92811D+02					
1033	8.43830D+01	1 1.04510D-04	1.05500D+00 0.0	0.0	0.0		
1033	8.43830D+01	3 4.71344D-06	1.05500D+00 0.0	0.0	0.0	1 3.28653D-05	
1033	8.43830D+01	2 5.52075D-06	1.05500D+00 0.0	0.0	0.0	2 2.31911D-06	24 1.41144D+00 24 7.42617D-01
1033	8.4383D+01	1 7.57975D+01	3 8.00758D+01	5 8.16824D+01	11 8.42218D+01	13 8.51491D+01	
		15 8.59392D+01	17 8.66301D+01	19 8.74440D+01	21 8.89169D+01	24 1.91474D+02	
		25 1.94221D+02					
1034	8.46037D+01	1 1.04673D-04	1.05500D+00 0.0	0.0	0.0		
1034	8.46037D+01	3 5.51226D-06	1.05500D+00 0.0	0.0	0.0	1 3.08127D-05	
1034	8.46037D+01	2 6.08105D-06	1.05500D+00 0.0	0.0	0.0	2 2.28897D-06	25 1.52856D+00 24 7.95170D-01
1034	8.4604D+01	1 7.57960D+01	3 8.00716D+01	5 8.16771D+01	11 8.42149D+01	13 8.51416D+01	
		15 8.59334D+01	17 8.66362D+01	19 8.74796D+01	21 8.89912D+01	24 1.92997D+02	
		25 1.95750D+02					
1035	8.48465D+01	1 3.99294D-03	1.05500D+00 0.0	0.0	0.0		
1035	8.48465D+01	4 5.17955D-06	1.05500D+00 0.0	0.0	0.0	1 3.48697D-04	
1035	8.48465D+01	4 1.33812D-06	1.05500D+00 0.0	0.0	0.0	2 8.45017D-05	
1035	8.48465D+01	4 3.43812D-07	1.05500D+00 0.0	0.0	0.0	3 2.17162D-05	
1035	8.48465D+01	3 4.41780D-06	1.05500D+00 0.0	0.0	0.0	4 5.46117D-06	24 1.29424D+00 23 6.91285D-01
1035	8.4847D+01	1 7.57944D+01	3 8.00669D+01	5 8.16713D+01	11 8.42073D+01	13 8.51334D+01	
		15 8.59277D+01	17 8.66439D+01	19 8.75194D+01	21 8.90716D+01	24 1.94291D+02	
		25 1.96642D+02					
1036	8.51135D+01	1 1.01283D-03	1.05500D+00 0.0	0.0	0.0		
1036	8.51135D+01	4 2.46680D-06	1.05500D+00 0.0	0.0	0.0	1 2.68567D-04	
1036	8.51135D+01	4 1.00970D-06	1.05500D+00 0.0	0.0	0.0	2 2.56972D-05	
1036	8.51135D+01	3 6.43634D-06	1.05500D+00 0.0	0.0	0.0	3 6.78713D-06	23 9.41828D-01 23 5.96167D-01
1036	8.5114D+01	1 7.57927D+01	3 8.00618D+01	5 8.16649D+01	11 8.41990D+01	13 8.51246D+01	
		15 8.59222D+01	17 8.66538D+01	19 8.75638D+01	21 8.91582D+01	24 1.95182D+02	
		25 1.97398D+02					
1037	8.54073D+01	1 1.25387D-03	1.05500D+00 0.0	0.0	0.0		
1037	8.54073D+01	4 6.34353D-06	1.05500D+00 0.0	0.0	0.0	1 2.41430D-04	
1037	8.54073D+01	4 1.99550D-06	1.05500D+00 0.0	0.0	0.0	2 2.81034D-05	
1037	8.54073D+01	3 8.69159D-06	1.05500D+00 0.0	0.0	0.0	3 7.85658D-06	23 7.52133D-01 23 4.73271D-01
1037	8.5407D+01	1 7.57907D+01	3 8.00561D+01	5 8.16578D+01	11 8.41898D+01	13 8.51152D+01	
		15 8.59170D+01	17 8.66662D+01	19 8.76133D+01	21 8.92504D+01	24 1.95900D+02	
		25 1.98002D+02					
1038	8.57036D+01	1 3.32004D-03	1.05500D+00 0.0	0.0	0.0		
1038	8.57036D+01	5 1.35304D-06	1.05500D+00 0.0	0.0	0.0	1 3.67167D-04	
1038	8.57036D+01	4 5.34246D-06	1.05500D+00 0.0	0.0	0.0	2 7.25295D-05	
1038	8.57036D+01	4 1.64799D-06	1.05500D+00 0.0	0.0	0.0	3 2.08396D-05	
1038	8.57036D+01	3 6.59139D-06	1.05500D+00 0.0	0.0	0.0	4 5.88957D-06	23 5.06196D-01 23 3.17017D-01
1038	8.5704D+01	1 7.57886D+01	3 8.00504D+01	5 8.16507D+01	11 8.41807D+01	13 8.51060D+01	
		15 8.59126D+01	17 8.66802D+01	13 8.76637D+01	21 8.93391D+01	24 1.96221D+02	
		25 1.98053D+02					
1039	8.60000D+01	1 1.28886D-02	1.05500D+00 0.0	0.0	0.0		
1039	8.60000D+01	5 5.25311D-06	1.05500D+00 0.0	0.0	0.0	1 1.13849D-03	
1039	8.60000D+01	5 1.53486D-06	1.05500D+00 0.0	0.0	0.0	2 2.81604D-04	
1039	8.60000D+01	4 5.90418D-06	1.05500D+00 0.0	0.0	0.0	3 8.10154D-05	
1039	8.60000D+01	4 1.70146D-06	1.05500D+00 0.0	0.0	0.0	4 2.31419D-05	
1039	8.60000D+01	3 7.18369D-06	1.05500D+00 0.0	0.0	0.0	5 6.48783D-06	25 2.12391D+00 25 1.07239D+00
1039	8.59662D+01	1 1.24279D-04	1.05500D+00 0.0	0.0	0.0		
1039	8.59662D+01	4 3.87668D-07	1.05500D+00 0.0	0.0	0.0	1 2.71593D-05	
1039	8.59662D+01	2 5.80399D-06	1.05500D+00 0.0	0.0	0.0	2 1.66862D-06	25 1.89703D+00 25 9.57837D-01
1039	8.5966D+01	1 7.57867D+01	3 8.00454D+01	5 8.16445D+01	11 8.41727D+01	13 8.50982D+01	

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                                15 8.59099D+01   17 8.66937D+01   19 8.77085D+01   21 8.94134D+01   24 1.95332D+02
                                25 1.96156D+02
1040 8.60000D+01     1 2 317540-05 1.05500D+00 0.0          0.0          0.0
1040 8.60000D+01     2 2 93455D-06 1.05500D+00 0.0          0.0          0.0          1 5 671090-05
1040 8.60000D+01     1 2 673880-06 1.05500D+00 0.0          0.0          0.0          2 1.08777D-06   25 3 096450-01   25 1 57857D-01
  1040      8.60000D+01     1 7.57862D+01    3 8.00447D+01    5 8.16437D+01   11 8.41716D+01   13 8.50972D+01
                            15 8.59096D+01   17 8.66955D+01   19 8.77143D+01   21 8.94227D+01   24 1.95090D+02
                            25 1.95847D+02
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PGC

HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20.58.30 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1040 TIME STEPS, TIME = 8.600000D+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75179
	2	0.03	77192
2	3	0.06	80104
	4	0.08	80185
3	5	0.10	81164
	6	0.57	82108
	7	1.04	82151
	8	1.51	82198
	9	1.98	83136
	10	2.45	83177
4	11	2.92	84117
	12	3.14	84165
5	13	3.35	85110
	14	3.57	85151
6	15	3.79	85191
	16	4.01	86129
7	17	4.23	86170
	18	4.45	87115
8	19	4.67	87171
	20	4.89	88145
9	21	5.10	89142
	22	5.18	124177
	23	5.25	160118
10	24	5.32	195109
11	25	5.35	195185

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.38226899D-02

ELAPSED CPU TIME IS 12.59 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.958470+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 25

THE MINIMUM TEMPERATURE IS - 7.578620+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

ccc

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
1041	8.60338D+01	1	4.48354D-06	1.05500D+00	0.0	0.0	0.0				
1041	8.60338D+01	1	4.48354D-06	1.05500D+00	0.0	0.0	0.0	1	8.08620D-06		
1041	8.60338D+01	1	2.55952D-07	1.05500D+00	0.0	0.0	0.0	2	3.55009D-07	25 3.08823D-01	25 1.57686D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES				
1041	8.6034D+01	1 7.57859D+01	3 8.00441D+01	5 8.16429D+01	11 8.41706D+01	13 8.50962D+01
		15 8.59093D+01	17 8.66974D+01	19 8.77201D+01	21 8.94318D+01	24 1.94837D+02
		25 1.95538D+02				
1042	8.60676D+01	1 2.91185D-06	1.05500D+00	0.0	0.0	0.0
1042	8.60676D+01	1 2.91185D-06	1.05500D+00	0.0	0.0	1 7.52559D-06
1042	8.60676D-01	1 2.45573D-07	1.05500D+00	0.0	0.0	2 3.00770D-07 25 3.10143D-01 25 1.58610D-01
1042	8.6068D+01	1 7.57856D+01	3 8.00434D+01	5 8.16421D+01	11 8.41696D+01	13 8.50952D+01
		15 8.59090D+01	17 8.66992D+01	19 8.77259D+01	21 8.94409D+01	24 1.94573D+02
		25 1.95228D+02				
1043	8.61015D+01	1 2.42503D-06	1.05500D+00	0.0	0.0	0.0
1043	8.61015D+01	1 2.42503D-06	1.05500D+00	0.0	0.0	1 7.27678D-06
1043	8.61015D+01	1 2.36925D-07	1.05500D+00	0.0	0.0	2 2.67896D-07 25 3.12981D-01 25 1.60316D-01
1043	8.6101D+01	1 7.57854D+01	3 8.00427D+01	5 8.16413D+01	11 8.41686D+01	13 8.50943D+01
		15 8.59087D+01	17 8.67011D+01	19 8.77317D+01	21 8.94498D+01	24 1.94301D+02
		25 1.94915D+02				
1044	8.61387D+01	1 2.79186D-06	1.05500D+00	0.0	0.0	0.0
1044	8.61387D+01	1 2.79186D-06	1.05500D+00	0.0	0.0	1 7.67064D-06
1044	8.61387D+01	1 2.73810D-07	1.05500D+00	0.0	0.0	2 2.75242D-07 25 3.46921D-01 25 1.77986D-01
1044	8.6139D+01	1 7.57851D+01	3 8.00420D+01	5 8.16404D+01	11 8.41674D+01	13 8.50932D+01
		15 8.59084D+01	17 8.67032D+01	19 8.77380D+01	21 8.94596D+01	24 1.93994D+02
		25 1.94568D+02				
1045	8.61796D+01	1 3.38749D-06	1.05500D+00	0.0	0.0	0.0
1045	8.61796D+01	1 3.38749D-06	1.05500D+00	0.0	0.0	1 8.76308D-06
1045	8.61796D+01	1 4.88199D-07	1.05500D+00	0.0	0.0	2 3.58537D-07 25 3.85580D-01 25 1.98173D-01
1045	8.6180D+01	1 7.57848D+01	3 8.00412D+01	5 8.16394D+01	11 8.41662D+01	13 8.50920D+01
		15 8.59081D+01	17 8.67055D+01	19 8.77450D+01	21 8.94701D+01	24 1.93647D+02
		25 1.94182D+02				
1046	8.62246D+01	1 4.12549D-06	1.05500D+00	0.0	0.0	0.0
1046	8.62246D+01	1 4.12549D-06	1.05500D+00	0.0	0.0	1 9.87253D-06
1046	8.62246D+01	1 7.54731D-07	1.05500D+00	0.0	0.0	2 4.71061D-07 25 4.29142D-01 25 2.21000D-01
1046	8.6225D+01	1 7.57845D+01	3 8.00403D+01	5 8.16383D+01	11 8.41649D+01	13 8.50908D+01
		15 8.59078D+01	17 8.67080D+01	19 8.77527D+01	21 8.94815D+01	24 1.93257D+02
		25 1.93753D+02				
1047	8.62741D+01	1 5.03093D-06	1.05500D+00	0.0	0.0	0.0
1047	8.62741D+01	1 5.03093D-06	1.05500D+00	0.0	0.0	1 1.10062D-05
1047	8.62741D+01	1 1.02194D-06	1.05500D+00	0.0	0.0	2 5.77450D-07 25 4.77971D-01 25 2.46691D-01
1047	8.6274D+01	1 7.57841D+01	3 8.00394D+01	5 8.16372D+01	11 8.41634D+01	13 8.50894D+01
		15 8.59074D+01	17 8.67109D+01	19 8.77611D+01	21 8.94937D+01	24 1.92818D+02
		25 1.93275D+02				
1048	8.63286D+01	1 6.14147D-06	1.05500D+00	0.0	0.0	0.0
1048	8.63286D+01	1 6.14147D-06	1.05500D+00	0.0	0.0	1 1.21718D-05
1048	8.63286D+01	1 1.34110D-06	1.05500D+00	0.0	0.0	2 6.93319D-07 25 5.32573D-01 25 2.75552D-01
1048	8.6329D+01	1 7.57837D+01	3 8.00383D+01	5 8.16359D+01	11 8.41617D+01	13 8.50879D+01
		15 8.59071D+01	17 8.67140D+01	19 8.77704D+01	21 8.95068D+01	24 1.92324D+02
		25 1.92742D+02				
1049	8.63885D+01	1 7.49573D-06	1.05500D+00	0.0	0.0	0.0
1049	8.63885D+01	1 7.49573D-06	1.05500D+00	0.0	0.0	1 1.32827D-05
1049	8.63885D+01	1 1.68692D-06	1.05500D+00	0.0	0.0	2 8.05817D-07 25 5.93220D-01 25 3.07779D-01
1049	8.6389D+01	1 7.57833D+01	3 8.00371D+01	5 8.16345D+01	11 8.41600D+01	13 8.50862D+01
		15 8.59068D+01	17 8.67176D+01	19 8.77805D+01	21 8.95209D+01	24 1.91771D+02
		25 1.92149D+02				
1050	8.64544D+01	1 9.11407D-06	1.05500D+00	0.0	0.0	0.0
1050	8.64544D+01	1 9.11407D-06	1.05500D+00	0.0	0.0	1 1.44181D-05
1050	8.64544D+01	1 2.06254D-06	1.05500D+00	0.0	0.0	2 9.35524D-07 25 6.60857D-01 25 3.43929D-01
1050	8.6454D+01	1 7.57829D+01	3 8.00359D+01	5 8.16329D+01	11 8.41580D+01	13 8.50844D+01

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                    15 8.590650+01   17 8.672150+01   19 8.779170+01   21 8.953580+01   24 1.911500+02
                    25 1.914880+02
1051 6.652690+01  1 1.102190-05 1.055000+00 0.0          0.0          0.0
1051 8.652690+01  2 1.092080-06 1.055000+00 0.0          0.0          0.0          1 1.605900-05
1051 8.652690+01  1 1.533110-06 1.055000+00 0.0          0.0          0.0          2 3.306190-07   25 7.356500-01   25 3.641750-01
  1051     8.6527D+01   1 7.578240+01   3 8.003450+01   5 8.163120+01   11 8.415590+01   13 8.508250+01
                    15 8.590620+01   17 8.672590+01   19 8.780390+01   21 8.955150+01   24 1.904540+02
                    25 1.907530+02
1052 8.660670+01  1 1.176850-04 1.055000+00 0.0          0.0          0.0
1052 8.660670+01  3 1.663500-06 1.055000+00 0.0          0.0          0.0          1 3.513680-05
1052 8.660670+01  2 1.640280-06 1.055000+00 0.0          0.0          0.0          2 2.584860-06   25 8.783780-01   25 4.604800-01
  1052     8.6607D+01   1 7.578190+01   3 8.003300+01   5 8.162930+01   11 8.415350+01   13 8.508040+01
                    15 8.590590+01   17 8.673080+01   19 8.781730+01   21 8.956800+01   24 1.896630+02
                    25 1.898740+02
1053 8.669440+01  1 9.039370-05 1.055000+00 0.0          0.0          0.0
1053 8.669440+01  2 9.685700-06 1.055000+00 0.0          0.0          0.0          1 3.772830-05
1053 8.669440+01  2 1.541400-06 1.055000+00 0.0          0.0          0.0          2 2.712410-06   25 1.019180+00   25 5.367660-01
  1053     8.6694D+01   1 7.578130+01   3 8.003130+01   5 8.162730+01   11 8.415100+01   13 8.507810+01
                    15 8.590570+01   17 8.673630+01   19 8.783200+01   21 8.958530+01   24 1.887450+02
                    25 1.888550+02
1054 8.679090+01  1 7.095870-05 1.055000+00 0.0          0.0          0.0
1054 8.679090+01  2 7.492010-06 1.055000+00 0.0          0.0          0.0          1 3.909440-05
1054 8.679090+01  2 1.493260-06 1.055000+00 0.0          0.0          0.0          2 2.265790-06   25 1.161590+00   25 6.150690-01
  1054     8.6791D+01   1 7.578070+01   3 8.002950+01   5 8.162510+01   11 8.414820+01   13 8.507560+01
                    15 8.590560+01   17 8.674240+01   19 8.784790+01   21 8.960300+01   24 1.876800+02
                    25 1.876940+02
1055 8.689710+01  1 7.283880-05 1.055000+00 0.0          0.0          0.0
1055 8.689710+01  2 8.289990-06 1.055000+00 0.0          0.0          0.0          1 [illegible]142170-05
1055 8.689710+01  2 1.758350-06 1.055000+00 0.0          0.0          0.0          2 [illegible]304770-06   25 1.315110+00   25 7.006710-01
  1055     8.6897D+01   1 7.578000+01   3 8.002750+01   5 8.162270+01   11 8.414520[illegible]   13 8.507290+01
                    15 8.590550+01   17 8.674920+01   19 8.786540+01   21 8.962120[illegible]   24 1.864570+02
                    25 1.863780+02
1056 8.701380+01  1 8.240420-05 1.055000+00 0.0          0.0          0.0
1056 8.701380+01  3 1.624820-06 1.055000+00 0.0          0.0          0.0          1 [illegible]180-05
1056 8.701380+01  2 2.218210-06 1.055000+00 0.0          0.0          0.0          2 [illegible]970-06   25 1.483710+00   25 7.960760-01
  1056     8.7014D+01   1 7.577920+01   3 8.002540+01   5 8.162000+01   11 8.414190+[illegible]   [illegible] 8.507010+01
                    15 8.590560+01   17 8.675690+01   19 8.788430+01   21 8.963960+[illegible]   24 1.850590+02
                    25 1.848950+02
1057 8.714230+01  1 1.209610-04 1.055000+00 0.0          0.0          0.0
1057 8.714230+01  3 2.947050-05 1.055000+00 0.0          0.0          0.0          1 4.[illegible]6868D-05
1057 8.714230+01  2 3.481300-05 1.055000+00 0.0          0.0          0.0          2 2.[illegible]71520-06   25 1.678380+00   25 9.077460-01
  1057     8.7142D+01   1 7.577840+01   3 8.002300+01   5 8.161710+01   11 8.413830+01   13 8.506700+01
                    15 8.590530+01   17 8.676540+01   19 8.790470+01   21 8.965770+01   24 1.836690+02
                    25 1.832160+02
1058 8.727670+01  1 1.247950-04 1.055000+00 0.0          0.0          0.0
1058 8.727670+01  3 3.206430-05 1.055000+00 0.0          0.0          0.0          1 4.988370-05
1058 8.727670+01  2 3.728850-06 1.055000+00 0.0          0.0          0.0          2 2.798470-06   25 1.801770+00   25 9.834080-01
  1058     8.7277D+01   1 7.577750+01   3 8.002060+01   5 8.161420+01   11 8.413150+01   13 8.506390+01
                    15 8.590630+01   17 8.677450+01   19 8.792570+01   21 8.967450+01   24 1.817530+02
                    25 1.814150+02
1059 8.741110+01  1 1.173770-04 1.055000+00 0.0          0.0          0.0
1059 8.741110+01  3 3.015320-05 1.055000+00 0.0          0.0          0.0          1 4.599040-05
1059 8.741110+01  2 3.487470-06 1.055000+00 0.0          0.0          0.0          2 2.626440-06   25 1.843750+00   25 1.016320+00
1059 8.740230+01  1 3.196280-05 1.055000+00 0.0          0.0          0.0
1059 8.740230+01  2 4.885160-06 1.055000+00 0.0          0.0          0.0          1 4.332130-06
1059 8.740230+01  1 5.064500-06 1.055000+00 0.0          0.0          0.0          2 6.920060-07   25 1.734350+00   25 9.560130-01
  1059     8.7402D+01   1 7.577670+01   3 8.001830+01   5 8.161140+01   11 8.413110+01   13 8.506130+01
                    15 8.590690+01   17 8.678320+01   19 8.794490+01   21 8.968820+01   24 1.801010+02
                    25 1.796800+02
1060 8.752800+01  1 4.524220-05 1.055000+00 0.0          0.0          0.0
1060 8.752800+01  2 5.389960-06 1.055000+00 0.0          0.0          0.0          1 3.275500-05
1060 8.752800+01  1 9.268780-06 1.055000+00 0.0          0.0          0.0          2 1.142910-06   25 1.754230+00   25 9.763050-01
  1060     8.7528D+01   1 7.577590+01   3 8.001610+01   5 8.160870+01   11 8.412780+01   13 8.505830+01
                    15 8.590760+01   17 8.679190+01   19 8.796370+01   21 8.970000+01   24 1.784120+02
                    25 1.779260+02
                  1 7.159730-04 1.055000+00 0.0          0.0          0.0
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1061 8.76536D+01    4 1 9.78329D-06 1.05500D+00 0.0                0.0          0.0                1 1 1.10450D-04
1061 8.76536D+01    3 2 9.82280D-06 1.05500D+00 0.0                0.0          0.0                2 1 4.10960D-05
1061 8.76536D+01    2 2 6.84750D-06 1.05500D+00 0.0                0.0          0.0                3 2.25406D-06   25 2.00544D+00   25 1.12712D+00
1061 8.76339D+01    1 3 3.80310D-05 1.05500D+00 0.0                0.0          0.0
1061 8.76339D+01    2 4 9.39968D-06 1.05500D+00 0.0                0.0          0.0                1 5.64745D-06
1061 8.76339D+01    1 4 3.20569D-05 1.05500D+00 0.0                0.0          0.0                2 5.74988D-07   25 1.70260D+00   25 9.56915D-01
     1061    8.7634D+01     1 7.57.  +01    3 8.00142D+01    5 8.16064D+01   11 8.41250D+01   13 8.50560D+01
                            15 8.59  +01   17 8.67993D+01   19 8.79791D+01   21 8.97085D+01   24 1.76909D+02
                            25 1.76  3D+02

1062 8.77398D+01    1 2.63087D-04 1.05500D+00 0.0                0.0          0.0
1062 8.77398D+01    3 4.16031D-06 1.05500D+00 0.0                0.0          0.0                1 8.08380D-05
1062 8.77398D+01    2 5.58920D-06 1.05500D+00 0.0                0.0          0.0                2 5.92593D-06   25 1.82256D+00   25 1.03423D+00
1062 8.77312D+01    1 2.56974D-05 1.05500D+00 0.0                0.0          0.0
1062 8.77312D+01    2 3.36041D-06 1.05500D+00 0.0                0.0          0.0                1 3.84017D-06
1062 8.77312D+01    1 3.20770D-06 1.05500D+00 0.0                0.0          0.0                2 5.18741D-07   25 1.68474D+00   25 9.56025D-01
     1062    8.7731D+01     1 7.57745D+01    3 8.00125D+01    5 8.16044D+01   11 8.41224D+01   13 8.50540D+01
                            15 8.59091D+01   17 8.68062D+01   19 8.79930D+01   21 8.97151D+01   24 1.75413D+02
                            25 1.74539D+02

1063 8.78285D+01    1 1.09345D-04 1.05500D+00 0.0                0.0          0.0
1063 8.78285D+01    3 1.41060D-06 1.05500D+00 0.0                0.0          0.0                1 5.90879D-05
1063 8.78285D+01    2 2.32428D-06 1.05500D+00 0.0                0.0          0.0                2 2.77516D-06   25 1.74605D+00   25 1.00188D+00
1063 8.78236D+01    1 1.44077D-05 1.05500D+00 0.0                0.0          0.0
1063 8.78236D+01    2 1.78652D-06 1.05500D+00 0.0                0.0          0.0                1 2.76359D-06
1063 8.78236D+01    1 1.81060D-06 1.05500D+00 0.0                0.0          0.0                2 3.01989D-07   25 1.66438D+00   25 9.58585D-01
     1063    8.7824D+01     1 7.57739D+01    3 8.00108D+01    5 8.16024D+01   11 8.41208D+01   13 8.50522D+01
                            15 8.59099D+01   17 8.68127D+01   19 8.80059D+01   21 8.97204D+01   24 1.73900D+02
                            25 1.72874D+02

1064 8.79118D+01    1 7.01841D-05 1.05500D+00 0.0                0.0          0.0
1064 8.79118D+01    2 7.24962D-06 1.05500D+00 0.0                0.0          0.0                1 4.70496D-05
1064 8.79118D+01    2 3.77790D-06 1.05500D+00 0.0                0.0          0.0                2 2.49755D-06   25 1.63744D+00   25 9.47185D-01
     1064    8.7912D+01     1 7.57734D+01    3 8.00094D+01    5 8.16006D+01   11 8.41178D+01   13 8.50505D+01
                            15 8.59107D+01   17 8.68190D+01   19 8.80179D+01   21 8.97244D+01   24 1.72387D+02
                            25 1.71237D+02

1065 8.80000D+01    1 5.60804D-05 1.05500D+00 0.0                0.0          0.0
1065 8.80000D+01    2 5.05054D-06 1.05500D+00 0.0                0.0          0.0                1 4.02679D-05
1065 8.80000D+01    1 8.81575D-06 1.05500D+00 0.0                0.0          0.0                2 1.50450D-06   25 1.67229D+00   25 9.76595D-01
     1065    8.8000D+01     1 7.57728D+01    3 8.00079D+01    5 8.15988D+01   11 8.41156D+01   13 8.50488D+01
                            15 8.59116D+01   17 8.68253D+01   19 8.80297D+01   21 8.97275D+01   24 1.70819D+02
                            25 1.69565D+02
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HEATING6 02/12/83
W9XNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ O
20.58.31 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1065 TIME STEPS, TIME = 8.800000D+01

GROSS GRID		1
		I
FINE GRID		1
	DISTANCE	0.0
1	1	0.0	75177
	2	0.03	77189
2	3	0.06	80101
	4	0.08	80180
3	5	0.10	81160
	6	0.57	82103
	7	1.04	82146
	8	1.51	82189
	9	1.98	83130
	10	2.45	83171
4	11	2.92	84112
	12	3.14	84159
5	13	3.35	85105
	14	3.57	85148
6	15	3.79	85191
	16	4.02	86135
7	17	4.23	86183
	18	4.45	87137
8	19	4.67	88103
	20	4.89	88182
9	21	5.10	89173
	22	5.18	119112
	23	5.25	146182
10	24	5.32	170182
11	25	5.35	169156

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 8.822122500-02

ELAPSED CPU TIME IS 12.91 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.708190+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.577280+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
1066	8.80882D+01	1	7.11818D-05	1.05500D+00	0.0	0.0	0.0					
1066	8.80882D+01	2	7.28680D-06	1.05500D+00	0.0	0.0	0.0	1	3.91127D-05			
1066	8.80882D+01	2	1.12102D-06	1.05500D+00	0.0	0.0	0.0	2	2.04131D-06	25	1.71182D+00	25 1.00954D+00
1066	8.80830D+01	1	1.36262D-05	1.05500D+00	0.0	0.0	0.0					
1066	8.80830D+01	2	1.52593D-06	1.05500D+00	0.0	0.0	0.0	1	2.50842D-06			
1066	8.80830D+01	1	1.46929D-06	1.05500D+00	0.0	0.0	0.0	2	2.77114D-07	25	1.61745D+00	25 9.53883D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1066	8.8083D+01	1 7.57723D+01	3 8.00065D+01	5 8.15971D+01	11 8.41135D+01	13 8.50472D+01	
		15 8.59125D+01	17 8.68313D+01	19 8.80404D+01	21 8.97296D+01	24 1.69302D+02	
		25 1.67947D+02					
1067	8.81660D+01	1 3.40151D-05	1.05500D+00	0.0	0.0	0.0	
1067	8.81660D+01	2 2.86455D-06	1.05500D+00	0.0	0.0	0.0	1 3.07182D-05
1067	8.81660D+01	1 5.18989D-06	1.05500D+00	0.0	0.0	0.0	2 9.33431D-07 25 1.64060D+00 25 9.76852D-01
1067	8.8166D+01	1 7.57718D+01	3 8.00051D+01	5 8.15954D+01	11 8.41115D+01	13 8.50457D+01	
		15 8.59135D+01	17 8.68372D+01	19 8.80510D+01	21 8.97307D+01	24 1.67747D+02	
		25 1.66307D+02					
1068	8.82491D+01	1 3.83541D-05	1.05500D+00	0.0	0.0	0.0	
1068	8.82491D+01	2 3.64236D-06	1.05500D+00	0.0	0.0	0.0	1 2.84856D-05
1068	8.82491D+01	1 5.33041D-06	1.05500D+00	0.0	0.0	0.0	2 9.58039D-07 25 1.66420D+00 25 1.00068D+00
1068	8.82449D+01	1 1.05548D-05	1.05500D+00	0.0	0.0	0.0	
1068	8.82449D+01	2 1.15438D-06	1.05500D+00	0.0	0.0	0.0	1 1.80624D-06
1068	8.82449D+01	1 9.95646D-07	1.05500D+00	0.0	0.0	0.0	2 2.05817D-07 25 1.58512D+00 25 9.53134D-01
1068	8.8245D+01	1 7.57713D+01	3 8.00038D+01	5 8.15939D+01	11 8.41095D+01	13 8.50443D+01	
		15 8.59144D+01	17 8.68429D+01	19 8.80607D+01	21 8.97309D+01	24 1.66242D+02	
		25 1.64721D+02					
1069	8.83237D+01	1 2.21614D-05	1.05500D+00	0.0	0.0	0.0	
1069	8.83237D+01	2 1.85369D-06	1.05500D+00	0.0	0.0	0.0	1 2.32431D-05
1069	8.83237D+01	1 3.23088D-06	1.05500D+00	0.0	0.0	0.0	2 6.07489D-07 25 1.60106D+00 25 9.71982D-01
1069	8.8324D+01	1 7.57709D+01	3 8.00026D+01	5 8.15923D+01	11 8.41077D+01	13 8.50430D+01	
		15 8.59154D+01	17 8.68485D+01	19 8.80702D+01	21 8.97303D+01	24 1.64710D+02	
		25 1.63120D+02					
1070	8.84025D+01	1 2.60711D-05	1.05500D+00	0.0	0.0	0.0	
1070	8.84025D+01	2 2.41633D-06	1.05500D+00	0.0	0.0	0.0	1 2.16827D-05
1070	8.84025D+01	1 3.52762D-06	1.05500D+00	0.0	0.0	0.0	2 6.65308D-07 25 1.61781D+00 25 9.91791D-01
1070	8.8402D+01	1 7.57704D+01	3 8.00013D+01	5 8.15908D+01	11 8.41058D+01	13 8.50416D+01	
		15 8.59165D+01	17 8.68542D+01	19 8.80795D+01	21 8.97289D+01	24 1.63158D+02	
		25 1.61503D+02					
1071	8.84813D+01	1 2.58456D-05	1.05500D+00	0.0	0.0	0.0	
1071	8.84813D+01	2 2.43715D-06	1.05500D+00	0.0	0.0	0.0	1 2.02112D-05
1071	8.84813D+01	1 3.33204D-06	1.05500D+00	0.0	0.0	0.0	2 6.37422D-07 25 1.63393D+00 25 1.01171D+00
1071	8.84765D+01	1 1.15202D-05	1.05500D+00	0.0	0.0	0.0	
1071	8.84765D+01	2 1.17324D-06	1.05500D+00	0.0	0.0	0.0	1 2.13791D-06
1071	8.84765D+01	1 1.14831D-06	1.05500D+00	0.0	0.0	0.0	2 2.43595D-07 25 1.54021D+00 25 9.53676D-01
1071	8.8476D+01	1 7.57699D+01	3 8.00001D+01	5 8.15893D+01	11 8.41041D+01	13 8.50404D+01	
		15 8.59175D+01	17 8.68595D+01	19 8.80879D+01	21 8.97267D+01	24 1.61681D+02	
		25 1.59962D+02					
1072	8.85505D+01	1 1.95775D-05	1.05500D+00	0.0	0.0	0.0	
1072	8.85505D+01	2 1.65771D-06	1.05500D+00	0.0	0.0	0.0	1 1.74943D-05
1072	8.85505D+01	1 2.50090D-05	1.05500D+00	0.0	0.0	0.0	2 5.06811D-07 25 1.55387D+00 25 9.71396D-01
1072	8.85500D+01	1 7.57695D+01	3 7.99989D+01	5 8.15879D+01	11 8.41024D+01	13 8.50392D+01	
		15 8.59186D+01	17 8.68647D+01	19 8.80961D+01	21 8.97238D+01	24 1.60186D+02	
		25 1.58408D+02					
1073	8.86245D+01	1 5.29758D-05	1.05500D+00	0.0	0.0	0.0	
1073	8.86245D+01	2 5.03503D-06	1.05500D+00	0.0	0.0	0.0	1 2.24411D-05
1073	8.86245D+01	1 5.71889D-06	1.05500D+00	0.0	0.0	0.0	2 1.19056D-06 25 1.58446D+00 25 1.00023D+00
1073	8.86208D+01	1 8.84715D-06	1.05500D+00	0.0	0.0	0.0	
1073	8.86208D+01	1 8.84715D-06	1.05500D+00	0.0	0.0	0.0	1 1.80902D-06
1073	8.86208D+01	1 1.41273D-06	1.05500D+00	0.0	0.0	0.0	2 4.75985D-07 25 1.50943D+00 25 9.52913D-01
1073	8.8621D+01	1 7.57691D+01	3 7.99978D+01	5 8.15866D+01	11 8.41008D+01	13 8.50382D+01	

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                    15 8.591960D+01   17 8.686970D+01   19 8.810370D+01   21 8.972040D+01   24 1.587470D+02
                    25 1.568990D+02
1074 8.86911D+01    1 2.239080D-05 1.055000D+00 0.0        0.0        0.0
1074 8.86911D+01    2 1.942300D-06 1.055000D+00 0.0        0.0        0.0                1 1.791770D-05
1074 8.86911D+01    1 2.728960D-06 1.055000D+00 0.0        0.0        0.0                2 5.927760D-07   25 1.525870D+00   25 9.725200D-01
      1074    8.8691D+01    1 7.576870D+01    3 7.999670D+01   5 8.158530D+01   11 8.409920D+01   13 8.503710D+01
                    15 8.592070D+01   17 8.687470D+01   19 8.811100D+01   21 8.971630D+01   24 1.572870D+02
                    25 1.553730D+02
1075 8.87614D+01    1 2.192830D-05 1.055000D+00 0.0        0.0        0.0
1075 8.87614D+01    2 1.858620D-06 1.055000D+00 0.0        0.0        0.0                1 1.700140D-05
1075 8.87614D+01    1 2.606510D-06 1.055000D+00 0.0        0.0        0.0                2 5.645950D-07   25 1.541350D+00   25 9.920330D-01
      1075    8.8761D+01    1 7.576830D+01    3 7.999570D+01   5 8.158400D+01   11 8.409760D+01   13 8.503610D+01
                    15 8.592180D+01   17 8.687970D+01   19 8.811820D+01   21 8.971150D+01   24 1.558090D+02
                    25 1.538320D+02
1076 8.88317D+01    1 2.094570D-05 1.055000D+00 0.0        0.0        0.0
1076 8.88317D+01    2 1.760480D-06 1.055000D+00 0.0        0.0        0.0                1 1.622250D-05
1076 8.88317D+01    1 2.457870D-06 1.055000D+00 0.0        0.0        0.0                2 5.319810D-07   25 1.555860D+00   25 1.011410D+00
1076 8.88274D+01    1 9.257540D-06 1.055000D+00 0.0        0.0        0.0
1076 8.88274D+01    1 9.257540D-06 1.055000D+00 0.0        0.0        0.0                1 1.895200D-06
1076 8.88274D+01    1 1.404290D-06 1.055000D+00 0.0        0.0        0.0                2 4.840400D-07   25 1.466580D+00   25 9.533690D-01
      1076    8.8827D+01    1 7.576790D+01    3 7.999460D+01   5 8.158280D+01   11 8.409620D+01   13 8.503510D+01
                    15 8.592290D+01   17 8.688440D+01   19 8.812460D+01   21 8.970630D+01   24 1.544030D+02
                    25 1.523650D+02
1077 8.88934D+01    1 1.030440D-05 1.055000D+00 0.0        0.0        0.0
1077 8.88934D+01    2 1.064070D-06 1.055000D+00 0.0        0.0        0.0                1 1.327030D-05
1077 8.88934D+01    1 1.407800D-06 1.055000D+00 0.0        0.0        0.0                2 3.155260D-07   25 1.475700D+00   25 9.685260D-01
      1077    8.8893D+01    1 7.576760D+01    3 7.999370D+01   5 8.158160D+01   11 8.409480D+01   13 8.503420D+01
                    15 8.592400D+01   17 8.688900D+01   19 8.813090D+01   21 8.970060D+01   24 1.529820D+02
                    25 1.508890D+02
1078 8.89594D+01    1 1.399320D-05 1.055000D+00 0.0        0.0        0.0
1078 8.89594D+01    2 1.269620D-06 1.055000D+00 0.0        0.0        0.0                1 1.297730D-05
1078 8.89594D+01    1 1.599250D-06 1.055000D+00 0.0        0.0        0.0                2 3.660850D-07   25 1.486260D+00   25 9.850000D-01
      1078    8.8959D+01    1 7.576720D+01    3 7.999270D+01   5 8.158040D+01   11 8.409340D+01   13 8.503330D+01
                    15 8.592520D+01   17 8.689360D+01   19 8.813700D+01   21 8.969430D+01   24 1.515480D+02
                    25 1.494030D+02
1079 8.90255D+01    1 1.769580D-05 1.055000D+00 0.0        0.0        0.0
1079 8.90255D+01    2 1.510040D-06 1.055000D+00 0.0        0.0        0.0                1 1.316090D-05
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1079 8.90220D+01    1 6.998320D-06 1.055000D+00 0.0        0.0        0.0
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1079 8.90220D+01    1 1.068630D-06 1.055000D+00 0.0        0.0        0.0                2 3.745280D-07   25 1.423360D+00   25 9.526950D-01
      1079    8.9022D+01    1 7.576690D+01    3 7.999170D+01   5 8.157930D+01   11 8.409200D+01   13 8.503250D+01
                    15 8.592630D+01   17 8.689790D+01   19 8.814250D+01   21 8.968780D+01   24 1.501780D+02
                    25 1.479800D+02
1080 8.90845D+01    1 1.344650D-05 1.055000D+00 0.0        0.0        0.0
1080 8.90845D+01    2 1.256880D-06 1.055000D+00 0.0        0.0        0.0                1 1.193130D-05
1080 8.90845D+01    1 1.459750D-06 1.055000D+00 0.0        0.0        0.0                2 3.551760D-07   25 1.433860D+00   25 9.689550D-01
      1080    8.9084D+01    1 7.576650D+01    3 7.999080D+01   5 8.157820D+01   11 8.409070D+01   13 8.503170D+01
                    15 8.592740D+01   17 8.690220D+01   19 8.814790D+01   21 8.968080D+01   24 1.487950D+02
                    25 1.465460D+02
1081 8.91470D+01    1 1.331570D-05 1.055000D+00 0.0        0.0        0.0
1081 8.91470D+01    2 1.229880D-06 1.055000D+00 0.0        0.0        0.0                1 1.152110D-05
1081 8.91470D+01    1 1.343050D-06 1.055000D+00 0.0        0.0        0.0                2 3.324790D-07   25 1.444060D+00   25 9.853990D-0.
      1081    8.9147D+01    1 7.576620D+01    3 7.998990D+01   5 8.157720D+01   11 8.408950D+01   13 8.503090D+01
                    15 8.592860D+01   17 8.690650D+01   19 8.815300D+01   21 8.967330D+01   24 1.474010D+02
                    25 1.451020D+02
1082 8.92096D+01    1 1.301330D-05 1.055000D+00 0.0        0.0        0.0
1082 8.92096D+01    2 1.196830D-06 1.055000D+00 0.0        0.0        0.0                1 1.118580D-05
1082 8.92096D+01    1 1.337530D-06 1.055000D+00 0.0        0.0        0.0                2 3.290320D-07   25 1.453870D+00   25 1.001960D+00
1082 8.92063D+01    1 6.654800D-06 1.055000D+00 0.0        0.0        0.0
1082 8.92063D+01    1 6.654800D-06 1.055000D+00 0.0        0.0        0.0                1 1.450430D-06
1082 8.92063D+01    1 1.032060D-06 1.055000D+00 0.0        0.0        0.0                2 3.652480D-07   25 1.382410D+00   25 9.527150D-01
      1082    8.9206D+01    1 7.576590D+01    3 7.998910D+01   5 8.157610D+01   11 8.408830D+01   13 8.503020D+01
                    15 8.592970D+01   17 8.691060D+01   19 8.815770D+01   21 8.966560D+01   24 1.460690D+02
                    25 1.437200D+02
1083 8.92656D+01    1 6.811740D-06 1.055000D+00 0.0        0.0        0.0
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1083 8.92656D+01     1 5.81714D-06 1.05500D+00 0.0          0.0          0.0          1 9.09063D-06
1083 8.92656D+01     1 1.62531D-06 1.05500D+00 0.0          0.0          0.0          2 7.18773D-07   25 1.38893D+00   25 9.66417D-01
  1083      8.9266D+01     1 7.57656D+01     3 7.99882D+01     5 8.15751D+01    11 8.40871D+01    13 8.50295D+01
                           15 8.59308D+01    17 8.69146D+01    19 8.81622D+01    21 8.96576D+01    24 1.44726D+02
                           25 1.42331D+02
1084 8.93249D+01     1 9.19760D-06 1.05500D+00 0.0          0.0          0.0
1084 8.93249D+01     1 9.19760D-06 1.05500D+00 0.0          0.0          0.0          1 8.95136D-06
1084 8.93249D+01     1 1.87095D-06 1.05500D+00 0.0          0.0          0.0          2 7.87680D-07   25 1.39647D+00   25 9.8 .46D-01
  1084      8.9325D+01     1 7.57652D+01     3 7.99874D+01     5 8.15742D+01    11 8.40859D+01    13 8.50288D+01
                           15 8.59319D+01    17 8.69186D+01    19 8.81665D+01    21 8.96490D+01    24 1.43374D+02
                           25 1.40934D+02
1085 8.93842D+01     1 1.03815D-05 1.05500D+00 0.0          0.0          0.0
1085 8.93842D+01     2 9.81234D-07 1.05500D+00 0.0          0.0          0.0          1 9.32874D-06
1085 8.93842D+01     1 1.00351D-06 1.05500D+00 0.0          0.0          0.0          2 2.63356D-07   25 1.40449D+00   25 9.96560D-01
  1085      8.9384D+01     1 7.57650D+01     3 7.99866D+01     5 8.15732D+01    11 8.40848D+01    13 8.50281D+01
                           15 8.59331D+01    17 8.69225D+01    19 8.81707D+01    21 8.96400D+01    24 1.42013D+02
                           25 1.39530D+02
1086 8.94435D+01     1 9.92043D-06 1.05500D+00 0.0          0.0          0.0
1086 8.94435D+01     1 9.92043D-06 1.05500D+00 0.0          0.0          0.0          1 8.64020D-06
1086 8.94435D+01     1 1.95097D-06 1.05500D+00 0.0          0.0          0.0          2 8.01787D-07   25 1.41218D+00   25 1.01210D+00
1086 8.94398D+01     1 6.81527D-06 1.05500D+00 0.0          0.0          0.0
1086 8.94398D+01     1 6.81527D-06 1.05500D+00 0.0          0.0          0.0          1 1.54684D-06
1086 8.94398D+01     1 1.01000D-06 1.05500D+00 0.0          0.0          0.0          2 3.74930D-07   25 1.32969D+00   25 9.52381D-01
  1086      8.9440D+01     1 7.57647D+01     3 7.99858D+01     5 8.15723D+01    11 8.40837D+01    13 8.50275D+01
                           15 8.59342D+01    17 8.69262D+01    19 8.81744D+01    21 8.96311D+01    24 1.40728D+02
                           25 1.38200D+02
1087 8.94955D+01     1 4.58803D-06 1.05500D+00 0.0          0.0          0.0
1087 8.94955D+01     1 4.58803D-06 1.05500D+00 0.0          0.0          0.0          1 7.33887D-06
1087 8.94955D+01     1 1.13180D-06 1.05500D+00 0.0          0.0          0.0          2 5.18363D-07   25 1.32456D+00   25 9.65677D-01
  1087      8.9495D+01     1 7.57644D+01     3 7.99851D+01     5 8.15714D+01    11    .98260+01    13 8.50270+01
                           15 8.59353D+01    17 8.69298D+01    19 8.81780D+01    21 8.96219D+01    24 1.39435D+02
                           25 1.36865D+02
1088 8.95511D+01     1 1.24766D-05 1.05500D+00 0.0          0.0          0.0
1088 8.95511D+01     2 1.02062D-06 1.05500D+00 0.0          0.0          0.0          1 6.96193D-06
1088 8.95511D+01     1 6.54249D-07 1.05500D+00 0.0          0.0          0.0          2 2.09622D-07   25 1.32860D+00   25 9.70735D-01
  1088      8.9551D+01     1 7.57641D+01     3 7.99843D+01     5 8.15705D+01    11 8.40816D+01    13 8.50264D+01
                           15 8.59364D+01    17 8.69335D+01    19 8.81813D+01    21 8.96122D+01    24 1.38136D+02
                           25 1.35537D+02
1089 8.96068D+01     1 2.91556D-05 1.05500D+00 0.0          0.0          0.0
1089 8.96068D+01     2 2.27085D-06 1.05500D+00 0.0          0.0          0.0          1 9.17011D-06
1089 8.96068D+01     1 1.90911D-06 1.05500D+00 0.0          0.0          0.0          2 5.75 50D-07   25 1.31156D+00   25 9.67680D-01
  1089      8.9607D+01     1 7.57639D+01     3 7.99836D+01     5 8.15696D+01    11 8.40806D+01    13 8.50259D+01
                           15 8.59376D+01    17 8.69370D+01    19 8.81845D+01    21 8.96021D+01    24 1.36839D+02
                           25 1.34225D+02
1090 8.96624D+01     1 1.20300D-05 1.05500D+00 0.0          0.0          0.0
1090 8.96624D+01     2 9.73980D-07 1.05500D+00 0.0          0.0          0.0          1 6.58790D-06
1090 8.96624D+01     1 8.39988D-07 1.05500D+00 0.0          0.0          0.0          2 2.54068D-07   25 1.30399D+00   25 9.71498D-01
  1090      8.9662D+01     1 7.57636D+01     3 7.99829D+01     5 8.15687D+01    11 8.40796D+01    13 8.50253D+01
                           15 8.59387D+01    17 8.69406D+01    19 8.81876D+01    21 8.95917D+01    24 1.35545D+02
                           25 1.32921D+02
1091 8.97181D+01     1 4.10057D-06 1.05500D+00 0.0          0.0          0.0
1091 8.97181D+01     1 4.10057D-06 1.05500D+00 0.0          0.0          0.0          1 4.87001D-06
1091 8.97181D+01     1 8.44798D-07 1.05500D+00 0.0          0.0          0.0          2 4.54621D-07   25 1.30056D+00   25 9.78446D-01
  1091      8.9718D+01     1 7.57633D+01     3 7.99821D+01     5 8.15679D+01    11 8.40786D+01    13 8.50248D+01
                           15 8.59399D+01    17 8.69441D+01    19 8.81904D+01    21 8.95808D+01    24 1.34256D+02
                           25 1.31621D+02
1092 8.97737D+01     1 3.27410D-06 1.05500D+00 0.0          0.0          0.0
1092 8.97737D+01     1 3.27410D-06 1.05500D+00 0.0          0.0          0.0          1 3.57153D-06
1092 8.97737D+01     1 3.09994D-07 1.05500D+00 0.0          0.0          0.0          2 2.24189D-07   25 1.29911D+00   25 9.87014D-01
  1092      8.9774D+01     1 7.57631D+01     3 7.99814D+01     5 8.15670D+01    11 8.40776D+01    13 8.50243D+01
                           15 8.59411D+01    17 8.69476D+01    19 8.81931D+01    21 8.95696D+01    24 1.32971D+02
                           25 1.30322D+02
1093 8.98294D+01     1 2.43473D-06 1.05500D+00 0.0          0.0          0.0
1093 8.98294D+01     1 2.43473D-06 1.05500D+00 0.0          0.0          0.0          1 2.64956D-06
1093 8.98294D+01     1 1.94616D-07 1.05500D+00 0.0          0.0          0.0          2 1.52727D-07   25 1.29866D+00   25 9.96507D-01
  1093      8.9829D+01     1 7.57628D+01     3 7.99807D+01     5 8.15662D+01    11 8.40766D+01    13 8.50238D+01
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                    15 8.59423D+01   17 8.69510D+01   19 8.81957D+01   21 8.95580D+01   24 1.31688D+02
                    25 1.29023D+02
1094 8.98850D+01  1 2.03799D-06 1.05500D+00 0.0          0.0          0.0
1094 8.98850D+01  1 2.03799D-06 1.05500D+00 0.0          0.0          0.0          1 2.19665D-06
1094 8.98850D+01  1 2.44853D-07 1.05500D+00 0.0          0.0          0.0          2 1.83183D-07   25 1.29930D+00   25 1.00703D+00
1094 8.98819D+01  1 5.70983D-06 1.05500D+00 0.0          0.0          0.0
1094 8.98819D+01  1 5.70983D-06 1.05500D+00 0.0          0.0          0.0          1 1.25814D-06
1094 8.98819D+01  1 8.72306D-07 1.05500D+00 0.0          0.0          0.0          2 3.22526D-07   25 1.22924D+00   25 9.52728D-01
  1094     8.9882D+01    1 7.57626D+01   3 7.99801D+01   5 8.15654D+01   11 8.40757D+01   13 8.50234D+01
                    15 8.59434D+01   17 8.69543D+01   19 8.81979D+01   21 8.95467D+01   24 1.30479D+02
                    25 1.27794D+02
1095 8.99344D+01  1 8.12952D-07 1.05500D+00 0.0          0.0          0.0
1095 8.99344D+01  1 8.12952D-07 1.05500D+00 0.0          0.0          0.0          1 1.33643D-06
1095 8.99344D+01  1 1.19154D-07 1.05500D+00 0.0          0.0          0.0          2 8.41519D-08   25 1.22870D+00   25 9.61470D-01
  1095     8.9934D+01    1 7.57623D+01   3 7.99794D+01   5 8.15647D+01   11 8.40748D+01   13 8.50230D+01
                    15 8.59446D+01   17 8.69574D+01   19 8.81999D+01   21 8.95351D+01   24 1.29271D+02
                    25 1.26565D+02
1096 8.99672D+01  1 1.62663D-05 1.05500D+00 0.0          0.0          0.0
1096 8.99672D+01  2 1.58601D-06 1.05500D+00 0.0          0.0          0.0          1 6.42457D-06
1096 8.99672D+01  1 6.22841D-07 1.05500D+00 0.0          0.0          0.0          2 3.32498D-07   25 7.83913D-01   25 6.19376D-01
  1096     8.9967D+01    1 7.57622D+01   3 7.99790D+01   5 8.15642D+01   11 8.40743D+01   13 8.50227D+01
                    15 8.59453D+01   17 8.69594D+01   19 8.82011D+01   21 8.95277D+01   24 1.28514D+02
                    25 1.25781D+02
1097 9.00000D+01  1 5.72174D-06 1.05500D+00 0.0          0.0          0.0
1097 9.00000D+01  1 5.72174D-06 1.05500D+00 0.0          0.0          0.0          1 2.86946D-06
1097 9.00000D+01  1 6.91781D-07 1.05500D+00 0.0          0.0          0.0          2 3.93352D-07   25 7.79704D-01   25 6.19890D-01
  1097     9.0000D+01    1 7.57620D+01   3 7.99786D+01   5 8.15637D+01   11 8.40737D+01   13 8.50225D+01
                    15 8.59460D+01   17 8.69614D+01   19 8.82022D+01   21 8.95201D+01   24 1.27754D+02
                    25 1.25001D+02
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL 1893033/ 0
W9XNP110 20 58 32 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1097 TIME STEPS, TIME = 9.000000D+01

GROSS GRID 1
1
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75176
	2	0.03	77187
2	3	0.06	79198
	4	0.08	80177
3	5	0.10	81156
	6	0.57	81199
	7	1.04	82142
	9	1.51	82184
	9	1.98	83126
	10	2.45	83167
4	11	2.92	84107
	12	3.14	84156
5	13	3.35	85102
	14	3.57	85148
6	15	3.79	85195
	16	4.01	86143
7	17	4.23	86196
	18	4.45	87155
8	19	4.67	88120
	20	4.89	88189
9	21	5.10	89152
	22	5.18	105185
	23	5.25	119148
10	24	5.32	127175
11	25	5.35	125100

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	93.690000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 3.281228300-02

ELAPSED CPU TIME IS 13.32 SECONDS

THE MAXIMUM TEMPERATURE IS - 1.27754D+02 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 24

THE MINIMUM TEMPERATURE IS - 7.57620D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE MAX PERCENT TEMP CHANGE
1098	9.00328D+01	1	1.70097D-06	1.05500D+00	0.0	0.0	0.0				
1098	9.00328D+01	1	1.70097D-06	1.05500D+00	0.0	0.0	0.0	1	1 328690-06		
1098	9.00328D+01	1	1.64864D-07	1.05500D+00	0.0	0.0	0.0	2	1 140290-07	25 7.78816D-01	25 6.23046D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1098	9.00330+01	1 7.57619D+01	3 7.99782D+01	5 8.15633D+01	11 8.40732D+01	13 8.50222D+01	
		15 8.59467D+01	17 8.69633D+01	19 8.82033D+01	21 8.95125D+01	24 1.26993D+02	
		25 1.24223D+02					
1099	9.00689D+01	1 3.53753D-06	1.05500D+00	0.0	0.0	0.0	
1099	9.00689D+01	1 3.53753D-06	1.05500D+00	0.0	0.0	0.0	1 1 900250-06
1099	9.00689D+01	1 4.48985D-07	1.05500D+00	0.0	0.0	0.0	2 2 322480-07 25 8.54117D-01 25 6.87570D-01
1099	9.00690+01	1 7.57617D+01	3 7.99778D+01	5 8.15627D+01	11 8.40726D+01	13 8.50220D+01	
		15 8.59475D+01	17 8.69654D+01	19 8.82044D+01	21 8.95039D+01	24 1.26155D+02	
		25 1.23368D+02					
1100	9.01086D+01	1 2.33376D-06	1.05500D+00	0.0	0.0	0.0	
1100	9.01086D+01	1 2.33376D-06	1.05500D+00	0.0	0.0	0.0	1 1 463090-06
1100	9.01086D+01	1 3.12798D-07	1.05500D+00	0.0	0.0	0.0	2 1 574930-07 25 9.37908D-01 25 7.60250D-01
1100	9.01090+01	1 7.57615D+01	3 7.99773D+01	5 8.15622D+01	11 8.40720D+01	13 8.50217D+01	
		15 8.59484D+01	17 8.69677D+01	19 8.82056D+01	21 8.94943D+01	24 1.25233D+02	
		25 1.22430D+02					
1101	9.01523D+01	1 3.79221D-07	1.05500D+00	0.0	0.0	0.0	
1101	9.01523D+01	1 3.79221D-07	1.05500D+00	0.0	0.0	0.0	1 9.19416D-07
1101	9.01523D+01	1 3.48325D-08	1.05500D+00	0.0	0.0	0.0	2 4 89141D-08 25 1.03146D+00 25 8.42484D-01
1101	9.01520+01	1 7.57614D+01	3 7.99768D+01	5 8.15616D+01	11 8.40713D+01	13 8.50214D+01	
		15 8.59494D+01	17 8.69702D+01	19 8.82067D+01	21 8.94835D+01	24 1.24218D+02	
		25 1.21399D+02					
1102	9.02003D+01	1 7.57256D-07	1.05500D+00	0.0	0.0	0.0	
1102	9.02003D+01	1 7.57256D-07	1.05500D+00	0.0	0.0	0.0	1 1 109380-06
1102	9.02003D+01	1 1.08347D-07	1.05500D+00	0.0	0.0	0.0	2 8 20856D-08 25 1.13508D+00 25 9.35000D-01
1102	9.02000+01	1 7.57612D+01	3 7.99762D+01	5 8.15609D+01	11 8.40705D+01	13 8.50210D+01	
		15 8.59505D+01	17 8.69730D+01	19 8.82078D+01	21 8.94714D+01	24 1.23102D+02	
		25 1.20264D+02					
1103	9.02491D+01	1 8.52103D-06	1.05500D+00	0.0	0.0	0.0	
1103	9.02491D+01	1 8.52103D-06	1.05500D+00	0.0	0.0	0.0	1 2 95255D-06
1103	9.02491D+01	1 1.24345D-06	1.05500D+00	0.0	0.0	0.0	2 5 18055D-07 25 1.15864D+00 25 9.63418D-01
1103	9.02490+01	1 7.57610D+01	3 7.99757D+01	5 8.15603D+01	11 8.40698D+01	13 8.50207D+01	
		15 8.59516D+01	17 8.69757D+01	19 8.82088D+01	21 8.94589D+01	24 1.21967D+02	
		25 1.19105D+02					
1104	9.02979D+01	1 7.48717D-06	1.05500D+00	0.0	0.0	0.0	
1104	9.02979D+01	1 7.48717D-06	1.05500D+00	0.0	0.0	0.0	1 3 29089D-06
1104	9.02979D+01	1 1.16493D-06	1.05500D+00	0.0	0.0	0.0	2 4 78904D-07 25 1.16369D+00 25 9.77029D-01
1104	9.02980+01	1 7.57608D+01	3 7.99751D+01	5 8.15596D+01	11 8.[illegible]90D+01	13 8.50201D+01	
		15 8.59527D+01	17 8.69784D+01	19 8.82097D+01	21 8.94461D+01	24 1.20830D+02	
		25 1.17942D+02					
1105	9.03468D+01	1 5.86297D-06	1.05500D+00	0.0	0.0	0.0	
1105	9.03468D+01	1 5.86297D-06	1.05500D+00	0.0	0.0	0.0	1 3 37018D-06
1105	9.03468D+01	1 1.01021D-06	1.05500D+00	0.0	0.0	0.0	2 4 27645D-07 25 1.16796D+00 25 9.90290D-01
1105	9.0347D+01	1 7.57606D+01	3 7.99746D+01	5 8.15590D+01	11 8.40683D+01	13 8.50201D+01	
		15 8.59538D+01	17 8.69811D+01	19 8.82104D+01	21 8.94331D+01	24 1.19691D+02	
		25 1.16774D+02					
1106	9.03956D+01	1 5.38286D-06	1.05500D+00	0.0	0.0	0.0	
1106	9.03956D+01	1 5.38286D-06	1.05500D+00	0.0	0.0	0.0	1 3 52849D-06
1106	9.03956D+01	1 9.39619D-07	1.05500D+00	0.0	0.0	0.0	2 4 11383D-07 25 1.17206D+00 25 1.00370D+00
1106	9.03930D+01	1 4.26759D-06	1.05500D+00	0.0	0.0	0.0	
1106	9.03930D+01	1 4.26759D-06	1.05500D+00	0.0	0.0	0.0	1 1 09388D-06
1106	9.03930D+01	1 6.06721D-07	1.05500D+00	0.0	0.0	0.0	2 2 48588D-07 25 1.11203D+00 25 9.52293D-01
1106	9.03930+01	1 7.57604D+01	3 7.99741D+01	5 8.15584D+01	11 8.40676D+01	13 8.50199D+01	
		15 8.59548D+01	17 8.69835D+01	19 8.82110D+01	21 8.94205D+01	24 1.18608D+02	
		25 1.15662D+02					
1107	9.04392D+01	1 1.84835D-06	1.05500D+00	0.0	0.0		

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1107 9.043920D+01     1 1.948835D-06 1.055000D+00 0.0          0.0          0.0                1 3.089770-06
1107 9.043920D+01     1 4.670050-07 1.055000D+00 0.0           0.0          0.0                2 2.398840-07   25 1.114380+00   25 9.634820-01
  1107      9.0439D+01      1 7.576020+01      3 7.997360+01      5 8.155780+01     11 8.406700+01     13 8.501960+01
                            15 8.595590+01     17 8.688600+01     19 8.821140+01     21 8.940770+01     24 1.175220+02
                            25 1.145470+02
1108 9.048540+01     1 3.534400-06 1.055000+00 0.0            0.0          0.0
1108 9.048540+01     1 3.534400-06 1.055000+00 0.0            0.0          0.0                1 3.383950-06
1108 9.048540+01     1 7.245380-07 1.055000+00 0.0            0.0          0.0                2 3.300730-07   25 1.117550+00   25 9.756230-01
  1108      9.0485D+01      1 7.575000+01      3 7.997310+01      5 8.155720+01     11 8.406630+01     13 8.501940+01
                            15 8.595700+01     17 8.698840+01     19 8.821170+01     21 8.939410+01     24 1.164330+02
                            25 1.134300+02
1109 9.053160+01     1 8.644420-06 1.055000+00 0.0            0.0          0.0
1109 9.053160+01     1 8.644420-06 1.055000+00 0.0            0.0          0.0                1 3.916020-06
1109 9.053160+01     1 1.077150-06 1.055000+00 0.0            0.0          0.0                2 5.289120-07   25 1.113080+00   25 9.812950-01
  1109      9.0532D+01      1 7.575980+01      3 7.997260+01      5 8.155660+01     11 8.406570+01     13 8.501920+01
                            15 8.595800+01     17 8.699080+01     19 8.821190+01     21 8.938150+01     24 1.153420+02
                            25 1.123170+02
1110 9.057780+01     1 5.913550-05 1.055000+00 0.0            0.0          0.0
1110 9.057780+01     2 5.161670-06 1.055000+00 0.0            0.0          0.0                1 1.673350-05
1110 9.057780+01     1 2.923310-06 1.055000+00 0.0            0.0          0.0                2 1.105770-06   24 1.086800+00   25 9.586990-01
  1110      9.0578D+01      1 7.575960+01      3 7.997210+01      5 8.155610+01     11 8.406500+01     13 8.501890+01
                            15 8.595910+01     17 8.699310+01     19 8.821190+01     21 8.936810+01     24 1.142550+02
                            25 1.112400+02
1111 9.062400+01     1 3.079550-05 1.055000+00 0.0            0.0          0.0
1111 9.062400+01     2 2.951810-06 1.055000+00 0.0            0.0          0.0                1 1.304500-05
1111 9.062400+01     1 1.697260-06 1.055000+00 0.0            0.0          0.0                2 6.349250-07   24 1.075690+00   25 9.485310-01
  1111      9.0624D+01      1 7.575940+01      3 7.997160+01      5 8.155550+01     11 8.406440+01     13 8.501870+01
                            15 8.596020+01     17 8.699540+01     19 8.821180+01     21 8.935430+01     24 1.131790+02
                            25 1.101850+02
1112 9.067020+01     1 1.731440-05 1.055000+00 0.0            0.0          0.0
1112 9.067020+01     2 1.864680-06 1.055000+00 0.0            0.0          0.0                1 1.122060-05
1112 9.067020+01     1 1.151400-06 1.055000+00 0.0            0.0          0.0                2 4.156520-07   24 1.064340+00   25 9.461750-01
  1112      9.0670D+01      1 7.575930+01      3 7.997110+01      5 8.155490+01     11 8.406380+01     13 8.501850+01
                            15 8.596120+01     17 8.699770+01     19 8.821160+01     21 8.934060+01     24 1.121150+02
                            25 1.091420+02
1113 9.071670+01     1 1.130210-05 1.055000+00 0.0            0.0          0.0
1113 9.071670+01     2 1.348750-06 1.055000+00 0.0            0.0          0.0                1 1.012170-05
1113 9.071670+01     1 8.531950-07 1.055000+00 0.0            0.0          0.0                2 3.010990-07   24 1.055870+00   25 9.493650-01
  1113      9.0717D+01      1 7.575910+01      3 7.997070+01      5 8.155440+01     11 8.406310+01     13 8.501830+01
                            15 8.596230+01     17 8.699990+01     19 8.821130+01     21 8.932640+01     24 1.110590+02
                            25 1.081060+02
1114 9.076320+01     1 7.757320-06 1.055000+00 0.0            0.0          0.0
1114 9.076320+01     1 7.757320-06 1.055000+00 0.0            0.0          0.0                1 8.773300-06
1114 9.076320+01     1 1.810840-06 1.055000+00 0.0            0.0          0.0                2 9.011190-07   24 1.044770+00   25 9.515840-01
  1114      9.0763D+01      1 7.575890+01      3 7.997020+01      5 8.155390+01     11 8.406250+01     13 8.501820+01
                            15 8.596340+01     17 8.700210+01     19 8.821080+01     21 8.931210+01     24 1.100140+02
                            25 1.070770+02
1115 9.080970+01     1 6.062730-06 1.055000+00 0.0            0.0          0.0
1115 9.080970+01     1 6.062730-06 1.055000+00 0.0            0.0          0.0                1 8.163340-06
1115 9.080970+01     1 1.461910-06 1.055000+00 0.0            0.0          0.0                2 7.443500-07   24 1.034480+00   25 9.544830-01
  1115      9.0810D+01      1 7.575880+01      3 7.996970+01      5 8.155330+01     11 8.406200+01     13 8.501800+01
                            15 8.596450+01     17 8.700430+01     19 8.821020+01     21 8.929750+01     24 1.089800+02
                            25 1.060550+02
1116 9.085620+01     1 4.884310-06 1.055000+00 0.0            0.0          0.0
1116 9.085620+01     1 4.884310-06 1.055000+00 0.0            0.0          0.0                1 7.615630-06
1116 9.085620+01     1 1.192640-06 1.055000+00 0.0            0.0          0.0                2 6.215200-07   24 1.025460+00   25 9.583880-01
  1116      9.0856D+01      1 7.575860+01      3 7.996930+01      5 8.155280+01     11 8.406140+01     13 8.501780+01
                            15 8.596550+01     17 8.700640+01     19 8.820950+01     21 8.928270+01     24 1.079550+02
                            25 1.050390+02
1117 9.090260+01     1 3.757230-06 1.055000+00 0.0            0.0          0.0
1117 9.090260+01     1 3.757230-06 1.055000+00 0.0            0.0          0.0                1 7.023100-06
1117 9.090260+01     1 9.887600-07 1.055000+00 0.0            0.0          0.0                2 5.169190-07   24 1.017640+00   25 9.633040-01
  1117      9.0903D+01      1 7.575840+01      3 7.996880+01      5 8.155230+01     11 8.406080+01     13 8.501770+01
                            15 8.596660+01     17 8.700850+01     19 8.820860+01     21 8.926780+01     24 1.069370+02
                            25 1.040270+02
1118 9.094910+01     1 3.034680-06 1.055000+00 0.0            0.0          0.0
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1118 9.09481D+01    1 3.03468D-06 1.05500D+00 0.0          0.0          0.0                1 6.47484D-06
1118 9.09491D+01    1 8.20197D-07 1.05500D+00 0.0          0.0          0.0                2 4.31381D-07   24 1.01091D+00   25 9.69004D-01
1118     9.0949D+01     1 7.57583D+01     3 7.99684D+01    5 8.15518D+01   11 8.40602D+01   13 8.50176D+01
                       15 8.59677D+01    17 8.70105D+01    19 8.82076D+01   21 8.92526D+01   24 1.05926D+02
                       25 1.03019D+02
1119 9.09956D+01    1 2.21267D-06 1.05500D+00 0.0          0.0          0.0
1119 9.09956D+01    1 2.21267D-06 1.05500D+00 0.0          0.0          0.0                1 5.87885D-06
1119 9.09956D+01    1 6.23490D-07 1.05500D+00 0.0          0.0          0.0                2 3.38667D-07   24 1.00517D+00   25 9.75544D-01
1119     9.0996D+01     1 7.57581D+01     3 7.99680D+01    5 8.15513D+01   11 8.40597D+01   13 8.50174D+01
                       15 8.59687D+01    17 8.70125D+01    19 8.82065D+01   21 8.92373D+01   24 1.04921D+02
                       25 1.02014D+02
1120 9.10421D+01    1 2.02385D-06 1.05500D+00 0.0          0.0          0.0
1120 9.10421D+01    1 2.02385D-06 1.05500D+00 0.0          0.0          0.0                1 4.45538D-06
1120 9.10421D+01    1 1.69680D-07 1.05500D+00 0.0          0.0          0.0                2 2.16163D-07   25 1.00461D+00   25 9.84778D-01
1120     9.1042D+01     1 7.57579D+01     3 7.99675D+01    5 8.15508D+01   11 8.40591D+01   13 8.50173D+01
                       15 8.59698D+01    17 8.70144D+01    19 8.82053D+01   21 8.92218D+01   24 1.03920D+02
                       25 1.01009D+02
1121 9.10886D+01    1 1.58860D-06 1.05500D+00 0.0          0.0          0.0
1121 9.10886D+01    1 1.58860D-06 1.05500D+00 0.0          0.0          0.0                1 3.96117D-06
1121 9.10886D+01    1 8.85944D-08 1.05500D+00 0.0          0.0          0.0                2 1.58083D-07   25 1.00419D+00   25 9.94154D-01
1121     9.1089D+01     1 7.57578D+01     3 7.99671D+01    5 8.15503D+01   11 8.40586D+01   13 8.50172D+01
                       15 8.59709D+01    17 8.70163D+01    19 8.82039D+01   21 8.92061D+01   24 1.02923D+02
                       25 1.00005D+02
1122 9.11351D+01    1 1.38818D-06 1.05500D+00 0.0          0.0          0.0
1122 9.11351D+01    1 1.38818D-06 1.05500D+00 0.0          0.0          0.0                1 3.47440D-06
1122 9.11351D+01    1 8.94268D-08 1.05500D+00 0.0          0.0          0.0                2 1.33490D-07   25 1.00389D+00   25 1.00384D+00
1122 9.11326D+01    1 3.72232D-06 1.05500D+00 0.0          0.0          0.0
1122 9.11326D+01    1 3.72232D-06 1.05500D+00 0.0          0.0          0.0                1 1.04777D-06
1122 9.11326D+01    1 5.28912D-07 1.05500D+00 0.0          0.0          0.0                2 2.20191D-07   25 9.52233D-01   25 9.52184D-01
1122     9.1133D+01     1 7.57576D+01     3 7.99667D+01    5 8.15498D+01   11 8.40581D+01   13 8.50171D+01
                       15 8.59719D+01    17 8.70181D+01    19 8.82025D+01   21 8.91911D+01   24 1.01981D+02
                       25 9.90529D+01
1123 9.11766D+01    1 9.30718D-07 1.05500D+00 0.0          0.0          0.0
1123 9.11766D+01    1 9.30718D-07 1.05500D+00 0.0          0.0          0.0                1 2.87938D-06
1123 9.11766D+01    1 2.10474D-07 1.05500D+00 0.0          0.0          0.0                2 1.48322D-07   25 9.51306D-01   25 9.60401D-01
1123     9.1177D+01     1 7.57575D+01     3 7.99663D+01    5 8.15494D+01   11 8.40576D+01   13 8.50170D+01
                       15 8.59729D+01    17 8.70198D+01    19 8.82009D+01   21 8.91760D+01   24 1.01041D+02
                       25 9.81016D+01
1124 9.12206D+01    1 7.96709D-07 1.05500D+00 0.0          0.0          0.0
1124 9.12206D+01    1 7.96709D-07 1.05500D+00 0.0          0.0          0.0                1 2.38883D-06
1124 9.12206D+01    1 8.71253D-08 1.05500D+00 0.0          0.0          0.0                2 9.19031D-08   25 9.51051D-01   25 9.69455D-01
1124     9.1221D+01     1 7.57574D+01     3 7.99660D+01    5 8.15489D+01   11 8.40571D+01   13 8.50169D+01
                       15 8.59739D+01    17 8.70215D+01    19 8.81993D+01   21 8.91607D+01   24 1.00101D+02
                       25 9.71506D+01
1125 9.12646D+01    1 1.28927D-05 1.05500D+00 0.0          0.0          0.0
1125 9.12646D+01    2 1.12432D-06 1.05500D+00 0.0          0.0          0.0                1 4.86406D-06
1125 9.12646D+01    1 5.22749D-07 1.05500D+00 0.0          0.0          0.0                2 2.20779D-07   25 9.58076D-01   25 9.86177D-01
1125     9.1265D+01     1 7.57572D+01     3 7.99656D+01    5 8.15485D+01   11 8.40567D+01   13 8.50168D+01
                       15 8.59749D+01    17 8.70231D+01    19 8.81975D+01   21 8.91453D+01   24 9.91617D+01
                       25 9.61925D+01
1126 9.13086D+01    1 1.98402D-05 1.05500D+00 0.0          0.0          0.0
1126 9.13086D+01    2 1.81124D-06 1.05500D+00 0.0          0.0          0.0                1 7.69514D-06
1126 9.13086D+01    1 8.90489D-07 1.05500D+00 0.0          0.0          0.0                2 3.64790D-07   25 9.69583D-01   25 1.00796D+00
1126 9.13060D+01    1 3.46857D-06 1.05500D+00 0.0          0.0          0.0
1126 9.13060D+01    1 3.46857D-06 1.05500D+00 0.0          0.0          0.0                1 1.02105D-06
1126 9.13060D+01    1 4.64939D-07 1.05500D+00 0.0          0.0          0.0                2 2.06756D-07   25 9.15839D-01   25 9.52090D-01
1126     9.1306D+01     1 7.57571D+01     3 7.99652D+01    5 8.15481D+01   11 8.40562D+01   13 8.50168D+01
                       15 8.59759D+01    17 8.70246D+01    19 8.81958D+01   21 8.91307D+01   24 9.82736D+01
                       25 9.52766D+01
1127 9.13475D+01    1 8.53005D-06 1.05500D+00 0.0          0.0          0.0
1127 9.13475D+01    1 8.53005D-06 1.05500D+00 0.0          0.0          0.0                1 5.58032D-06
1127 9.13475D+01    1 1.41147D-06 1.05500D+00 0.0          0.0          0.0                2 6.92963D-07   25 9.22204D-01   25 9.67922D-01
1127     9.1348D+01     1 7.57570D+01     3 7.99649D+01    5 8.15477D+01   11 8.40558D+01   13 8.50167D+01
                       15 8.59768D+01    17 8.70261D+01    19 8.81939D+01   21 8.91159D+01   24 9.73810D+01
                       25 9.43544D+01
1128 9.13820D+01    1 5.93636D-06 1.05500D+00 0.0          0.0          0.0
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1128 9.13890D+01    1 6.99806D-06 1.05500D+00 0.0          0.0          0.0              1 5.09892D-05
1128 9.13890D+01    1 1.24937D-06 1.05500D+00 0.0          0.0          0.0              2 6.14916D-07   25 9.27744D-01   25 9.83254D-01
  1128      9.1389D+01     1 7.57568D+01     3 7.99645D+01     5 8.15473D+01   11 8.40554D+01    13 8.50167D+01
                           15 8.59777D+01    17 8.70275D+01    19 8.81919D+01   21 8.91010D+01    24 9.64838D+01
                           25 9.34267D+01
1129 9.14304D+01    1 5.71699D-06 1.05500D+00 0.0          0.0          0.0
1129 9.14304D+01    1 3.71699D-06 1.05500D+00 0.0          0.0          0.0              1 4.61406D-06
1129 9.14304D+01    1 1.07299D-06 1.05500D+00 0.0          0.0          0.0              2 5.41314D-07   25 9.32578D-01   25 9.98192D-01
  1129      9.1430D+01     1 7.57567D+01     3 7.99642D+01     5 8.15469D+01   11 8.40550D+01    13 8.50166D+01
                           15 8.59787D+01    17 8.70289D+01    19 8.81899D+01   21 8.90863D+01    24 9.55818D+0
                           25 9.24941D+01
1130 9.14719D+01    1 6.81670D-05 1.05500D+00 0.0          0.0          0.0
1130 9.14719D+01    2 6.08386D-06 1.05500D+00 0.0          0.0          0.0              1 1.86858D-05
1130 9.14719D+01    1 2.61787D-06 1.05500D+00 0.0          0.0          0.0              2 1.17554D-06   24 9.00814D-01   25 9.67430D-01
  1130      9.1472D+01     1 7.57566D+01     3 7.99639D+01     5 8.15466D+01   11 8.40546D+01    13 8.50166D+01
                           15 8.59796D+01    17 8.70302D+01    19 8.81877D+01   21 8.90709D+01    24 9.46809D+01
                           25 9.15993D+01
1131 9.15134D+01    1 2.38312D-04 1.05500D+00 0.0          0.0          0.0
1131 9.15134D+01    3 1.83351D-06 1.05500D+00 0.0          0.0          0.0              1 7.49635D-05
1131 9.15134D+01    2 9.86824D-07 1.05500D+00 0.0          0.0          0.0              2 3.27179D-06   24 8.77564D-01   24 9.26865D-01
  1131      9.1513D+01     1 7.57565D+01     3 7.99636D+01     5 8.15462D+01   11 8.40542D+01    13 8.50166D+01
                           15 8.59805D+01    17 8.70316D+01    19 8.81855D+01   21 8.90557D+01    24 9.38034D+01
                           25 9.08429D+01
1132 9.15559D+01    1 1.44787D-04 1.05500D+00 0.0          0.0          0.0
1132 9.15559D+01    3 1.13738D-06 1.05500D+00 0.0          0.0          0.0              1 6.75017D-05
1132 9.15559D+01    1 7.72828D-06 1.05500D+00 0.0          0.0          0.0              2 2.13274D-06   24 8.49741D-01   24 9.05875D-01
  1132      9.1556D+01     1 7.57563D+01     3 7.99632D+01     5 8.15458D+01   11 8.40538D+01    13 8.50166D+01
                           15 8.59815D+01    17 8.70329D+01    19 8.81830D+01   21 8.90400D+01    24 9.29536D+01
                           25 9.01611D+01
1133 9.16004D+01    1 1.07287D-04 1.05500D+00 0.0          0.0          0.0
1133 9.16004D+01    3 8.79416D-07 1.05500D+00 0.0          0.0          0.0              1 6.68232D-05
1133 9.16004D+01    1 6.67816D-06 1.05500D+00 0.0          0.0          0.0              2 1.74855D-06   24 8.29608D-01   24 8.92497D-01
  1133      9.1600D+01     1 7.57562D+01     3 7.99629D+01     5 8.15454D+01   11 8.40534D+01    13 8.50166D+01
                           15 8.59824D+01    17 8.70342D+01    19 8.81804D+01   21 8.90234D+01    24 9.21240D+01
                           25 8.95202D+01
1134 9.16479D+01    1 9.20606D-05 1.05500D+00 0.0          0.0          0.0
1134 9.16479D+01    3 7.96780D-07 1.05500D+00 0.0          0.0          0.0              1 7.01802D-05
1134 9.16479D+01    1 6.60232D-06 1.05500D+00 0.0          0.0          0.0              2 1.61807D-06   24 8.13326D-01   24 8.82860D-01
  1134      9.1648D+01     1 7.57563D+01     3 7.99625D+01     5 8.15450D+01   11 8.40530D+01    13 8.50165D+01
                           15 8.59835D+01    17 8.70356D+01    19 8.81774D+01   21 8.90056D+01    24 9.13107D+01
                           25 8.89027D+01
1135 9.16989D+01    1 9.16051D-05 1.05500D+00 0.0          0.0          0.0
1135 9.16989D+01    3 8.38044D-07 1.05500D+00 0.0          0.0          0.0              1 7.63443D-05
1135 9.16989D+01    1 7.21887D-06 1.05500D+00 0.0          0.0          0.0              2 1.64139D-06   24 7.99235D-01   24 8.75401D-01
  1135      9.1699D+01     1 7.57559D+01     3 7.99622D+01     5 8.15446D+01   11 8.40525D+01    13 8.50165D+01
                           15 8.59846D+01    17 8.70370D+01    19 8.81741D+01   21 8.89863D+01    24 9.05514D+01
                           25 8.83000D+01
1136 9.17543D+01    1 9.99715D-05 1.05500D+00 0.0          0.0          0.0
1136 9.17543D+01    3 9.62116D-07 1.05500D+00 0.0          0.0          0.0              1 8.44655D-05
1136 9.17543D+01    1 8.31352D-06 1.05500D+00 0.0          0.0          0.0              2 1.74166D-06   24 7.86329D-01   24 8.68763D-01
  1136      9.1754D+01     1 7.57558D+01     3 7.99618D+01     5 8.15441D+01   11 8.40521D+01    13 8.50166D+01
                           15 8.59858D+01    17 8.70384D+01    19 8.81704D+01   21 8.89652D+01    24 8.97250D+01
                           25 8.77074D+01
1137 9.18149D+01    1 1.15646D-04 1.05500D+00 0.0          0.0          0.0
1137 9.18149D+01    3 1.16250D-06 1.05500D+00 0.0          0.0          0.0              1 9.43896D-05
1137 9.18149D+01    2 7.60010D-07 1.05500D+00 0.0          0.0          0.0              2 2.18130D-06   24 7.74453D-01   24 8.63140D-01
  1137      9.1815D+01     1 7.57556D+01     3 7.99613D+01     5 8.15437D+01   11 8.40516D+01    13 8.50166D+01
                           15 8.59871D+01    17 8.70399D+01    19 8.81661D+01   21 8.89420D+01    24 8.89506D+01
                           25 8.71225D+01
1138 9.18816D+01    1 1.36135D-04 1.05500D+00 0.0          0.0          0.0
1138 9.18816D+01    3 1.41904D-06 1.05500D+00 0.0          0.0          0.0              1 1.06212D-04
1138 9.18816D+01    2 9.60525D-07 1.05500D+00 0.0          0.0          0.0              2 2.50070D-06   24 7.60569D-01   24 8.55047D-01
  1138      9.1862D+01     1 7.57555D+01     3 7.99609D+01     5 8.15432D+01   11 8.40510D+01    13 8.50166D+01
                           15 8.59885D+01    17 8.70415D+01    19 8.81611D+01   21 8.89163D+01    24 8.81900D+01
                           25 8.65443D+01
1139 9.19408D+01    1 7.56514D-05 1.05500D+00 0.0          0.0          0.0
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1139 9.194080+01     2 8.443890-06 1.055000+00 0.0          0.0          0.0          1 8.358710-05
1139 9.194080+01     1 6.549930-06 1.055000+00 0.0          0.0          0.0          2 1.776630-06   23 6.189570-01   24 6.870870-01
  1139      9.1941D+01     1 7.575530+01     3 7.996050+01     5 8.154270+01    11 8.405060+01    13 8.501670+01
                          15 8.598970+01    17 8.704280+01    19 8.815650+01    21 8.889350+01    24 8.758410+01
                          25 8.607580+01
1140 9.200000+01     1 7.636920-05 1.055000+00 0.0          0.0          0.0          1 7.407700-05
1140 9.200000+01     2 7.950330-06 1.055000+00 0.0          0.0          0.0          2 1.654420-06   23 5.762480-01   23 6.326500-01
1140 9.200000+01     1 6.046370-06 1.055000+00 0.0          0.0          0.0
  1140      9.2000D+01     1 7.575520+01     3 7.996010+01     5 8.154230+01    11 8.405010+01    13 8.501670+01
                          15 8.599100+01    17 8.704400+01    19 8.815170+01    21 8.887060+01    24 8.703410+01
                          25 8.564910+01
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COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1140 TIME STEPS, TIME = 9.200000+01

GROSS GRID		1
		I
FINE GRID		1
DISTANCE		0.0
1	1	0.0	75176
	2	0.03	77186
2	3	0.06	79196
	4	0.08	80175
3	5	0.10	81154
	6	0.57	81197
	7	1.04	82139
	8	1.51	82181
	9	1.98	83123
	10	2.45	83164
4	11	2.92	84105
	12	3.14	84154
5	13	3.35	85102
	14	3.57	85150
6	15	3.79	85199
	16	4.01	86150
7	17	4.23	87104
	18	4.45	87160
8	19	4.67	88115
	20	4.89	88162
9	21	5.10	88187
	22	5.18	90171
	23	5.25	90151
10	24	5.32	87103
11	25	5.35	85165

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	91.360000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 5.921650190-02

ELAPSED CPU TIME IS 13.78 SECONDS

THE MAXIMUM TEMPERATURE IS - 9.07101D+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 22

THE MINIMUM TEMPERATURE IS - 7.57552D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

PCC

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF NODE TEMP DIFF	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
1141	9.20651D+01	1	8.17858D-05	1.05500D+00	0.0	0.0	0.0					
1141	9.20651D+01	2	8.02588D-06	1.05500D+00	0.0	0.0	0.0	1	7.76057D-05			
1141	9.20651D+01	1	6.97078D-06	1.05500D+00	0.0	0.0	0.0	2	1.72385D-06	23 5.86948D-01	23	6.48505D-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1141	9.2065D+01	1 7.57550D+01	3 7.99597D+01	5 8.15418D+01	11 8.40497D+01	13 8.50168D+01	
		15 8.59923D+01	17 8.70452D+01	19 8.81461D+01	21 8.88455D+01	24 8.64860D+01	
		25 8.52195D+01					
1142	9.21368D+01	1 9.90608D-05	1.05500D+00	0.0	0.0	0.0	
1142	9.21368D+01	2 8.82753D-06	1.05500D+00	0.0	0.0	0.0	1 8.54897D-05
1142	9.21368D+01	1 8.88499D-06	1.05500D+00	0.0	0.0	0.0	2 1.99141D-06 23 5.92381D-01 23 6.58779D-01
1142	9.2137D+01	1 7.57549D+01	3 7.99593D+01	5 8.15413D+01	11 8.40492D+01	13 8.50169D+01	
		15 8.59937D+01	17 8.70464D+01	19 8.81398D+01	21 8.88181D+01	24 8.59425D+01	
		25 8.47888D+01					
1143	9.22156D+01	1 1.17208D-04	1.05500D+00	0.0	0.0	0.0	
1143	9.22156D+01	2 9.37727D-06	1.05500D+00	0.0	0.0	0.0	1 9.28414D-05
1143	9.22156D+01	2 9.03822D-07	1.05500D+00	0.0	0.0	0.0	2 2.57376D-06 23 5.92318D-01 23 6.63078D-01
1143	9.2216D+01	1 7.57547D+01	3 7.99588D+01	5 8.15408D+01	11 8.40487D+01	13 8.50170D+01	
		15 8.59953D+01	17 8.70477D+01	19 8.81326D+01	21 8.87881D+01	24 8.54056D+01	
		25 8.43583D+01					
1144	9.23023D+01	1 1.34028D-04	1.05500D+00	0.0	0.0	0.0	
1144	9.23023D+01	3 1.47607D-06	1.05500D+00	0.0	0.0	0.0	1 9.98023D-05
1144	9.23023D+01	2 1.27818D-06	1.05500D+00	0.0	0.0	0.0	2 2.22621D-06 23 5.86592D-01 23 6.61050D-01
1144	9.2302D+01	1 7.57545D+01	3 7.99583D+01	5 8.15403D+01	11 8.40481D+01	13 8.50172D+01	
		15 8.59970D+01	17 8.70488D+01	19 8.81243D+01	21 8.87555D+01	24 8.48779D+01	
		25 8.39287D+01					
1145	9.23977D+01	1 1.53191D-04	1.05500D+00	0.0	0.0	0.0	
1145	9.23977D+01	3 1.66520D-06	1.05500D+00	0.0	0.0	0.0	1 1.05245D-04
1145	9.23977D+01	2 1.61769D-06	1.05500D+00	0.0	0.0	0.0	2 2.44971D-06 23 5.75439D-01 23 6.52798D-01
1145	9.2398D+01	1 7.57543D+01	3 7.99578D+01	5 8.15397D+01	11 8.40476D+01	13 8.50174D+01	
		15 8.59988D+01	17 8.70499D+01	19 8.81147D+01	21 8.87201D+01	24 8.43606D+01	
		25 8.35001D+01					
1146	9.25026D+01	1 1.71706D-04	1.05500D+00	0.0	0.0	0.0	
1146	9.25026D+01	3 1.89327D-06	1.05500D+00	0.0	0.0	0.0	1 1.09143D-04
1146	9.25026D+01	2 1.99654D-06	1.05500D+00	0.0	0.0	0.0	2 2.63551D-06 23 5.59517D-01 23 6.38905D-01
1146	9.2503D+01	1 7.57541D+01	3 7.99573D+01	5 8.15391D+01	11 8.40470D+01	13 8.50176D+01	
		15 8.60007D+01	17 8.70507D+01	19 8.81037D+01	21 8.86820D+01	24 8.38538D+01	
		25 8.30724D+01					
1147	9.26180D+01	1 1.84845D-04	1.05500D+00	0.0	0.0	0.0	
1147	9.26180D+01	3 2.35866D-06	1.05500D+00	0.0	0.0	0.0	1 1.10645D-04
1147	9.26180D+01	2 2.41105D-06	1.05500D+00	0.0	0.0	0.0	2 2.77811D-06 23 5.39868D-01 23 6.20433D-01
1147	9.2618D+01	1 7.57539D+01	3 7.99567D+01	5 8.15385D+01	11 8.40464D+01	13 8.50179D+01	
		15 8.60027D+01	17 8.70514D+01	19 8.80911D+01	21 8.85411D+01	24 8.33566D+01	
		25 8.26438D+01					
1148	9.27449D+01	1 1.97782D-04	1.05500D+00	0.0	0.0	0.0	
1148	9.27449D+01	3 2.91835D-06	1.05500D+00	0.0	0.0	0.0	1 1.10055D-04
1148	9.27449D+01	2 2.86908D-06	1.05500D+00	0.0	0.0	0.0	2 2.89309D-06 23 5.17927D-01 23 5.98933D-01
1148	9.2745D+01	1 7.57537D+01	3 7.99561D+01	5 8.15379D+01	11 8.40459D+01	13 8.50183D+01	
		15 8.60049D+01	17 8.70517D+01	19 8.80766D+01	21 8.85973D+01	24 8.28669D+01	
		25 8.22121D+01					
1149	9.28845D+01	1 2.01905D-04	1.05500D+00	0.0	0.0	0.0	
1149	9.28845D+01	3 3.40651D-06	1.05500D+00	0.0	0.0	0.0	1 1.06503D-04
1149	9.28845D+01	2 3.27631D-06	1.05500D+00	0.0	0.0	0.0	2 2.89584D-06 23 4.95461D-01 24 5.86287D-01
1149	9.2885D+01	1 7.57535D+01	3 7.99555D+01	5 8.15372D+01	11 8.40453D+01	13 8.50187D+01	
		15 8.60071D+01	17 8.70516D+01	19 8.80601D+01	21 8.85507D+01	24 8.23810D+01	
		25 8.17736D+01					
1150	9.30381D+01	1 1.86962D-04	1.05500D+00	0.0	0.0	0.0	
1150	9.30381D+01	3 3.56133D-06	1.05500D+00	0.0	0.0	0.0	1 9.89144D-05
1150	9.30381D+01	2 3.47116D-06	1.05500D+00	0.0	0.0	0.0	2 2.69112D-06 24 4.87614D-01 24 5.91900D-01
1150	9.3038D+01	1 7.57533D+01	3 7.99550D+01	5 8.15366D+01	11 8.40447D+01	13 8.50193D+01	

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                    15 8.600950+01   17 8.705090+01   19 8.804120+01   21 8.850130+01   24 8.189340+01
                    25 8.132180+01
1151 9.32071D+01     1 1.311880-04 1.055000+00 0.0          0.0          0.0
1151 9.32071D+01     3 2.473180-06 1.055000+00 0.0          0.0          0.0          1 8.395150-05
1151 9.32071D+01     2 2.626380-06 1.055000+00 0.0          0.0          0.0          2 1.790280-06   24 4.994290-01   24 6.096530-01
  1151      9.32070+01    1 7.575300+01    3 7.995440+01    5 8.153600+01   11 8.404420+01   13 8.501990+01
                    15 8.601180+01   17 8.704950+01   19 8.801980+01   21 8.844910+01   24 8.139400+01
                    25 8.084360+01
1152 9.33929D+01     1 1.432990-04 1.055000+00 0.0          0.0          0.0
1152 9.33929D+01     3 3.620770-06 1.055000+00 0.0          0.0          0.0          1 7.398580-05
1152 9.33929D+01     2 3.214160-06 1.055000+00 0.0          0.0          0.0          2 1.950960-06   24 5.213830-01   24 6.405670-01
  1152      9.33930+01    1 7.575280+01    3 7.995380+01    5 8.153540+01   11 8.404380+01   13 8.502060+01
                    15 8.601410+01   17 8.704710+01   19 8.799560+01   21 8.839400+01   24 8.087260+01
                    25 8.033640+01
1153 9.35974D+01     1 1.208170-04 1.055000+00 0.0          0.0          0.0
1153 9.35974D+01     3 3.369370-06 1.055000+00 0.0          0.0          0.0          1 6.214890-05
1153 9.35974D+01     2 3.012100-06 1.055000+00 0.0          0.0          0.0          2 1.640340-06   24 5.509290-01   24 6.812310-01
  1153      9.35970+01    1 7.573260+01    3 7.995330+01    5 8.153490+01   11 8.404340+01   13 8.502140+01
                    15 8.601640+01   17 8.704360+01   19 8.796820+01   21 8.833610+01   24 8.032170+01
                    25 7.979270+01
1154 9.37987D+01     1 7.782130-05 1.055000+00 0.0          0.0          0.0
1154 9.37987D+01     2 8.653680-06 1.055000+00 0.0          0.0          0.0          1 4.160060-05
1154 9.37987D+01     1 9.413510-06 1.055000+00 0.0          0.0          0.0          2 8.911960-07   24 5.280820-01   25 6.613790-01
  1154      9.37990+01    1 7.575240+01    3 7.995280+01    5 8.153440+01   11 8.404320+01   13 8.502220+01
                    15 8.601820+01   17 8.703920+01   19 8.794090+01   21 8.828130+01   24 7.979360+01
                    25 7.926500+01
1155 9.40000D+01     1 5.090040-05 1.055000+00 0.0          0.0          0.0
1155 9.40000D+01     2 5.842860-06 1.055000+00 0.0          0.0          0.0          1 2.708820-05
1155 9.40000D+01     1 5.637150-06 1.055000+00 0.0          0.0          0.0          2 5.812990-07   25 5.230710-01   25 6.599020-01
  1155      9.40000+01    1 7.575230+01    3 7.995250+01    5 8.153410+01   11 8.404300+01   13 8.502310+01
                    15 8.601970+01   17 8.703390+01   19 8.791320+01   21 8.822850+01   24 7.927290+01
                    25 7.874190+01
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HEATING6 02/12/83 COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL IB#3033/ 0
W9XNP110 20.58.34 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1155 TIME STEPS, TIME = 9.400000+01

GROSS GRID	FINE GRID	DISTANCE	T I T D C
1	1	0.0	75175
	2	0.03	77185
2	3	0.06	79195
	4	0.08	80174
3	5	0.10	81153
	6	0.57	81196
	7	1.04	82130
	8	1.51	82179
	9	1.98	83121
	10	2.45	83163
4	11	2.92	84104
	12	3.14	84153
5	13	3.35	85102
	14	3.57	85152
6	15	3.79	86102
	16	4.01	86153
7	17	4.23	87103
	18	4.45	87151
8	19	4.67	87191
	20	4.89	88118
9	21	5.10	88123
	22	5.18	85173
	23	5.25	82183
10	24	5.32	79127
11	25	5.35	78174

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	87.330000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.013179240-01

ELAPSED CPU TIME IS 13.96 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.822850+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.575230+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 1

NO TIME	TIME	NO ITER	MAX HEAT RESIDUAL	BETA	L1 NORM OF TEMP DIFF	RHO (ITERATION)	RHO (JACOBI)	NO ITER	L1 NORM OF TEMP DIFF	NODE	MAX TEMP CHANGE	NODE	MAX PERCENT TEMP CHANGE
1156	9.42214D+01	1	6.220930-05	1.055000+00	0.0	0.0	0.0						
1156	9.42214D+01	3	2.226280-06	1.055000+00	0.0	0.0	0.0	1	1.989680-05				
1156	9.42214D+01	1	7.759830-06	1.055000+00	0.0	0.0	0.0	2	4.849340-07	25	5.809720-01	25	7.378190-01

TABLE FOR SPECIAL MONITORING OF TEMPERATURES

NUMBER OF TIME STEPS	TIME	NODE NUMBERS AND TEMPERATURES					
1156	9.4221D+01	1 7.575210+01	3 7.995220+01	5 8.153380+01	11 8.404300+01	13 8.502400+01	
		15 8.602100+01	17 8.702710+01	19 8.788240+01	21 8.817250+01	24 7.870120+01	
		25 7.816090+01					
1157	9.44650D+01	1 2.922270-05	1.055000+00	0.0	0.0	0.0	
1157	9.44650D+01	2 4.952180-06	1.055000+00	0.0	0.0	0.0	1 1.902200-05
1157	9.44650D+01	1 4.056550-06	1.055000+00	0.0	0.0	0.0	2 5.298500-07 25 6.417390-01 25 8.210490-01
1157	9.4465D+01	1 7.575200+01	3 7.995200+01	5 8.153370+01	11 8.404300+01	13 8.502500+01	
		15 8.602180+01	17 8.701870+01	19 8.784850+01	21 8.811330+01	24 7.807010+01	
		25 7.751920+01					
1158	9.47330D+01	1 2.848780-05	1.055000+00	0.0	0.0	0.0	
1158	9.47330D+01	2 5.036020-06	1.055000+00	0.0	0.0	0.0	1 1.189500-05
1158	9.47330D+01	1 3.915830-06	1.055000+00	0.0	0.0	0.0	2 5.122800-07 25 7.083470-01 25 9.137700-01
1158	9.4733D+01	1 7.575200+01	3 7.995180+01	5 8.153360+01	11 8.404320+01	13 8.502600+01	
		15 8.602210+01	17 8.700810+01	19 8.781100+01	21 8.804960+01	24 7.737340+01	
		25 7.681080+01					
1159	9.50116D+01	1 4.415150-05	1.055000+00	0.0	0.0	0.0	
1159	9.50116D+01	2 8.232400-06	1.055000+00	0.0	0.0	0.0	1 1.022760-05
1159	9.50116D+01	1 5.192200-06	1.055000+00	0.0	0.0	0.0	2 6.792350-07 25 7.399490-01 25 9.633400-01
1159	9.5012D+01	1 7.575190+01	3 7.995170+01	5 8.153360+01	11 8.404350+01	13 8.502690+01	
		15 8.602170+01	17 8.699600+01	19 8.777210+01	21 8.798570+01	24 7.664610+01	
		25 7.607090+01					
1160	9.52902D+01	1 1.788810-05	1.055000+00	0.0	0.0	0.0	
1160	9.52902D+01	2 3.087730-06	1.055000+00	0.0	0.0	0.0	1 6.685340-06
1160	9.52902D+01	1 2.064510-06	1.055000+00	0.0	0.0	0.0	2 3.276560-07 25 7.414920-01 25 9.747380-01
1160	9.5290D+01	1 7.575190+01	3 7.995180+01	5 8.153380+01	11 8.404390+01	13 8.502780+01	
		15 8.602060+01	17 8.698250+01	19 8.773330+01	21 8.792340+01	24 7.591660+01	
		25 7.532940+01					
1161	9.55687D+01	1 6.189880-06	1.055000+00	0.0	0.0	0.0	
1161	9.55687D+01	1 6.189880-06	1.055000+00	0.0	0.0	0.0	1 4.232050-06
1161	9.55687D+01	1 1.396920-06	1.055000+00	0.0	0.0	0.0	2 6.518170-07 25 7.410980-01 25 9.838100-01
1161	9.5568D+01	1 7.575190+01	3 7.995190+01	5 8.153400+01	11 8.404440+01	13 8.502840+01	
		15 8.601880+01	17 8.696860+01	19 8.769460+01	21 8.786260+01	24 7.518660+01	
		25 7.458830+01					
1162	9.57844D+01	1 1.241790-05	1.055000+00	0.0	0.0	0.0	
1162	9.57844D+01	2 2.092130-06	1.055000+00	0.0	0.0	0.0	1 3.478260-06
1162	9.57844D+01	1 1.301250-06	1.055000+00	0.0	0.0	0.0	2 1.745460-07 25 5.748280-01 25 7.706670-01
1162	9.5784D+01	1 7.575200+01	3 7.995210+01	5 8.153420+01	11 8.404480+01	13 8.502880+01	
		15 8.601690+01	17 8.695700+01	19 8.766470+01	21 8.781630+01	24 7.462100+01	
		25 7.401350+01					
1163	9.60000D+01	1 4.539780-05	1.055000+00	0.0	0.0	0.0	
1163	9.60000D+01	2 7.684030-06	1.055000+00	0.0	0.0	0.0	1 5.271940-06
1163	9.60000D+01	1 5.777820-06	1.055000+00	0.0	0.0	0.0	2 5.847920-07 25 5.706480-01 25 7.710060-01

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HEATING6 02/12/83
WGXNP110

COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL

IBM3033/ 0
20 58 34 11-16-89

TRANSIENT TEMPERATURE DISTRIBUTION AFTER 1163 TIME STEPS, TIME = 9.600000D+01

GROSS GRID 1
I
FINE GRID 1
DISTANCE 0.0

1	1	0.0	75175
	2	0.03	77185
2	3	0.06	79195
	4	0.08	80174
3	5	0.10	81153
	6	0.57	81195
	7	1.04	82137
	8	1.51	82179
	9	1.98	83121
	10	2.45	83163
4	11	2.92	84105
	12	3.14	84154
5	13	3.35	85103
	14	3.57	85152
6	15	3.79	86101
	16	4.01	86149
7	17	4.23	86194
	18	4.45	87134
8	19	4.67	87163
	20	4.89	87179
9	21	5.10	87177
	22	5.18	83165
	23	5.25	79117
10	24	5.32	74106
11	25	5.35	73144

TEMPERATURES ON NUMBERED BOUNDARIES

BOUNDARY NUMBER	TEMPERATURE
1	82.670000
2	0.0
3	73.400000

THE CURRENT TIME STEP (DELTAT) = 2.15633342D-01

ELAPSED CPU TIME IS 14.05 SECONDS

THE MAXIMUM TEMPERATURE IS - 8.779300+01 (+-0.1 PERCENT)

MAX. TEMP. APPEARS AT NODES - 20 21

THE MINIMUM TEMPERATURE IS - 7.34428D+01 (+-0.1 PERCENT)

MIN. TEMP. APPEARS AT NODES - 25

THE TRANSIENT CALCULATIONS HAVE BEEN COMPLETED

FINAL TIME IS 9.600000D+01

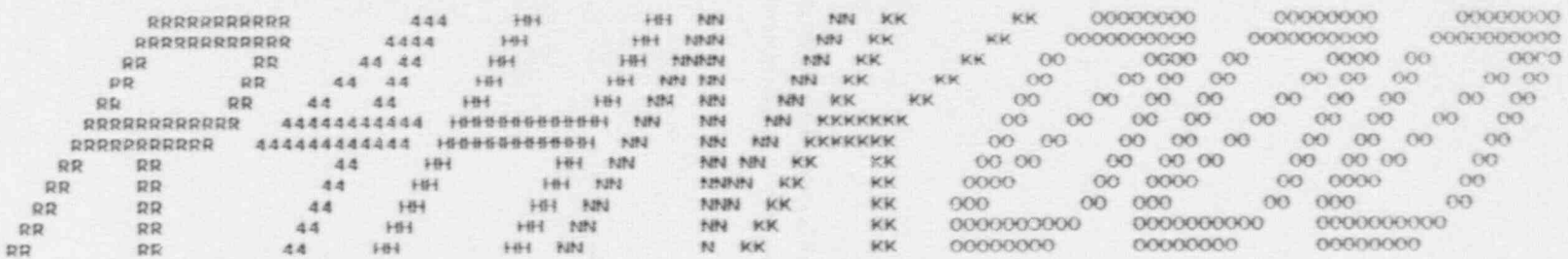
NUMBER OF TIME STEPS COMPLETED = 1163

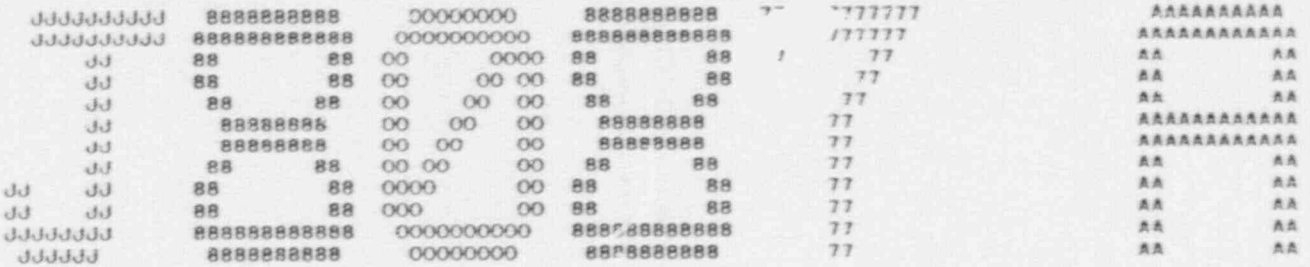
PCC

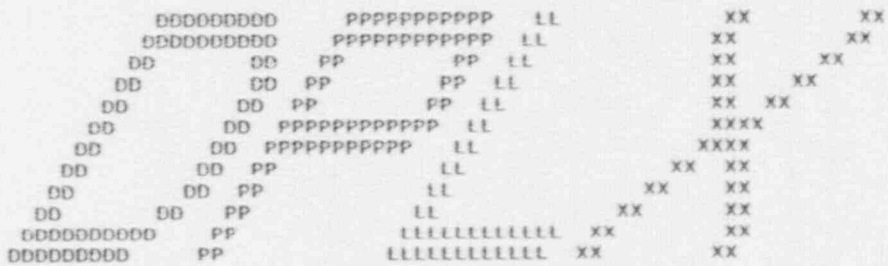
```
***** CASE NUMBER     1
***** JOB DESCRIPTION ***** COOPER NUCLEAR STATION CONTROL ROOM CEILING 1-D MODEL
***** THE CALCULATIONS FOR THIS CASE HAVE BEEN COMPLETED.
***** NUMBER OF ERRORS ENCOUNTERED IN THE INPUT DATA FOR THIS CASE WAS --     0
***** AN ATTEMPT WILL BE MADE TO READ DATA FOR A NEW CASE.

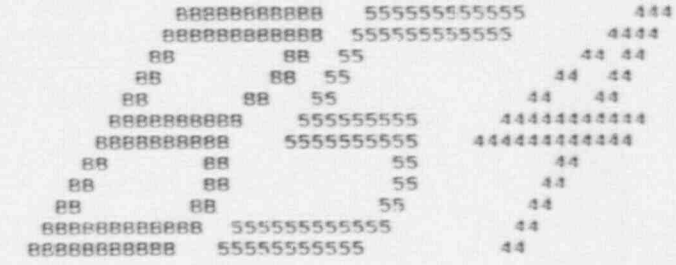
***** THE CALCULATIONS USING THE HEATING6 CODE HAVE BEEN COMPLETED.
***** NUMBER OF CASES ENCOUNTERED IN THE INPUT DATA  --      1
***** NUMBER OF ERRORS ENCOUNTERED IN THE INPUT DATA --      0
```

PCC









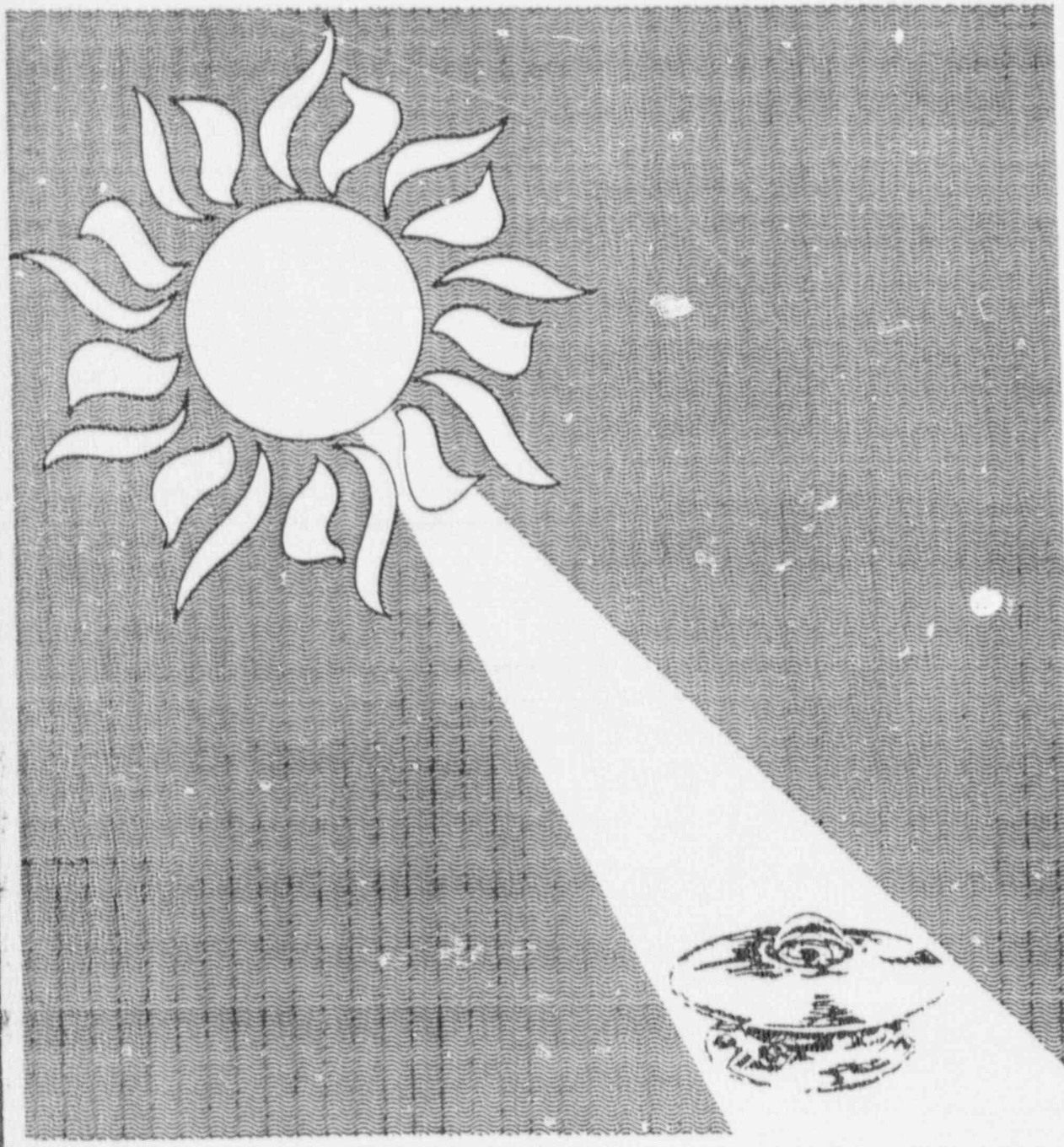
JUNE 1977 VOLUME 1 NUMBER 6

III - 1/5
NPPA - SBO - 007

MONTHLY SUMMARY SOLAR RADIATION DATA

ATTACHMENT III

NPPA - SBO - 007



noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA AND INFORMATION SERVICE / NATIONAL CLIMATIC CENTER ASHEVILLE, N.C. APRIL 1979

3. Dashes (----) in place of a solar radiation value. The dashes mean the value was missing from an observed data set, or was missing, or considered faulty in the case of an edited data set.

The qualifier flag, "*", appearing in an edited data set, points to a value which fell outside limits normally prescribed for valid data but which was not judged to be faulty. Most of the flags for edited global radiation are automatically assigned as measured radiation data are compared to a clear sky radiation model. If the measurements exceed the model by ten percent or more, they are flagged as questionable. During processing, the questionable flag may be removed or the measurement may be deleted based on the meteorological conditions for that time.

COMPUTATIONAL PROCEDURES.

Daily totals. Daily totals are the sum of all listed hourly values for the day. The first of the following criteria to be met determines the qualifier flag assigned to a daily total:

1. If any hourly value is missing (indicated by dashes), the daily total is not computed and dashes appear in the place of the daily total.

2. If any hourly value is questionable, the daily total is considered questionable as well and assumes the questionable flag, "*".

3. If the daytime hourly series contains only modeled values, the daily total represents a modeled value and is given the qualifier flag, "#".

4. If the daytime hourly series contains any estimated and/or modeled values, the daily total is considered an estimate and assumes the qualifier flag, "$".

5. Otherwise, the daily total appears without a qualifier flag.

Monthly means. Monthly means of hourly values are computed from all the listed values for the hour. The mean daily total for the month is computed from all listed daily totals. The first of the following criteria to be met determines the qualifier flag assigned to a mean value:

1. A monthly mean is not computed if:

a. Values are missing (indicated by dashes) for ten or more days during the month, or

b. Values are missing for seven or more days during the first fifteen days of the month, or

c. Values are missing for seven or more days between the sixteenth of the month and the end of the month.

The last two criteria are included to reduce the risk of computing non-representative monthly means influenced by clusters of missing data.

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SBØ-007

2. If any value contributing to the mean is questionable, the mean value is given the questionable qualifier flag, "?".

3. If all values contributing to the mean are modeled, the mean value is given the modeled qualifier flag, "#".

4. If the series contributing to the mean contains any estimated and/or modeled values, the mean assumes the estimated qualifier flag, "$".

5. Otherwise, the monthly mean appears without a qualifier flag.

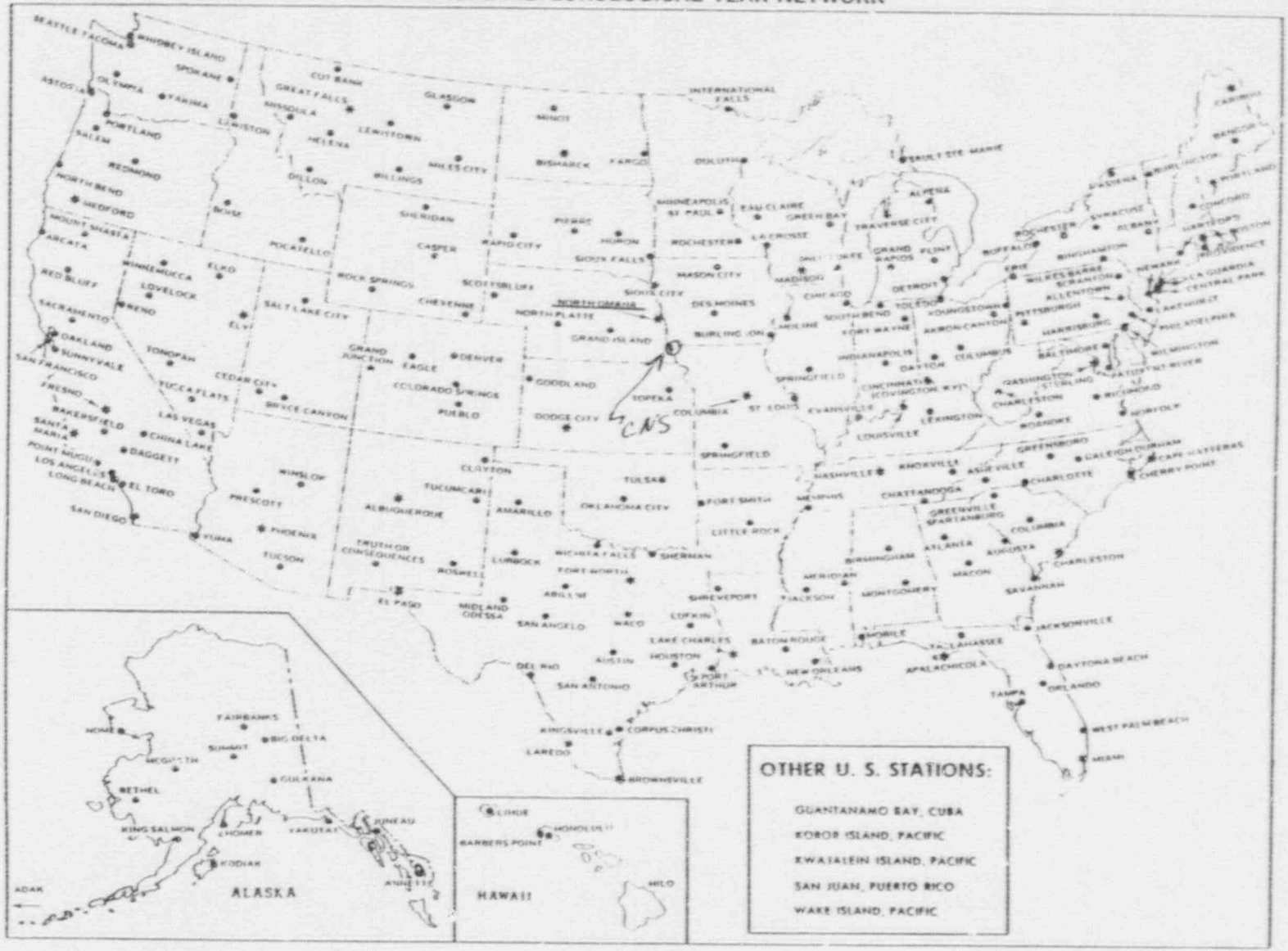
GENERAL NOTES. This section contains corrections to previously published data tables; publicizes other solar radiation data and summaries available at the National Climatic Center; describes changes to the network, instrumentation, or operating procedures; and alerts the reader to new features contained in the publication.

STATION INDEX. This listing contains names of network stations for which data are normally published. It also has information on station location, observer, and data types selected (indicated by "X") for publication in the current issue.

ABBREVIATIONS. The following are the abbreviations used in the publication:

C	code (data type)
DEG	degrees
DIF	diffuse radiation
DIR	direct radiation
E	east longitude
ELEV	elevation
GBL	global radiation
IR	infrared radiation
LAT	latitude
LON	longitude
M	meters
MIN	minutes
MSL	mean sea level
N	north latitude
ORT	other radiation type
S	south latitude
SPEC SR-75	Spectrolab Model SR-75 pyranometer
STN	station
TLT	tilt (with respect to horizontal)
UV	ultraviolet radiation
W	west longitude

TYPICAL METEOROLOGICAL YEAR NETWORK



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TYPICAL METEOROLOGICAL YEAR

NCDC-SBO-0027

PAGE NO. 3

Ref. III - 4/5

LINCOLN, NE
JUNE 1977

STATION 94918
N41.22 W096.01 ELEV (M MSL) 0404
PYRANOMETER SPEC SR-75

EDITED GLOBAL RADIATION
RADIATION FOR EACH HOUR ENDING AT LOCAL STANDARD TIME (KILOJOULES PER SQUARE METER)

DAY	C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
01	0	0	0	0	0	0	88	425	884	1588	2545	3180	3427	3485	3323	2983	2455	1822	1118	457	----	0	0	0	0	-----
02	0	0	0	0	0	0	189	803%	1577%	2254	2801	3215	3438	3424	3247	2898	2401	1742	1073	428	18	0	0	0	0	29578%
02	0	0	0	0	0	0	78	823	988	1793	2418	2491	2707	2275	1148	1109	857	1494	997	418	25	0	0	0	0	19307
03	0	0	0	0	0	0	78	823	988	1793	2418	2491	2707	2275	1148	1109	857	1494	997	428	32	0	0	0	0	28308
04	0	0	0	0	0	0	155	782	1469	2117	2650	3028	3251	3305	3157	2828	2344	1721	1033	428	32	0	0	0	0	25138
05	0	0	0	0	0	0	148	713	1472	2002	2041	2808	2790	3053	2729	2338	1987	1570	984	439	54	0	0	0	0	25138
06	0	0	0	0	0	7	245	783	1463	1926	2754	3092	3420	3508	3344	2995	2462	1832	1156	490	40	0	0	0	0	28494
07	0	0	0	0	0	4	187	898%	1595%	2257	2797	3200	3398	3456	3280	2941	2437	1800	1112	438	32	0	0	0	0	28860%
07	0	0	0	0	0	4	184	873	1321	2203	2740	3107	3398	3352	3188	2804	2322	1717	1069	389	25	0	0	0	0	28478
08	0	0	0	0	0	4	184	873	1321	2203	2740	3107	3398	3352	3188	2804	2322	1717	1069	389	25	0	0	0	0	25192%
09	0	0	0	0	0	7	187	850%	1418	1926	2614	3085	3280	3348	2603	2005	1260	1004	1037	500	68	0	0	0	0	26591
10	0	0	.	0	0	4	7	778	1422	2088	2508	2992	3204	3244	2488	2653	2171	1582	1040	410	22	0	0	0	0	25134
11	0	0	0	0	0	4	180	799	1462	1530	1878	1922	3053	1800	482	324	317	842	1098	310	54	0	0	0	0	15855
12	0	0	0	0	0	0	40	266	886	817	446	284	335	328	466	1055	1145	1523	1159	302	25	0	0	0	0	8861
13	0	0	.	0	0	11	58	180	270	353	1307	1231	1321	1912	1030	1408	1048	817	421	364	50	0	0	0	0	11781
14	0	0	0	0	0	4	130	634	1141	1837	2642	3010	2603	2426	2380	2833	2214	1577	1015	428	54	0	0	0	0	25028
15	0	0	0	0	0	7	140	745	1418	2041	2580	2999	3193	3244	2848	2732	2328	1717	1037	450	68	0	0	0	0	27525
16	0	0	0	0	0	7	238	173	823	1246	382	547	2135	2621	3046	3028	1840	742	724	486	40	0	0	0	0	17878
17	0	0	0	0	0	0	140	850%	1544	1577	191	310	277	299	1253	2750	2452	1782	1109	346	54	0	0	0	0	14934%
18	0	0	0	0	0	14	263	976%	1485	1840	2344	2736	3416	3492	2898	2498	2347	1586	1098	317	61	0	0	0	0	27331%
19	0	0	0	0	0	22	212	828%	884	2021	2747	3046	3333	3402	3395	2988	2495	1825	1127	490	61	0	0	0	0	28058%
20	0	0	0	0	0	14	94	191	472	1534	2700	3110	3344	3373	3218	2894	2380	1771	1123	468	18	0	0	0	0	26704
21	0	0	0	0	0	0	58	79	126	144	101	155	101	184	284	446	317	972	1213	403	61	0	0	0	0	4644
22	0	0	0	0	0	0	88	266	713	1022	1649	2426	2884	2148	2124	2034	954	1112	659	367	22	0	0	0	0	18448
23	0	0	0	0	0	0	50	374	560	490	855	1732	1800	2232	1483	2088	1753	1184	877	346	83	0	0	0	0	15827
24	0	0	0	0	0	7	259	774	1537%	2059	2707	2790	2835	2718	3186	2225	1750	1037	713	317	40	0	0	0	0	24754%
25	0	0	0	0	0	11	198	898%	1570%	2218	2768	3182	3420	3460	3301	2948	2437	1825	1141	500	65	0	0	0	0	29840%
26	0	0	0	0	0	11	194	875%	1534%	2174	2718	3150	3316	3380	3251	2884	2412	1822	1004	472	68	0	0	0	0	29285%
27	0	0	0	0	0	11	187	830%	1508	2156	2704	3100	3326	3380	3215	2869	2408	1800	1058	198	25	0	0	0	0	28784%
28	0	0	0	0	0	4	83	227	398	540	220	799	1813	2992	3330	3042	2480	1828	1177	522	58	0	0	0	0	18312
29	0	0	0	0	0	0	94	749	1528%	2174	2740	3139	3384	3452	3278	2814	2117	1339	804	436	54	0	0	0	0	27098%
30	0	0	0	0	0	4	173	497	862	1609	2182	----	----	----	----	----	----	----	----	----	----	0	0	0	0	-----
MEAN		0	0	0	0	5	143	621%	1117%	1660	2044	2410%	2682%	2734%	2516%	2386%	1927%	1495%	1003%	412%	46%	0	0	0	0	23060%

EXHIBIT III-51
NRC-SEP-007

ENERCON SERVICES, INC.

SHEET IV-1 OF 5

JOB NO. NP-110 DATE 12/13/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR T Holcomb

REVIEWER J Gasaway APPROVED

CALCULATION NO. NPPI - SBØ - 007

ATTACHMENT IV

CNS CONTROL ROOM ROOF INSULATION INFORMATION

NPM-SB0-007 10/24/89

ED HOLCOMB,

IT TURNS OUT THAT THE ENTIRE CONTROL BLDG ROOF WAS REPLACED ABOUT SIX MONTHS AGO. THE ATTACHED LETTER DETAILS THE SPECIFICATIONS FOR THE NEW CONTROL BLDG ROOF. I CALLED THE FIRESTONE TECHNICAL SERVICES DEPARTMENT (1-800-428-4511) AND ASKED THE R VALUE FOR 2 5/8" OF FIRESTONE ISO 95 ROOF INSULATION. I WAS INFORMED IT WAS R20. THE FIRESTONE ADDRESS IS BELOW.

FIRESTONE BUILDING PRODUCTS CO.
3500 W. DEPAUW BLVD
INDIANAPOLIS, IN 46268.

IF YOU HAVE ANY QUESTIONS PLEASE CALL!!

- Bill

INDEPENDENT ROOFING CO.

901 South 40th Street • Omaha, Nebraska 68105 • Phone (402) 348-0909

NPPT-5B0-007
IV-3/5
Ltr Dtd

April 25, 1989

6

Gary Stuchal
Nebraska Public Power District
Post Office Box 98
Brownville, Nebraska

RE: AS BUILT DRAWINGS
CONTRACT 87-30

Gary:

Listed below are the specifications used for each roof:

Rad Waste Roof:

Firestone Building Products
Fully Adhered Roof System
Firestone ISO 95 Roof Insulation
2 5/8" Thickness
Rawl Drive Mechanical Fastners

Penthouse roof insulation was replaced per Firestone recommendations.

Control Building Roof:

Firestone Building Products
Fully Adhered Roof System
Firestone ISO 95 Roof Insulation
2 5/8" Thickness
Rawl Drive Mechanical Fastners

Machine Shop/Water Treatment Roof:

Firestone Building Products
Ballasted Roof System
Firestone ISO 95 Roof Insulation
2 5/8" Thickness
Firestone AP Roof Fastners

MEMBER MIDWEST ROOFING CONTRACTORS ASSOCIATION

JOB NO. NF-110 DATE 11/30/89
PROJECT CNS STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E Holcomb
REVIEWER [illegible] APPROVED
CALCULATION NO. NPP1-SBO-007

SUMMARY OF TELEPHONE CONVERSATION

DATE: October 23, 1989

FROM: John Brandon, Enercon Sevices

TO: Mark Eastwood, Firestone Building Products

TEL. NO: 1-800-428-4511

SUBJECT: NPPD Control Building Roof Insulation and Waterproofing

Mr. Mark Eastwood of Firestone was contacted concerning the thermal properties of Firestone ISO 95 2-5/8" Roof Insulation. The following information was given:

Material

ISO 95 consists of a polyisocyanate (urethane) foam matrix containing Freon F-11 gas.

JOB NO. NP-110 DATE 11/30/89
PROJECT ONE STATION BLACKOUT (SBO)
SUBJECT CONTROL ROOM HEATUP
CLIENT NPPD ORIGINATOR E. Holcomb
REVIEWER [illegible] APPROVED
CALCULATION NO. NPP1-SBO-007

Thermal Properties

Density = 1.9 lb/cu ft

Thermal Conductivity = 0.131 BTU-in/hr-sq ft-F

Specific heat was not known; however, Mr Eastwood recommended that the specific heat of Freon R-11 be used since it makes up the bulk of the volume of the insulation material.

Waterproofing

Mr. Eastwood also stated that a layer of waterproofing material is always applied on top of the ISO 95 insulation. A thin layer, less than one inch, of rubber or asphalt is commonly used.

ENERCON SERVICES, INC.

JOB NO. NP-110 DATE 12/12/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR [illegible]

REVIEWER [illegible] APPROVED

CALCULATION NO. NPPI - SBO - 007

ATTACHMENT V

SUMMARY of CONTROL ROOM ELECTRICAL LOADS

JOB NO. NP-110 DATE 12/12/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Pulvenaite

REVIEWER [illegible] APPROVED

CALCULATION NO. NPPD-580-007

SUMMARY of CONTROL ROOM ELECTRICAL LOADS

EMERGENCY LIGHTING (30 - 12W BULBS)	360 W
INDICATING LIGHTS (SHEETS 4 & 5 of NEDC-89-1947)	344 W
AC LOADS	
COMPUTER SYSTEM (Exhibit B)	3960 W
NO-BREAK POWER PANEL (see calc. #1947)	4753 W
SECURITY SYSTEM (Exhibit C & calc. #1947)	1494 W
DC LOADS	
DIV. I and DIV. II (see CALC. #1947 & Exhibit A)	2721 W
ANNUCIATORS (Exhibit D)	1938 W
PERSONNEL (see Ref. 10)	879 W
TOTAL	16,449 W

NOTE: REFER TO NPPD CALC. NEDC-89-1947 FOR A DETAILED BREAKDOWN OF AC and DC LOADS.

ENERCON SERVICES, INC.

SHEET V-5 OF 6

JOB NO. NP-110 DATE 12/12/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Wiecamb

REVIEWER [illegible] APPROVED

CALCULATION NO. NPP1-SBØ-007

EXHIBIT A

LOAD SUBDIVISION BY BOARD (NBPP & DC) (a)

(CONTROL ROOM)

BOARD	I	V	POWER	
A	0.25 A	125 VDC	31.25 W.	
B	0.559	120 - 125 VDC	67.393	
	1.1055	110 - 125 VDC	135.5375	
F	0.3302	125 VDC	41.275	
FA	1.003	110 - 125 VDC	122.010	
	3.029	110 - 125 VDC	378.190	
	1.375	120 VAC	165.0	$\cos\theta = 1$
H	1.84	120 VAC	220.8	$\cos\theta = 1$
K	0.072	125 VDC	9.0	
9-2	1.078	120 VAC	129.36	$\cos\theta = 1$
9-3	0.954	125 VDC	119.25	
	5.3515	125 VDC	668.9375	
9-4	14.791	120 VAC	1774.920	$\cos\theta = 1$
	0.6875	125 VDC	85.9375	
9-13	0.4709	125 VDC	58.8625	
9-15	3.9895	110 - 125 VDC	498.5225	
9-17	4.040	125 VDC	505.125	
9-18	1.204	120 VAC	144.48	$\cos\theta = 1$
9-27	—	—	2318.4 W	$\cos\theta = 0.8$
		TOTAL	7474.2505 WATTS	

(a) SEE NPPD CALC. NEDC-89-1947.

V-4/6
NPP1-580-007

EX B

EXHIBIT B

CNS CONTROL ROOM
COMPUTER SYSTEM LOAD SUMMARY

- Breakers #13 and #14 of No-Break Panel (120 VAC)

5 Franklin Model FT-286 Telecom Display Units @ 600W ea.	3000W
1 IBM 13" Monitor	120W
1 Printer	440W
4 Mega Trend CRT's @ 100W ea.	400W
TOTAL =	3960W

V-5/6
EX 03

CALC. NPPI-580-007

EXHIBIT C

BAS CONSOLE HEAT LOAD AND STEADY STATE AMPERES

1. Uninterruptible Power Supply (UPS)

NORMAL LOAD WATTS	BTU/HR
1494 W	5098

NORMAL LOAD AMPERES
12.45 A

2. NON-UPS

CONVENIENCE LOAD WATTS	BTU/HR
480 W	1638

CONVENIENCE LOAD AMPERES
4 A

NOTE: The NON-UPS loads represent an estimated value during BAS Console Maintenance. Under normal conditions, no load is present on the power distribution system.

NOTED
OCT 27 1989
W.I.S.

CALC. NPP-SB0-007
FOR INTER-DISTRICT BUSINESS ONLY

Date October 11, 1989

To W. L. Swantz - Columbus General Office

From A. M. Morisi - Columbus General Office

Subject Annunciator System Lampbox Station Blackout Heat Loading

The purpose of this memo is to provide an engineering evaluation of the Control Room heat loading during a Station Blackout condition due to the control panel Annunciator System lampboxes.

The total number of annunciator windows will be 1276, of which 307 are spares. Thus, there will be 969 active windows.

The estimated heat loading during a Station Blackout condition would therefore be 1938 watts. This value was determined based on the following assumptions:

1. The most lights to be energized under the worst case scenario is 50% of the active windows.

2. All electrical input is converted to heat.

Based on these assumptions and the wattage value for the type of bulbs being used: part No. 1829 (refer to attached Ronan Drawing 15-5311-D9, Revision 1); 2 watts each (refer to attached Rona Lamp Cabinet and Indicator catalog pages), the total wattage was calculated as follows:

	Total number of active windows	= 969
times	2 bulbs/window	= 1,938
times	2 watts/bulb	= 3,876
times	50% of the active windows ON at any one time	= 1,938 watts

Alan M. Morisi

A. M. Morisi
Engineering Consultant
Nuclear Projects & Construction

AMM:dh96.1b

ENERCON SERVICES, INC.

SHEET VI-1 OF 6

JOB NO. NP-110 DATE 12/11/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E Holcomb

REVIEWER [illegible] APPROVED

CALCULATION NO. NPPI-SBO-007

ATTACHMENT VI

DETAILS of LEAKAGE COEFFICIENT CALCULATIONS

for CONTEMPT-LT/028 INPUT DECK

LEAKAGES

a) SE DBL. DOORS (TO SOUTH)

W = 6' 5" from DWG. 4526

- Assume 1/2" clearance between door and floor

$A_T = 6.4167' * 1/2" * 1/12 = 0.2674\ ft^3$

$A_T/A_{IN} = 4.5061E-03$

$A_{IN} = A_{EXIT} = \underset{\text{CORRIDOR WIDTH}}{7.4167'} * \underset{\text{DOOR HT.}}{8'} = 59.3336\ ft^3$

b) NE DBL. DOORS (TO COMPUTER ROOM)

W = 5.5' (SCALING from DWG.)

- Assume 1/2" clearance between door and floor

$A_{IN} = 5.5' * 11.33' = 62.32$

$A_{EXIT} = \text{same} = 62.32$

$A_T = 1/2" * 1/12 * 5.5' = 0.2292\ ft^2$

$A_T/A_{IN} = \dfrac{A_T}{A_{EXIT}} = \dfrac{1/24}{11\frac{1}{3}} = 3.6765E-03$

Assume crack width = 0.1" for top and sides; 0.5" for bottom.

ASHRAE — From p. 21.4, $Q = C(\Delta p)^n$. Let $n = 1$.

$$\dot{m} = \rho Q = C \rho \Delta P$$

LT26 MANUAL — p. 20 $\dot{m} = K_L \rho \Delta P$

$C \equiv$ vol. flow / unit length (or area) / unit ΔP

Thus, $C \cdot L = K_L$, or $C \cdot A = K_L$, but simpler just to equate flows.

a) The average crack width is $(3 * 0.1" + 0.5")/4 = 0.2"$

b) Using Fig. 7 on ASHRAE pg. 21.7,

$Q \cong 680$ cfm @ 0.2" and @ $\Delta P = 0.30$ in. H_2O

The perimeter of the elevator door in Fig. 7 is $2 * (3.5 + 7') = 21'$.

CNS

SE DOOR - perimeter = $2 * (6.4167' + 8') = 28.83'$

NE DOOR - " = $2 * (5.5 + 8') = 27'$

$$\Rightarrow Q_{SE} = \frac{28.83}{21} * 680 = 934 \text{ cfm}$$

$$Q_{NE} = \frac{27}{21} * 680 = 874 \text{ cfm}$$

along Fig. 7,

$$0.30 \text{ in. } H_2O = 75 \frac{N}{m^2} * \frac{1 m^2}{39.37^2 in^2} * \frac{1 lbf}{4.44822 N}$$

$$= 0.010878 \ lbf/in^2$$

Adjust Q for different ΔP according to $(\Delta P/.30)^{0.515}$ or $(\Delta P/.75)^{0.55}$, all Fig. 7.

inches H_2O	ΔP lbf/in^2	Q_{SE} (CFM)	Q_{NE}	$K_{L_{SE}}$	$K_{L_{NE}}$
0.0	0.0	0.	0.		
0.01	3.626E-04	144.	135.	2.3828E7	2.2334E7
0.1	3.626E-03	510.	478.	8.4391E6	7.9095E6
0.3	0.010878	934	874	5.1517E6	4.8207E6
0.6	0.021756	1367	1280	3.7700E6	3.5301E6
0.9	0.032634	1709	1599	3.1421E6	2.9399E6
1.2"	0.043512	2002	1873	2.7606E6	2.5827E6
27.578"	1.0	11227	10505	6.7362E5	6.3030E5

Use the smaller door (and flow rate) for the LT28 input deck to be conservative.

SAMPLE CHECK OF TABULATED VALUES

$$\dot{m} = \rho Q = K_L \rho (p_i - p_e)$$

$$\Rightarrow Q = K_L \Delta P \quad ; \quad Q \text{ from Fig. 7.}$$

$$\Rightarrow K_L = Q/\Delta P$$

Equate flows, then convert Q to CFH and divide by ΔP.

e.g.

$$Q = 934 \text{ CFM} = 56{,}040 \ \frac{ft^3}{hr}$$

$$Q/\Delta P = \frac{Q}{0.010878 \ \frac{lb_f}{in^2}} = 5.1517E06 \ \frac{ft^3 - in^2}{hr - lb_f}$$

$$= 1.4310E03 \ \frac{ft^3 - in^2}{sec - lb_f}$$

code input units

NORMAL LEAKAGE

		ΔP	K_L
30301	0	0.	0.
30302	0	3.626E-04	2.2339E7
30303	0	3.626E-03	7.9095E6
30304	0	0.010878	4.8207E6
30305	0	0.021756	3.5301E6
30306	0	0.032634	2.9399E6
30307	0	0.043512	2.5827E6
30308	0	1.0	6.3030E5

ENERCON SERVICES, INC.

SHEET _____ OF _____

JOB NO. NP-110 DATE 12/12/89

PROJECT CNS STATION BLACKOUT

SUBJECT CONTROL ROOM HEATUP

CLIENT NPPD ORIGINATOR E. Hunt

REVIEWER _____ APPROVED _____

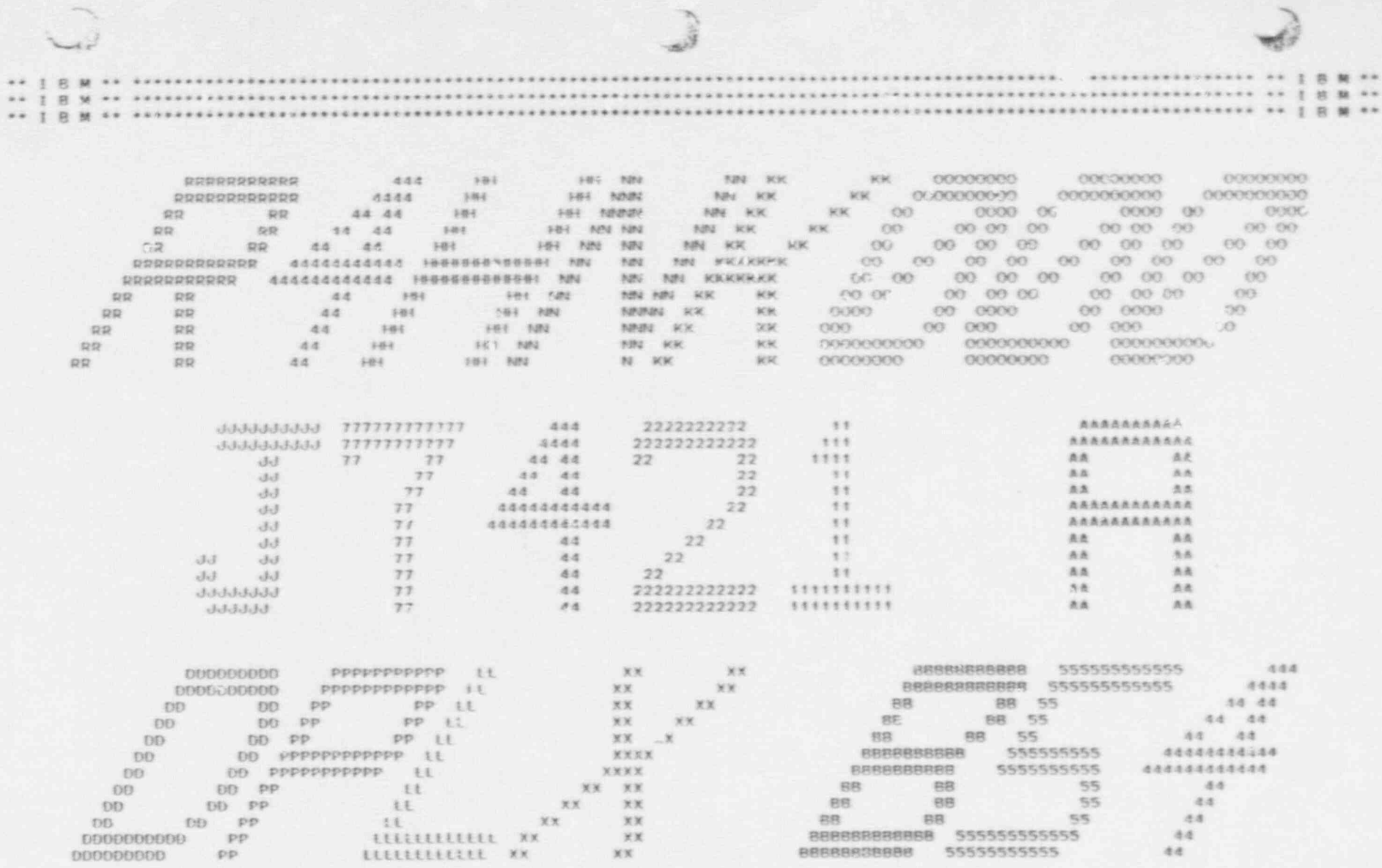
CALCULATION NO. NPPI-SB0-007

ATTACHMENT VII

CONTEMPT-LT/028 INPUT and OUTPUT

for the

4-HOUR SB0 SIMULATION



** I B M ** START JOB 7421 R4HNK000 FX2104 ZC2025 ROOM -B54 20.11.17 - 89.349 - PRT3 - SYSOUT - A ** I B M **
** I B M ** START JOB 7421 R4HNK000 FX2104 ZC2025 ROOM -B54 20.11.17 - 89.349 - PRT3 - SYS ... - A ** I B M **
** I B M ** START JOB 7421 R4HNK000 FX2104 ZC2025 ROOM -B54 20.11.17 - 89.349 - PRT3 - S... - A ** I B M **

********** JES2 NEWS BULLETIN **********

QUESTIONS? CALL POWER COMPUTING IBM CUSTOMER SUPPORT AT 1-800-527-6003

```
**********************************************************
**          POWER COMPUTING COMPANY QALIB               **
**            CONTEMPT NEWS BULLETIN                    **
**********************************************************


ACCESS
******

BEGIN,.CNTMPT,VER=  ,I=  ,O=  ,CM=  ,EC=  ,NEWS=  ,WATER= ,
              PLOT=  ,GDFILE=  .
              PLOTTER=  .  (  PLOTTING PARAMETERS).

THE FOLLOWING VERSION(S) ARE AVAILABLE

VER=
-------
JUL92               CONTEMPT LT-28 FROM NESC (ARGONNE)
                    INCLUDES ENERGY INC. MODIFICATIONS
                    TO FIX THE MK I & MK II MODELS,
                    AND THE PRESSURE-FLASH MODEL.
                    THIS VERSION IS THE SAME AS THE CONTEMPT
                    LT28 V=JUL82 ON NOS/BE.

THE PARAMETERS AND THEIR DEFAULTS AND DESCRIPTIONS ARE
  VER=              VERSION (NO DEFAULT - MUST BE EQUAL TO THE
                             VALUE LISTED ABOVE)
  NEWS=YES          PRINT THE NEWS FILE (MUST = YES OR NO)
  CM=               CENTRAL MEMORY IN OCTAL WORDS (DEFAULT=360000)
  EC=               EXTENDED CORE IN THOUSAND OCTAL WORDS (DEFAULT=1)
  I=                INPUT FILE (DEFAULT=INPUT)
  O=                OUTPUT FILE (DEFAULT=OUTPUT)
  WATER=            PERMANENT FILE NAME OF WATER TABLES
                    (WATER DEFAULTS TO PCC'S QALIB WATER TABLE FILE)
  PLOT=NO           PLOT THE PCCGDF IF IT EXISTS ( MUST = YES OR NO)
  GDFILE=PCCGDF     ---+
  PLOTTER=CENTRAL     +
  H=HANDLES           +
  P1=   --+           +
  P2=     |  PLOTTER    --- STANDARD PCCPOST PLOTTING PARAMETERS          +
  P3=     +-DEVICE    +
  P4=       DRIVER    +
  P5=       PARMS.    +
  P6=   --+-----------+

                                        .....CONTINUED
```

7 PCC

INF 06 MDI K BH#K0001 2025

PCC

```
      ********************************************************
      **          POWER COMPUTING COMPANY QALIB             **
      **            CONTEMPT NEWS BULLETIN                  **
      ********************************************************


ACCESS
******

BEGIN,.CNTMPT,VER=   ,I=   ,O=   ,CM=   ,EC=   ,NEWS=   ,WATER= .
                PLOT=   ,GDFILE=   .
                PLOTTER=   .   ( PLOTTING PARAMETERS).

THE FOLLOWING VERSION(S) ARE AVAILABLE

VER=
-------
JUL82                   CONTEMPT LT-28 FROM NESC (ARGONNE)
                        INCLUDES ENERGY INC. MODIFICATIONS
                        TO FIX THE MK I & MK II MODELS,
                        AND THE PRESSURE-FLASH MODEL.
                        THIS VERSION IS THE SAME AS THE CONTEMPT
                        LT28 V=JUL82 ON NOS/BE.

THE PARAMETERS AND THEIR DEFAULTS AND DESCRIPTIONS ARE
  VER=              VERSION (NO DEFAULT - MUST BE EQUAL TO THE
                             VALUE LISTED ABOVE)
  NEWS=YES          PRINT THE NEWS FILE (MUST = YES OR NO)
  CM=               CENTRAL MEMORY IN OCTAL WORDS (DEFAULT=360000)
  EC=               EXTENDED CORE IN THOUSAND OCTAL WORDS (DEFAULT=1)
  I=                INPUT FILE (DEFAULT=INPUT)
  O=                OUTPUT FILE (DEFAULT=OUTPUT)
  WATER=            PERMANENT FILE NAME OF WATER TABLES
                    (WATER DEFAULTS TO PCC'S QALIB WATER TABLE FILE)
  PLOT=NO           PLOT THE PCCGDF IF IT EXISTS ( MUST = YES OR NO)
  GDFILE=PCCGDF     ---+
  PLOTTER=CENTRAL      +
  H=HANDLE             :
  P1=    --+           +
  P2=      PLOTTER     --- STANDARD PCCPOST PLOTTING PARAMETERS          *
  P3=     +-DEVICE     +
  P4=      DRIVER      *
  P5=      PARMS       +
  P6=    --+-----------+

                                        .....CONTINUED
```

PCC

DOCUMENTATION
****

NAME AND DATE OF MANUAL	ORDER FROM
USER'S MANUAL NUREG/CR-0255 (MAR. 79) "CONTEMPT-LT/028 - A COMPUTER PROGRAM FOR PREDICTING CONTAINMENT PRESSURE-TEMPERATURE RESPONSE TO A LOSS-OF-COOLANT ACCIDENT"	PCC TECHNICAL LIBRARY

SUPPORT
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FOR SUPPORT, CONTACT THE POWER COMPUTING COMPANY CYBER HELPDESK AT:
(214) 655-8676 OR, (800) 351-1893 (US)
(800) 442-6407 (TX)

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LISTING OF INPUT DATA FOR CASE 1

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    1   *  COOPER NUCLEAR STATION CONTROL ROOM HEATUP ANALYSIS
    2   *     SINGLE VOLUME MODEL OF CONTROL ROOM
    3   *     UNIFORMLY DISTRIBUTED HEAT LOAD
    4   11000   BRITISH
    5   11001   4.000  6  0  31.4  14.7  0.60  90.  0.  0.  0.  0.  1.  1.  20.
    6   *        VOL    VOLL   TV    TL    PRT    HUM   ASURF   CHTC   CMTC  PFLASH
    7   10011   0.2    0.     73.4  73.4  14.7   0.60  1.      1.     1.
    8   10031 54018.   0.     73.4  73.4  14.7   0.40  4454.   1.     1.    0.
    9   *  TIMESTEP CONTROL
   10   9000   SEC
   11   9001    60.    0.1    100    300
   12   9002   600.    0.1    600   3000
   13   9003  2400.    0.1    600   3000
   14   9004 14400.    0.1   3000  18000
   15   *  OUTSIDE AIR TEMPERATURE
   16   1001      0.0   91.4   0.2
   17   1002      1.    92.8   0.2
   18   1003      2.    93.7   0.2
   19   1004      3.    94.0   0.2
   20   1005      4.    93.7   0.2
   21   1006     24.    93.7   0.2
   22   *  DECAY POWER TABLE MULTIPLIERS FOR HEAT STRUCTURES
   23   101       0.    1.0
   24   102   15000.    1.0
   25   *  MULTIPLIERS USED FOR CONSISTENCY W/4XX CARDS
   26   201       0.    0.0
   27   202   15000.    0.0
   28   300   SEC  LBM/SEC   BTU/LBM
   29   301     0.     0.       0.
   30   302 14400.     0.       0.
   31   *  ENERGY MULTIPLIERS FOR USE W/1XX & 2XX CARDS
   32   401       0.    1.0    1.0
   33   402   15000.    1.0    1.0
   34   *  DISTRIBUTED HEAT RELEASE WITHIN VOLUME
   35   *  INCLUDES ALL INTERNAL ENERGY IN CONTROL ROOM
   36   *        TIME      MDOT      QDOT
   37   *        HR        LBM/HR    BTU/HR
   38   501       0.      0.0      56140.
   39   502       4.      0.0      56140.
   40   ** CONTROL ROOM LEAKAGE **
   41   30301     0.        0.          0.
   42   +  3.626E-04      2.2339E+07
   43   +  3.626E-03      7.9095E+06
   44   +  0.010878       4.8207E+06
   45   +  0.021756       3.5301E+06
   46   +  0.032634       2.9399E+06
   47   +  0.043512       2.5827E+06
   48   +  1.0            6.3030E+05
   49   ****  HEAT STRUCTURES ****
   50   **
   51   101000 'NORTH WALL'
   52   101001  14  3  0  0.  0.  0.  726.3  0  3
   53   101101      8     2.0
   54   101102      4     2.3333
   55   101103      1     2.3854
   56   101201      1     *CONCRETE
```

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SAMPLE JOB SETUPS FOR CYBER NOS2 SYSTEM.

1. EXECUTE CONTEMPT, SAVE PLOT DATA PCCGDF.

```
JOB...
USER,...
CHARGE,...
ATTACHP,CNTMPTLT2B,,QALIB.
PFGET,PF=INFILE.
BEGIN,,CNTMPT,VER=JUL82,I=INFILE.
PFSAVE,LF=PCCGDF,PF=PERMFIL.
```

2. EXECUTE CONTEMPT, RUN THE PLOT PROGRAM, PCCPOST,
AND PLOT THE OUTPUT AT THE CENTRAL DALLAS SITE.
(INPUT DATA IS IN THE SECOND RECORD FOLLOWING THE JCL.)

```
JOB...
USER,...
CHARGE,...
ATTACHP,CNTMPTLT2B,,QALIB.
PFGET,PF=URFILE.
COPYBR,INPUT,HANDLE.
BEGIN,,CNTMPT,VER=JUL82,PLOT=YES.
--- /*EOR ---
ADDRS. YOUR NAME.
ADDRS. YOUR COMPANY.
ADDRS. STREET ADDRESS.
ADDRS. CITY-STATE-ZIP
INSTR. PLS SEND PLOTS BY EXPRESS DELIVERY, ETC...
--- /*EOR ---
 -DATA FOR CONTEMPT-LT2B GOES HERE-
--- /*EOF ---
```

3. RUN THE STANDARD TEST PROBLEM.

```
JOB...
USER,...
CHARGE,...
ATTACHP,CNTMPTLT2B,,QALIB.
ATTACHP,CNTMPTLT2B,,QALIB,SAMPINP.
BEGIN,,CNTMPT,VER=JUL82,I=TAPE5,PLOT=YES,M=INPUT.
--- /*EOR ---
ADDRS. YOUR NAME.
ADDRS. YOUR COMPANY.
ADDRS. STREET ADDRESS.
ADDRS. CITY-STATE-ZIP
INSTR. PLS SEND PLOTS BY EXPRESS DELIVERY, ETC.
```

********** PCC QALIB CONTEMPT-LT2B NEWS BULLETIN END **********

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```
    57  101202     2      *AIR
    58  101203     3      *FACED PANELS
    59  101300     0   0.
    60  101400     1   1   50   4
    61  101410                 73.4
    62  **
    63  102000 'ROOF & CEILING'
    64  102001  16  5  0  12.  0.  0.  3235.  3  0
    65  102101      1    12.0625
    66  102102      1    12.1042
    67  102103      2    12.4792
    68  102104      5    14.9167
    69  102105      6    17.1042
    70  102201      5      *ACOUSTIC TILE
    71  102202      4      *GYPSUM
    72  102203      8      *AIR
    73  102204      9      *AIR
    74  102205      1      *CONCRETE
    75  102300     0   0.
    76  102400     6   4    4   0
    77  102410     73.4
    78  440001    70. 0.6138  80. 0.4828  90. 0.4785 100. 0.4742
    79  +        110. 0.5920 120. 0.6716 150. 0.8250
    80  **
    81  103000 'FLOOR'
    82  103001   4  1  0  0.  0.  0.  4454.  0  3
    83  103101      3     0.6666667E0
    84  103201      1      *CONCRETE
    85  103300     0   0.
    86  103400    6   0    5   4
    87  103410                 73.4
    88  430001       0.0     0.25
    89  430002  14400.       0.25
    90  **
    91  104000 'SOUTH WALL'
    92  104001    9  1  0  71.5   0.  0.  913.2   3  0
    93  104101     8    73.5
    94  104201     1      *CONCRETE
    95  104300     0   0.
    96  104400    50   4    50   0
    97  104410     73.4
    98  **
    99  **
   100  105000 'WEST WALL'
   101  105001    9  1  0   0.    0.  0.  990.38   0  3
   102  105101     8     2.0
   103  105201     1      *CONCRETE
   104  105300     0   0.
   105  105400    50   0    50   4
   106  105410                 73.4
   107  **
   108  106000 'EAST WALL'
   109  106001  19  5  0  0.  0   0.  787.7   3  0
   110  106101      1     0.05208
   111  106102      4     0.3854
   112  106103      8     2.3854
   113  106104      4     2.7187
   114  106105      1     2.7708
```

```
  115     106201       3      *FACED PANELS
  116     106202       2      *AIR
  117     106203       1      *CONCRETE
  118     106204       2      *AIR
  119     106205       3      *FACED PANELS
  120     106300     0   5
  121     106400    50    4    50  0
  122     106410      73.4
  123     **
  124     *** MATERIAL PROPERTIES ***
  125     **              K       RHO*CP
  126     410001      1.05      22.152     *CONCRETE
  127     410002     0.0731      0.01752   *WALL AIR
  128     410003     0.067       9.86      *FACED PANELS
  129     410004     0.062      13.209     *GYPSUM
  130     410005     0.035       3.22      *ACOUSTIC TILE
  131     410006     0.0938     24.5       *WATERPROOFING
  132     410007    31.0        54.279     *STEEL
  133     410008     0.2119      0.01752   *ROOF AIR 1
  134     410009     0.5509      0.01752   *ROOF AIR 2
  135                ***END OF DATA DECK***
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BRITI UNITS USED FOR INPUT AND OUTPUT WHERE UNITS ARE UNSPECIFIED.

PROBLEM END TIME= 4.000000E+00 HRS. NO. HEAT STRUCTURES= 6 PRESSURE SUPPRESSION OPT.= 0
OUTSIDE AIR TEMPERATURE = 9.140000E+01 F PRESSURE = 1.470000E+01 PSIA HUMIDITY = 6.000000E-01
CONSTANT TEMP. FOR HEAT SLABS= 9.000000D+01 F STEP WATER TO DRY WELL = 0. LBM, WITH STEP ENERGY = 0. BTU
PRIMARY SYSTEM END-OF-BLOWDOWN WATER CONTENT = 0. LBM,WITH ENERGY = 0. BTU
PROBLEM EXECUTION STOPS WHEN TOTAL PRESSURE EXCEEDS 20.0000 PSIA.

SPRAY-ECC HEAT EXCHANGER, NO. 1
TYPE = 0 HEAT TRANSFER AREA = 0. OVERALL H.T. COEFF. = 0. COOLANT INLET TEMP = 0.
INLET MASS FLOW = 0.
PRESSURE FOR SPRAY ON AND OFF = 0. , 0.

SPRAY-ECC HEAT EXCHANGER, NO. 2
TYPE = 0 HEAT TRANSFER AREA = 0. OVERALL H.T. COEFF. = 0. COOLANT INLET TEMP = 0.
INLET MASS FLOW = 0.
PRESSURE FOR SPRAY ON AND OFF = 0. , 0.

COMP. = 1 VOL. = 2.000000D-01 LIQ VOL= 0. VAPOR VOL= 2.000000D-01 HUMIDITY= .6000 TOTAL PRESSURE= 1.470000D+01
VAPOR TEMPERATURE= 7.340000D+01 LIQ. TEMP.= 7.340000D+01 SURF. AREA= 1.000000D+00
HEAT TRANS. MULT.= 1.000000D+00 MASS TRANS. MULT.= 1.000000D+00

COMP. = 3 VOL. = 5.401800D+04 LIQ VOL= 0. VAPOR VOL= 5.401800D+04 HUMIDITY= .4000 TOTAL PRESSURE= 1.470000D+01
VAPOR TEMPERATURE= 7.340000D+01 LIQ. TEMP.= 7.340000D+01 SURF. AREA= 4.454000D+03
HEAT TRANS. MULT.= 1.000000D+00 MASS TRANS. MULT.= 1.000000D+00
DRYWELL TEMPERATURE FLASH MODEL SELECTED.

NORMAL COMPARTMENT LEAKAGE TABLE OF DELTA-PRESSURE AND COEFFICIENT -- FROM COMPARTMENT 3 TO 0
0. 0. 3.626000E-04 2.233900E+07
3.626000E-03 7.909500E+06 1.087800E-02 4.820700E+06
2.175600E-02 3.530100E+06 3.263400E-02 2.939900E+06
4.351200E-02 2.582700E+06 1.000000E+00 6.303000E+05

TABLE OF TIME, POWER DECAY
0. 1.000000E+00 1.500000E+04 1.000000E+00

TABLE OF TIME, METAL-WATER REACTION
0. 0. 1.500000E+04 0.

TABLE OF TIME(SEC) , WATER ADDITION RATE(LBM/SEC) AND ENTHALPY(BTU/LBM)
0. 0. 0. 1.440000D+04 0. 0.

PRIMARY VESSEL ENERGY INPUT, TIME, POWER MULT., M-W MULT.
0. 1.000000E+00 1.000000E+00 1.500000E+04 1.000000E+00 1.000000E+00

TOP REGION DIRECT ADDITION TABLE, TIME, WATER RATE, HEAT RATE
0. 0. 5.614000E+04 4.000000E+00 0. 5.614000E+04

LIQUID REGION DIRECT ADDITION TABLE, TIME, WATER RATE, HEAT RATE
0. 0. 0. 1.000000E+06 0. 0.

SUPER HEAT ADDITION TABLE, TIME, POW MULT., M-W MULT., FLOW RATE
0. 0. 0. 0.
1.000000E+01 0. 0. 0.

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SPRAY-ECC SYSTEM, NO. 1

TIME	FLOW RATE	DR.W.EFF	PCT.DRY	PCT.WET	PCT.ECC	PCT.DWL	INP.DRY	INP.WET	OUT.TEMP.
0	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
1.000000E+06	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

SPRAY-ECC SYSTEM, NO. 2

TIME	FLOW RATE	DR.W.EFF	PCT.DRY	PCT.WET	PCT.ECC	PCT.DWL	INP.DRY	INP.WET	OUT.TEMP.
0	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
1.000000E+06	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

ARBITRARY AIR ADDITION TABLE, TIME, AIR ADDED, TEMP.

0.	0.	0.	3.600000E+09	0.	0.

OUTSIDE AIR CONDITIONS TABLE, TIME, TEMP., HEAT TRANSFER COEF (24 HR CYCLE)

0.	9.140000E+01	2.000000E-01	1.000000E+00	9.280000E+01	2.000000E-01
2.000000E+00	9.370000E+01	2.000000E-01	3.000000E+00	9.400000E+01	2.000000E-01
4.000000E+00	9.370000E+01	2.000000E-01	2.400000E+01	9.370000E+01	2.000000E-01

TABLE OF TIME, TIME STEP (BOTH IN SEC), SLAB PRINT FREQUENCY, AND CONTAINMENT DATA PRINT FREQUENCY

6.000000D+01	1.000000D-01	100	300	6.000000D+02	1.000000D-01	600	3000
2.400000D+03	1.000000D-01	600	3000	1.440000D+04	1.000000D-01	3000	18000

HEAT STRUCTURE NO 1 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 0 RIGHT= 3
NORTH WALL

14 MESH POINTS 3 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 7.263000E+02
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)

0.	2.500000E-01	5.000000E-01	7.500000E-01	1.000000E+00	1.250000E+00	1.500000E+00
1.750000E+00	2.000000E+00*	2.083325E+00	2.166650E+00	2.249975E+00	2.333300E+00*	2.385400E+00*

COMPOSITION OVERLAY

1	2	3

SOURCE SPATIAL DEPENDENCE

0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	

INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 1, 1.50, 4

THE INITIAL RIGHT SIDE BULK TEMPERATURE = 73.400

HEAT STRUCTURE NO. 2 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 3 RIGHT= 0
ROOF & CEILING

16 MESH POINTS 5 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 3.235000E+03
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)

1.200000E+01	1.206250E+01*	1.210420E+01*	1.229170E+01	1.247920E+01*	1.296670E+01	1.345420E+01
1.394170E+01	1.442920E+01	1.491670E+01*	1.528128E+01	1.564587E+01	1.601045E+01	1.637503E+01
1.673962E+01	1.710420E+01*					

COMPOSITION OVERLAY
5 4 8 9 1

SOURCE SPATIAL DEPENDENCE

0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.
0.					

INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 6, 4, 4, 0

THE INITIAL LEFT SIDE BULK TEMPERATURE = 73.400

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HEAT STRUCTURE NO. 3 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 0 RIGHT= 3
FLOOR

4 MESH POINTS 1 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 4.454000E+03
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)
0. 2.222222E-01 4.444445E-01 6.666667E-01*

COMPOSITION OVERLAY
1

SOURCE SPATIAL DEPENDENCE
0. 0. 0.
INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 6, 0, 5, 4

THE INITIAL RIGHT SIDE BULK TEMPERATURE = 73.400

HEAT STRUCTURE NO. 4 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 3 RIGHT= 0
SOUTH WALL

9 MESH POINTS 1 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 9.132000E+02
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)
7.150000E+01 7.175000E+01 7.200000E+01 7.225000E+01 7.250000E+01 7.275000E+01 7.300000E+01
7.325000E+01 7.350000E+01*

COMPOSITION OVERLAY
1

SOURCE SPATIAL DEPENDENCE
0. 0. 0. 0. 0. 0. 0.
0.

INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 50, 4,50, 0

THE INITIAL LEFT SIDE BULK TEMPERATURE = 73.400

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HEAT STRUCTURE NO. 5 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 0 RIGHT= 3
WEST WALL

9 MESH POINTS 1 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 9.903800E+02
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)
0 2.500000E-01 5.000000E-01 7.500000E-01 1.000000E+00 1.250000E+00 1.500000E+00
1.750000E+00 2.000000E+00*

COMPOSITION OVERLAY
1

SOURCE SPATIAL DEPENDENCE
0. 0. 0. 0. 0. 0. 0.
0.

INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 50, 0,50, 4

THE INITIAL RIGHT SIDE BULK TEMPERATURE = 73.400

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HEAT STRUCTURE NO. 6 TRANSFER BETWEEN FOLLOWING COMPARTMENTS LEFT= 3 RIGHT= 0
EAST WALL

19 MESH POINTS 5 REGIONS RECTANGULAR GEOMETRY SOURCE FACTOR = 0. SURFACE FACTOR = 7.877000E+02
DELAY = 0.

MESH POINT COORDINATES (* INDICATES REGION BOUNDARY)

0.	5.208000E-02*	1.354100E-01	2.187400E-01	3.020700E-01	3.854000E-01*	6.354000E-01
8.854000E-01	1.135400E+00	1.385400E+00	1.635400E+00	1.885400E+00	2.135400E+00	2.385400E+00*
2.468725E+00	2.552050E+00	2.635375E+00	2.718700E+00*	2.770800E+00*		

COMPOSITION OVERLAY
3 2 1 2 3

SOURCE SPATIAL DEPENDENCE

0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.			

INTEGRATED SPACIAL DEPENDENCE = 0.

BOUNDARY CONDITION CONTROL OPTIONS = 50, 4,50, 0

THE INITIAL LEFT SIDE BULK TEMPERATURE = 73.400

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TABLES COMMON TO ALL HEAT SLABS

THERMAL CONDUCTIVITY AND VOLUMETRIC HEAT CAPACITY TABLE

COMPOSITION NO.	THERMAL CONDUCTIVITY	HEAT CAPACITY
1	1.050000E+00	2.215200E+01
2	7.310000E-02	1.752000E-02
3	6.700000E-02	9.860000E+00
4	6.200000E-02	1.320900E+01
5	3.500000E-02	3.220000E+00
6	9.380000E-02	2.450000E+01
7	3.100000E+01	5.427900E+01
8	2.119000E-01	1.752000E-02
9	5.509000E-01	1.752000E-02

TABLE OF TIME, HEAT TRANS. COEFF. (TYPE 5)

0.	2.100000E-01	1.440600E+04	2.100000E-01

TABLE OF TEMPERATURE, HEAT TRANS. COEFF. (TYPE 6)

7.000000E+01	6.138000E-01	8.000000E+01	4.828000E-01
9.000000E+01	4.785000E-01	1.000000E+02	4.742000E-01
1.100000E+02	5.920000E-01	1.200000E+02	6.716000E-01
1.500000E+02	8.250000E-01		

THE FOLLOWING DEFINITIONS WILL BE USED AT TIMES FOR COMPARTMENT IDENTIFICATION
0 = OUTSIDE ATMOSPHERE
1 = PRIMARY SYSTEM
2 = WET WELL
3 = DRY WELL
4 = ANNULAR COMPARTMENT

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -8.840826D+02 0. 0. 3 VAPOR 8.840826D+02 0. 0.
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.140000E+01 F
RIGHT FILM COEF ,H = 3.928269E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.340000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531379D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160773D+01 8.022022D+01 7.883272D+01 7.744521D+01 7.649867D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 4.298599D+03 0 0 LIQUID -4.298599D+03 0 0
LEFT FILM COEF ,H = 5.692600E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.340000E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.573422D+01 7.810704D+01 7.900075D+01 8.017652D+01 8.135229D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 LIQUID -9.875713D+03 0. 0. 3 VAPOR 9.875713D+03 0. 0.
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.100000E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.340000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489695D+01 8.442768D+01 8.395842D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 2.342881D+03 0. 0. 0 LIQUID -2.342881D+03 0. 0.
LEFT FILM COEF ,H = 4.285188E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 7.340000E+01 F
RIGHT FILM COEF ,H = 4.480471E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.938707D+01 7.999792D+01 8.060877D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366303D+01 8.427388D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 LIQUID -2.540892D+03 0. 0. 3 VAPOR 2.540892D+03 0. 0.
LEFT FILM COEF ,H = 4.480471E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.285188E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.340000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427388D+01 8.366303D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060877D+01 7.999792D+01 7.938707D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 7.232934D+02 0. 0. 0 LIQUID -7.232934D+02 0. 0.
LEFT FILM COEF ,H = 3.486253E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 7.340000E+01 F
RIGHT FILM COEF ,H = 3.801147E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.603387D+01 7.674763D+01 7.779437D+01 7.884110D+01 7.988784D+01 8.093458D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268360D+01 8.373027D+01 8.477694D+01 8.582362D+01 8.687029D+01

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8.758432D+01

* * * * * * * * * * * * * * * * TIME = 0. HR = 0. MIN = 0. SEC * * * * * * * * * * * * * * * * * *

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470000D+01	1.628866D-01	7.340000D+01	7.340000D+01	3.916180D+05	0.	3.916180D+05	0.

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.981820D+03	2.775650D+01	0.	0.	2.775650D+01	4.000000D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 0. LBM/HR ENERGY BTU/HR = 0. (NORMAL= 0. PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 0. STEP AIR= 0. NET VAPOR= 0. NET AIR= 0.

* * * * * * * * * * * * * * * * TIME = 2.777778E-03 HR = 1.666667E-01 MIN = 1.000000E+01 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -8.846475D+02 -2.457346D-02 -2.456570D+00 3 VAPOR 6.552316D+02 1.821154D-02 1.930805D+00
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+02 BTU/HR.FT. BULK TEMP = 9.140389E+01 F
RIGHT FILM COEF .,H = 3.170218E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.365578D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531379D+01 8.502397D+01 8.473475D+01 8.414433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160773D+01 8.022023D+01 7.883272D+01 7.744523D+01 7.650148D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 3.808882D+03 1.058686D-01 1.125406D+01 OLIQUID -4.298599D+03 -1.194055D-01 -1.194055D+01
LEFT FILM COEF.,H = 5.659093E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.365578E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.573632D+01 7.810704D+01 7.900075D+01 8.017652D+01 8.135229D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875713D+03 -2.743254D-01 -2.743254D+01 3 VAPOR 2.231407D+04 6.199391D-01 6.284799D+01
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.864256E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.365578D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489695D+01 8.442768D+01 8.395518D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 2.094955D+03 5.821038D-02 5.995028D+00 OLIQUID -2.213886D+03 -6.149676D-02 -6.150834D+00
LEFT FILM COEF.,H = 4.002585E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 7.365578E+01 F
RIGHT FILM COEF .,H = 4.233679E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.938728D+01 7.999792D+01 8.060877D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366303D+01 8.427374D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.400995D+03 -6.669422D-02 -6.670677D+00 3 VAPOR 2.272012D+03 6.313008D-02 6.501703D+00

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LEFT FILM COEF ,H = 4.233679E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.002585E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.365578D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427374D+01 8.366303D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060877D+01 7.999792D+01 7.938728D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	5.599124D+02	1.556407D-02	1.668118D+00	OLIQUID	-6.530860D+02	-1.814120D-02	-1.814369D+00

LEFT FILM COEF ,H = 2.986915E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 7.365578E+01 F
RIGHT FILM COEF ,H = 3.430819E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.603555D+01 7.674764D+01 7.779437D+01 7.884110D+01 7.988784D+01 8.093458D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268360D+01 8.290223D+01 8.477694D+01 8.582362D+01 8.687029D+01
8.758336D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.646366D-01	0.	-5.646554D+01
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	8.809237D-01	0.	9.019771D+01
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.24000D+01	7.34000D+01	0.	0.	0.	
3	1.47004D+01	1.63019D-01	7.36555D+01	7.36555D+01	3.916160+05	0.	3.916160+05	-4.40668D-07

	AIR MASS	W A T E R M A S S (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS	--LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.979990+03	2.77437D+01	0.	0.	2.77437D+01	3.965880-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 6.8473D+02 LBM/HR ENERGY BTU/HR = 9.1988D+04 (NORMAL= 9.1988D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.3167D-04 STEP AIR= 1.8889D-02 NET VAPOR= 1.2764D-02 NET AIR= 1.8310D+00
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.8310310+00 WATER VAPOR(LBM)= 1.2763740-02

* * * * * * * * * * * * * * * * * TIME = 5.555556E-03 HR = 3.333333E-01 MIN = 2.000000E+01 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT CO	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	8.852122D+02	-2.458915D-02	-4.914708D+00	3 VAPO	5.804507D+02	1.613374D-02	3.646107D+00

LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.140778E+01 F
RIGHT FILM COEF ,H = 3.074835E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.390626D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531379D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160773D+01 8.022024D+01 7.883275D+01 7.744530D+01 7.650539D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/H	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	3.342015D+03	9.289716D-02	2.118103D+01	OLIQUID	-4.298599D+03	-1.194055D-01	-2.388111D+01

LEFT FILM COEF ,H = 5.626280E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.390626E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.574243D+01 7.810706D+01 7.900075D+01 8.017652D+01 8.135229D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

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TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID       -9.875713D+03 -2.743254D-01 -5.486507D+01          3 VAPOR       2.157753D+04  5.994768D-01  1.238039D+02
LEFT FILM COEF .H =  4.785000E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  9.000000E+01 F
RIGHT FILM COEF  .H =  4.822398E-01 BTU/HR.FT2.F  LAST MESH K =  1.050000E+00 BTU/HR.FT.F    BULK TEMP =  7.390626D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536621D+01  8.489655D+01  8.442767D+01  8.395215D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR       1.973279D+03  5.482992D-02  1.164439D+01          OLIQUID       -2.214351D+03 -6.150970D-02 -1.230116D+01
LEFT FILM COEF .H =  3.942165E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  7.390626E+01 F
RIGHT FILM COEF  .H =  4.234465E-01 BTU/HR.FT2.F  LAST MESH K =  1.050000E+00 BTU/HR.FT.F    BULK TEMP =  9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.938761D+01  7.999792D+01  8.060877D+01  8.121962D+01  8.183047D+01  8.244133D+01  8.305218D+01  8.366303D+01  8.427359D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID       -2.401499D+03 -6.670825D-02 -1.334081D+01          3 VAPOR       2.140053D+03  5.946393D-02  1.262853D+01
LEFT FILM COEF .H =  4.234465E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  9.000000E+01 F
RIGHT FILM COEF  .H =  3.942165E-01 BTU/HR.FT2.F  LAST MESH K =  1.050000E+00 BTU/HR.FT.F    BULK TEMP =  7.390626D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.427359D+01  8.366303D+01  8.305218D+01  8.244133D+01  8.183047D+01  8.121962D+01  8.060877D+01  7.999792D+01  7.938761D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR       4.834104D+02  1.343838D-02  3.116124D+00          OLIQUID       -6.536140D+02 -1.815587D-02 -3.629232D+00
LEFT FILM COEF .H =  2.878471E-01BTU/HR.FT2.F   FIRST MESH   K =  6.700000E-02 BTU/HR.FT.   BULK TEMP =  7.390626E+01 F
RIGHT FILM COEF  .H =  3.432257E-01 BTU/HR.FT2.F  LAST MESH K =  6.700000E-02 BTU/HR.FT.F    BULK TEMP =  9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.603825D+01  7.674758D+01  7.779439D+01  7.884111D+01  7.988784D+01  8.093458D+01  8.198132D+01  8.302818D+01  8.409046D+01
  8.180908D+01  8.207 [illegible]D+01  8.224634D+01  8.246497D+01  8.268360D+01  8.373027D+01  8.477694D+01  8.582361D+01  8.687027D+01
  8.758242D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP   STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0   0.             -5.646939D-01  0.             -1.129321D+02
   1   0.              0.            0.              0.
   2   0.              0.            0.              0.
   3   0.              8.362399D-01  0.              1.760201D+02
   4   0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)     T E M P E R A T U R E  (F)          E N E R G Y  (BTU)                        CONVERGENCE
 NO.        TOTAL        STEAM          ATMOS          POOL          ATMOS          POOL          TOTAL              DE/E
  1     1.470000D+01   0.             7.340000D+01   7.340000D+01   0.             0.             0.               0.
  3     1.470040D+01   1.630190D-01   7.290610D+01   7.390610D+01   3.916050D+05   0.             3.916050D+05    -3.766530D-07

                                                                                                          TRANSFER COEFFICIENTS
          AIR MASS                W A T E R    M A S S    ( LBM)                HUMIDITY    CONDENSATION      MASS          HEAT
           ( LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
  1     0.              0.             0.             0.             0.             6.000010-01   0.             0.               0.
  3     3.978120+03     2.773070+01    0.             0.             2.773070+01    3.932660-01   0.             0.               0.
COMP    3 LEAKAGE OUTFLOW-  MASS=  6.7186D+02 LBM/HR   ENERGY BTU/HR  =  9.0300D+04 (NORMAL=  9.0300D+04 PENETRATION=  0.  )
STEP AND NET MASS LOSSES LBM STEP VAPOR=  1.2919D-04 STEP AIR=  1.8534D-02 NET VAPOR=  2.5805D-02 NET AIR=  3.7019D+00
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)=  3.7018600+00 WATER VAPOR(LBM)=  2.5804900-02


 * * * * * * * * * * * * * * * * TIME =  8.333333E-03  HR =  5.000000E-01 MIN =  3.000000E+01 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
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TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    0 VAPOR      -8.857768D+02 -2.460483D-02 -7.374415D+00          3 VAPOR        5.096168D+02  1.416559D-02  5.159186D+00
LEFT FILM COEF ,H =  2.000000E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  9.141167E+01 F
RIGHT FILM COEF  ,H =  2.975660E-01 BTU/HR.FT2.F   LAST MESH K =  6.700000E-02 BTU/HR.FT.F      BULK TEMP =  7.415231D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.531380D+01  8.502397D+01  8.473415D+01  8.444433D+01  8.415451D+01  8.386469D+01  8.357488D+01  8.328506D+01  8.299524D+01
  8.160775D+01  8.022027D+01  7.883278D+01  7.744542D+01  7.651032D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR        2.895477D+03  8.049060D-02  2.983963D+01          OLIQUID      -4.298599D+03 -1.194055D-01 -3.582166D+01
LEFT FILM COEF ,H =  5.594047E-01BTU/HR.FT2.F   FIRST MESH   K =  3.500000E-02 BTU/HR.FT.   BULK TEMP =  7.415231E+01 F
RIGHT FILM COEF  ,H =  1.000000E+04 BTU/HR.FT2.F   LAST MESH K =  1.050000E+00 BTU/HR.FT.F      BULK TEMP =  9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.575231D+01  7.810712D+01  7.900075D+01  8.017652D+01  8.135229D+01  8.252815D+01  8.370401D+01  8.487986D+01  8.605572D+01
  8.723158D+01  8.769296D+01  8.815434D+01  8.861572D+01  8.907710D+01  8.953849D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID      -9.875713D+03 -2.743254D-01 -8.229761D+01          3 VAPOR        2.086085D+04  5.795664D-01  1.827416D+02
LEFT FILM COEF ,H =  4.785000E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  9.000000E+01 F
RIGHT FILM COEF  ,H =  4.780668E-01 BTU/HR.FT2.F   LAST MESH K =  1.050000E+00 BTU/HR.FT.F      BULK TEMP =  7.415231D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536621D+01  8.489695D+01  8.442765D+01  8.394932D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR        1.855676D+03  5.156262D-02  1.696146D+01          OLIQUID      -2.214816D+03 -6.152261D-02 -1.845279D+01
LEFT FILM COEF ,H =  3.881110E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  7.415231E+01 F
RIGHT FILM COEF  ,H =  4.235251E-01 BTU/HR.FT2.F   LAST MESH K =  1.050000E+00 BTU/HR.FT.F      BULK TEMP =  9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.938808D+01  7.999793D+01  8.060877D+01  8.121962D+01  8.183047D+01  8.244133D+01  8.305218D+01  8.366302D+01  8.427346D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID      -2.402004D+03 -6.672225D-02 -2.001234D+01          3 VAPOR        2.012511D+03  5.592049D-02  1.839498D+01
LEFT FILM COEF ,H =  4.235251E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.   BULK TEMP =  9.000000E+01 F
RIGHT FILM COEF  ,H =  3.881110E-01 BTU/HR.FT2.F   LAST MESH K =  1.050000E+00 BTU/HR.FT.F      BULK TEMP =  7.415231D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.427346D+01  8.366302D+01  8.305218D+01  8.244133D+01  8.183047D+01  8.121962D+01  8.060877D+01  7.999792D+01  7.938808D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP   END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP    END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR        4.114342D+02  1.143842D-02  4.357922D+00          OLIQUID      -6.541356D+02 -1.817036D-02 -5.445552D+00
LEFT FILM COEF ,H =  2.764075E-01BTU/HR.FT2.F   FIRST MESH   K =  6.700000E-02 BTU/HR.FT.   BULK TEMP =  7.415231E+01 F
RIGHT FILM COEF  ,H =  3.433688E-01 BTU/HR.FT2.F   LAST MESH K =  6.700000E-02 BTU/HR.FT.F      BULK TEMP =  9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.604200D+01  7.674776D+01  7.779443D+01  7.884113D+01  7.988785D+01  8.093458D+01  8.115320D+01  8.137183D+01  8.159046D+01
  8.180909D+01  8.202771D+01  8.224634D+01  8.246497D+01  8.268360D+01  8.373026D+01  8.477693D+01  8.582359D+01  8.687023D+01
  8.758150D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP   STEP-LIQUID     STEP-VAPOR     NET-LIQUID      NET-VAPOR
   0   0.             -5.647510D-01  0.              -1.694044D+02
   1   0.              0.            0.               0.
   2   0.              0.            0.               0.
   3   0.              7.931441D-01  0.               2.574547D+02
   4   0.              0.            0.               0.
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COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470040D+01	1.630200D-01	7.415210D+01	7.415210D+01	3.915940D+05	0.	3.915940D+05	-3.148530D-07

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.976280D+03	2.771790D+01 0.	0.	2.771790D+01	3.900370D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 6.5946D+02 LBM/HR ENERGY BTU/HR = 8.8672D+04 (NORMAL= 8.8672D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2681D-04 STEP AIR= 1.8192D-02 NET VAPOR= 3.8603D-02 NET AIR= 5.5379D+00
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 5.5378500+00 WATER VAPOR(LBM)= 3.8603200-02

* * * * * * * * * * * * * * * * * TIME = 1.111111E-02 HR = 6.666667E-01 MIN = 4.000000E+01 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-8.863413D+02	-2.462051D-02	-9.835690D+00	3 VAPOR	4.426552D+02	1.230502D-02	6.480897D+00

LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.141556E+01 F
RIGHT FILM COEF ,H = 2.871987E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 7.439409D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531380D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160777D+01 8.022033D+01 7.883293D+01 7.744561D+01 7.651620D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	2.468188D+03	6.861884D-02	3.728483D+01	OLIQUID	-4.298599D+03	-1.194055D-01	-4.776221D+01

LEFT FILM COEF ,H = 5.562374E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT BULK TEMP = 7.439409E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.576574D+01 7.810721D+01 7.900075D+01 8.017652D+01 8.135229D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875713D+03	-2.743254D-01	-1.097301D+02	3 VAPOR	2.016332D+04	5.601877D-01	2.397152D+02

LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.739045E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.439409D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489695D+01 8.442762D+01 8.394668D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	1.742021D+03	4.340498D-02	2.195736D+01	OLIQUID	-2.215280D+03	-6.153550D-02	-2.460570D+01

LEFT FILM COEF ,H = 3.819340E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 7.439409E+01 F
RIGHT FILM COEF ,H = 4.236036E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.938867D+01 7.999793D+01 8.060877D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366302D+01 8.427332D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.402507D+03	-6.673624D-02	-2.668527D+01	3 VAPOR	1.889249D+03	5.249597D-02	2.381311D+01

LEFT FILM COEF ,H = 4.236036E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.819340E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.439409D+01 F

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427332D+01 8.366302D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060877D+01 7.999793D+01 7.938867D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 3.439541D+02 9.563343D-03 5.405032D+00 OLIQUID -6.546507D+02 -1.818467D-02 -7.263312D+00
LEFT FILM COEF ,H = 2.642369E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.439409E+01 F
RIGHT FILM COEF ,H = 3.435112E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.601661D+01 7.674790D+01 7.747851D+01 7.821117D+01 7.894787D+01 8.093458D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.290222D+01 8.312085D+01 8.333947D+01 8.355810D+01
8.377673D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP. STEP-LIQUID STEP-VAPOR NET-LIQUID NET-VAPOR
0 0. -5.648078D-01 0. -2.258823D+02
1 0. 0. 0. 0.
2 0. 0. 0. 0.
3 0. 7.515759D-01 0. 3.346575D+02
4 0. 0. 0. 0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.220000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470040D+01	1.630200D-01	7.439400D+01	7.439400D+01	3.915830D+05	0.	3.915830D+05	-2.551900D-07

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.974480+03	2.770530+01 0. 0.	0.	2.770530+01	3.868930-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 6.475100+02 LBM/HR ENERGY BTU/HR = 8.710200+04 (NORMAL= 8.710200+04 PENETRATION= 0)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.245100-04 STEP AIR= 1.786200-02 NET VAPOR= 5.116700-02 NET AIR= 7.340300+00
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 7.340254D+00 WATER VAPOR(LBM)= 5.116739D-02

* * * * * * * * * * * * * * * * * TIME = 1.388889E-02 HR = 8.333333E-01 MIN = 5.000000E+01 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -8.869057D+02 -2.463619D-02 -1.229853D+01 3 VAPOR 3.795117D+02 1.055050D-02 7.621916D+00
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.141944E+01 F
RIGHT FILM COEF ,H = 2.762917E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.463175D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531380D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160781D+01 8.022042D+01 7.883310D+01 7.744589D+01 7.652296D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 2.059127D+03 5.725357D-02 4.356867D+01 OLIQUID -4.298553D+03 -1.194055D-01 -5.970277D+01
LEFT FILM COEF ,H = 5.531241E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.463175E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.578251D+01 7.810737D+01 7.900076D+01 8.017652D+01 8.135229D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875713D+03 -2.743254D-01 -1.371627D+02 3 VAPOR 1.948423D+04 5.413277D-01 2.947771D+02

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LEFT FILM COEF .H = 4.785000E-01BTU/HR FT2 F   FIRST MESH  K = 1.050000E+00 BTU/HR FT  BULK  MP = 9.000000E+01 F
RIGHT FILM COEF  .H = 4.697511E-01 BTU/HR FT2 F   LAST MESH K = 1.050000E+00 BTU/HR FT F   BULK TEMP = 7.463175D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.536621D+01  8.489695D+01  8.442758D+01  8.394423D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR        1.632194D+03  4.535271D-02  2.664290D+01      0 LIQUID       -2.215744D+03 -6.158838D-02 -3.075990D+01
LEFT FILM COEF .H = 3.756768E-01BTU/HR FT2 F   FIRST MESH  K = 1.050000E+00 BTU/HR FT  BULK TEMP = 7.463175E+01 F
RIGHT FILM COEF  .H = 4.236821E-01 BTU/HR FT2 F   LAST MESH K = 1.050000E+00 BTU/HR FT F   BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 7.938939D+01  7.999793D+01  8.060877D+01  8.121962D+01  8.183047D+01  8.244133D+01  8.305218D+01  8.366302D+01  8.427318D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    0 LIQUID       -2.403010D+03 -6.675020D-02 -3.335960D+01      3 VAPOR        1.770140D+03  4.918682D-02  2.889465D+01
LEFT FILM COEF .H = 4.236821E-01BTU/HR FT2 F   FIRST MESH  K = 1.050000E+00 BTU/HR FT  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .H = 3.756768E-01 BTU/HR FT2 F   LAST MESH K = 1.050000E+00 BTU/HR FT F   BULK TEMP = 7.463175D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.427318D+01  8.366302D+01  8.305218D+01  8.244133D+01  8.183047D+01  8.121962D+01  8.060877D+01  7.999793D+01  7.938939D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR        2.809787D+02  7.813399D-03  6.272947D+00      0 LIQUID       -6.551598D+02 -1.819888D-02 -9.082495D+00
LEFT FILM COEF .H = 2.511492E-01BTU/HR FT2 F   FIRST MESH  K = 6.700000E-02 BTU/HR FT  BULK TEMP = 7.463175E+01 F
RIGHT FILM COEF  .H = 3.436529E-01 BTU/HR FT2 F   LAST MESH K = 6.700000E-02 BTU/HR FT F   BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 7.605205D+01  7.674811D+01  7.779463D+01  7.884124D+01  7.988790D+01  8.093458D+01  8.115320D+01  8.137183D+01  8.159046D+01
 8.180909D+01  8.202771D+01  8.224634D+01  8.246497D+01  8.268359D+01  8.373025D+01  8.477689D+01  8.582353D+01  8.687013D+01
 8.757972D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID    STEP-VAPOR    NET-LIQUID    NET-VAPOR
    0  0.            -5.648645D-01  0.           -2.823660D+02
    1  0.             0.            0.            0.
    2  0.             0.            0.            0.
    3  0.             7.114797D-01  0.            4.077791D+02
    4  0.             0.            0.            0.

COMP      P R E S S U R E  (PSIA)      T E M P E R A T U R E  (F)          E N E R G Y  (BTU)                    CONVERGENCE
 NO       TOTAL        STEAM          ATMOS        POOL          ATMOS        POOL          TOTAL              DE/E
  1    1.470000D+01   0.             7.340000D+01  7.340000D+01  0.           0.            0.                 0.
  3    1.470004D+01   1.630220D-01   7.463316D+01  7.463316D+01  3.915720D+05 0.            3.915720D+05       -1.975890D-07

                                                                                                  TRANSFER COEFFICIENTS
          AIR MASS          W A T E R   M A S S  ( LBM)                                HUMIDITY   CONDENSATION    MASS          HEAT
           ( LBM)       VAPOR--ATMOS--  LIQUID      POOL          TOTAL                           (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
  1    0.              0.              0.          0.            0.                  6.000000D-01  0.          0.            0.
  3    3.972710+03     2.769300+01     0.          0.            2.769300+01         3.838300-01   0.          0.            0.
COMP   3 LEAKAGE OUTFLOW- MASS= 6.3598D-02 LBM/HR   ENERGY BTU/HR = 8.55e8D+04 (NORMAL= 8.5588D+04 PENETRATION= 0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2229D-04 STEP AIR= 1.7544D-02 NET VAPOR= 6.3506D-02 NET AIR= 9.1103D+00
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 9.11[illegible]+00 WATER VAPOR(LBM)= 6.3505850-02

* * * * * * * * * * * * * * * * * TIME = 1.666667E-02 HR = 1.000000E+00 MIN = 6.000000E+01 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  7 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    0 VAPOR       -8.874700D+02 -2.465187D-02 -1.476294D+01      3 VAPOR        3.201559D+02  8.901202D-03  8.592801D+00
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PCC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.142333E+01 F
RIGHT FILM COEF ,H = 2.647274E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 7.486542D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531381D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160788D+01 8.022056D+01 7.883333D+01 7.744627D+01 7.653055D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 1.667534D+03 4.636810D-02 4.874042D+01 OLIQUID -4.298599D+03 -1.194055D-01 -2.164332D+01
LEFT FILM COEF ,H = 5.500629E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT. BULK TEMP = 7.486542E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.580242D+01 7.810761D+01 7.900076D+01 8.017653D+01 8.135230D+01 8.252815D+01 8.370401D+01 8.487986D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875713D+03 -2.743254D-01 -1.645952D+02 3 VAPOR 1.882294D+04 5.229501D-01 3.479774D+02
LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.656045E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.486542D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489695D+01 8.442754D+01 8.394196D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 1.526085D+03 4.240574D-02 3.102855D+01 OLIQUID -2.216207D+03 -6.156124D-02 -3.691539D+01
LEFT FILM COEF ,H = 3.693298E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 7.486542E+01 F
RIGHT FILM COEF ,H = 4.237605E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.939021D+01 7.999794D+01 8.060877D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366302D+01 8.427304D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.403512D+03 -6.676415D-02 -4.003533D+01 3 VAPOR 1.655064D+03 4.598970D-02 3.365096D+01
LEFT FILM COEF ,H = 4.237605E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.693298E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.486542D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427304D+01 8.366302D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060877D+01 7.999794D+01 7.939021D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 2.225677D+02 6.190229D-03 6.971249D+00 OLIQUID -6.556627D+02 -1.821276D-02 -1.090308D+01
LEFT FILM COEF ,H = 2.368785E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT. BULK TEMP = 7.486542E+01 F
RIGHT FILM COEF ,H = 3.437940E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.605825D+01 7.674839D+01 7.779481D+01 7.884134D+01 7.988794D+01 8.093458D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.373024D+01 8.477687D+01 8.582348D+01 8.687007D+01
8.757885D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.649209D-01	0.	-3.388553D+02
1	0.	0	0.	0
2	0.	0	0.	0
3	0.	6.728051D-01	0.	4.769614D+02
4	0.	0	0.	0

COMP	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
NO								
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47004D+01	1.63020D-01	7.48653D+01	7.48653D+01	3.91562D+05	0.	3.91562D+05	-1.41983D-07

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.97097D+03	2.76809D+01 0.	0.	2.76[illegible]09D+	3.80845D-01	0	0	0.

[illegible]127D+04 (NORMAL= 8.4127D+04 PENETRATION= 0.)

COMP 3 LEAKAGE OUTFLOW MASS= 6.2486D+02 LBM/HR ENERGY BTU/HR = [illegible]

STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2016D-04 STEP AIR= 1.7237D-02 NET VAPOR= 7.5627D-02 NET AIR= 1.0849D+01

TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.084908D+01 WATER VAPOR(LBM)= 7.562667D-02

* * * * * * * * * * * * * * * * * TIME = 3.333333E-02 HR = 2.000000E+00 MIN = 1.200000E+02 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-8.908534D+02	-2.474585D-02	-2.958231D+01	3 VAPOR	5.494395D+01	1.530057D-03	1.140336D+01

LEFT FILM COEF .H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.144667E+01 F
RIGHT FILM COEF .H = 1.900000E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 7.619158D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531385D+01 8.502397D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299524D+01
8.160878D+01 8.022247D+01 7.883646D+01 7.745093D+01 7.658973D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & C.ILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-3.683982D+02	-1.019166D-02	5.886850D+01	OLIQUID	-4.298599D+03	-1.194055D-01	-1.432866D+02

LEFT FILM COEF .H = 5.326903E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT BULK TEMP = 7.619158E+01 F
RIGHT FILM COEF .H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.597780D+01 7.811112D+01 7.900093D+01 8.017662D+01 8.135233D+01 8.252816D+01 8.370401D+01 8.487987D+01 8.605572D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875714D+03	-2.743254D-01	-3.291904D+02	3 VAPOR	1.519510D+04	4.221640D-01	6.306916D+02

LEFT FILM COEF .H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 4.407533E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.619158D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489694D+01 8.442720D+01 8.393188D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	9.621830D+02	2.673900D-02	5.159690D+01	OLIQUID	-2.218970D+03	-6.165[illegible]08-02	-7.387523D-01

LEFT FILM COEF .H = 3.286681E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 7.619158E+01 F
RIGHT FILM COEF .H = 4.242300E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.939736D+01 7.999802D+01 8.060877D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366301D+01 8.427225D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.406509D+03	-6.684739D-02	-8.011887D+01	3 VAPOR	1.043503D+03	2.899887D-02	5.595767D+01

LEFT FILM COEF .H = 4.242300E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 3.286681E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.619158D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427225D+01 8.366301D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060877D+01 7.999802D+01 7.939736D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.266291D+01	-3.475489D-04	8.408628D+00	LIQUID	-6.585627D+02	-1.829334D-02	-2.185523D+01

LEFT FILM COEF.,H = 1.900000E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 7.619158E+01 F
RIGHT FILM COEF.,H = 3.446271E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.610697D+01 7.675211D+01 7.779729D+01 7.884285D+01 7.988866D+01 8.093458D+01 8.198320D+01 8.301830D+01 8.[illegible]
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.373011D+01 8.477660D+01 8.582306D+01 8.686[illegible]
8.757402D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.652555D-01	0.	-6.779087D+02
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	4.688927D-01	0.	8.169267D+02
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470030+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470040+01	1.630220-01	7.619170+01	7.619170+01	3.915020+05	0.	3.915020+05	1.763470-07

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.961130+03	2.761230+01	0.	0.	2.761230+01	3.644020-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 5.6612D+02 LBM/HR ENERGY BTU/HR = 7.6399D+04 (NORMAL= 7.6399D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.0886D-04 STEP AIR 1.5617D-02 NET VAPOR= 1.4419D-01 NET AIR= 2.0685D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= [illegible]4.2D+01 WATER VAPOR(LBM)= 1.441875D-01

* * * * * * * * * * * * * * * * TIME = 5.000000E-02 HR = 3.000000E+00 MIN = 1.800000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-8.942329D+02	-2.483973D-02	-4.445804D+01	3 VAPOR	-1.027712D+02	-2.851277D-03	1.098355D+01

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.147000E+01 F
RIGHT FILM COEF.,H = 1.900000E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.740602D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531391D+01 8.502397D+01 8.173415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299525D+01
8.161085D+01 8.022672D+01 7.884313D+01 7.746040D+01 7.666128D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.971993D+03	-5.474455D-02	3.885024D+01	LIQUID	-4.298599D+03	-1.194055D-01	-2.140000D+02

LEFT FILM COEF.,H = 5.167812E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.740602E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.622645D+01 7.811945D+01 7.900158D+01 8.017700D+01 8.135253D+01 8.252825D+01 8.370405D+01 8.487988D+01 8.605573D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
LIQUID	-9.875714D+03	-2.743254D-01	-4.937857D+02	3 VAPOR	1.207133D+04	3.353819D-01	8.572720D+02

PDC

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.156067E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.740602D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489693D+01 8.442676D+01 8.395714D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 5.126426D+02 1.424921D-02 6.373407D+01 OLIQUID -2.221210D+03 -6.171411D-02 -1.108809D+02
LEFT FILM COEF ,H = 2.804592E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 7.740602E+01 F
RIGHT FILM COEF ,H = 4.246977E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.940763D+01 7.999821D+01 8.060878D+01 8.121962D+01 8.183047D+01 8.244133D+01 8.305218D+01 8.366298D+01 8.427149D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.409480D+03 -6.692994D-02 -1.202521D+02 3 VAPOR 5.559691D+02 1.545349D-02 6.912057D+01
LEFT FILM COEF ,H = 4.246977E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.804592E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.740602D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427149D+01 8.366298D+01 8.305218D+01 8.244133D+01 8.183047D+01 8.121962D+01 8.060878D+01 7.999821D+01 7.940763D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.331954D+02 -6.471290D-03 6.603511D+00 OLIQUID -6.612812D+02 -1.836866D-02 -3.285417D+01
LEFT FILM COEF ,H = 2.390563E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 7.740602E+01 F
RIGHT FILM COEF ,H = 3.454398E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.616762D+01 7.675982D+01 7.780271D+01 7.884629D+01 7.989033D+01 8.093459D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.372989D+01 8.477617D+01 8.582240D+01 8.686855D+01
8.756974D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.655836D-01	0.	-1.017161D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	3.010175D-01	0.	1.040564D+03
4	0.	0.	0.	0

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47003D+01	1.63023D-01	7.740602D+01	7.740602D+01	3.914488D-05	0.	3.914488D+05	4.518111D-07

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.952170D+03	2.754980D+01	0.	0.	2.754980D+01	3.500480D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 5.180900D+02 LBM/HR ENERGY BTU/HR = 7.006900D+04 (NORMAL= 7.006900D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 9.962400D-05 STEP AIR= 1.429200D-02 NET VAPOR= 2.066600D-01 NET AIR= 2.964600D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 2.964630D+01 WATER VAPOR(LBM)= 2.066582D-01

* * * * * * * * * * * * * * * * * TIME = 6.666667E-02 HR = 4.000000E+00 MIN = 2.400000E+02 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -8.976087D+02 -2.493350D-02 -5.939005D+01 3 VAPOR -3.482815D+02 -9.668561D-03 7.287755D+00

PGC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.149333E+01 F
RIGHT FILM COEF ,H = 2.693785E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 7.852511D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531401D+01 8.502398D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299527D+01
8.161420D+01 8.023353D+01 7.885367D+01 7.747508D+01 7.674498D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
2 VAPOR -3.250449D+03 -9.026380D-02 -5.063276D+00 OLIQUID -4.298599D+03 -1.194055D-01 -2.865733D+02
LEFT FILM COEF ,H = 5.021210E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT BULK TEMP = 7.852511E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.652405D+01 7.813366D+01 7.900310D+01 8.017797D+01 8.135309D+01 8.252854D+01 8.370419D+01 8.487995D+01 8.605575D+01
8.723158D+01 8.767296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 3.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875716D+03 -2.743254D-01 -6.583809D+02 3 VAPOR 9.376952D+03 2.605287D-01 1.035452D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.897404E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.852511D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489691D+01 8.442628D+01 8.392688D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR 1.553081D+02 4.318379D-03 6.926225D+01 OLIQUID -2.224428D+03 -6.178959D-02 -1.479321D+02
LEFT FILM COEF ,H = 1.900000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 7.852511E+01 F
RIGHT FILM COEF ,H = 4.251636E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.942022D+01 7.999853D+01 8.060878D+01 8.121962D+01 8.183047D+01 8.244132D+01 8.305217D+01 8.366295D+01 8.427077D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.412427D+03 -6.701180D-02 -1.604347D+02 3 VAPOR 1.684341D+02 4.683351D-03 7.511602D+01
LEFT FILM COEF ,H = 4.251636E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 1.900000E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 7.852511D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427077D+01 8.366295D+01 8.305217D+01 8.244132D+01 8.183047D+01 8.121962D+01 8.060878D+01 7.999853D+01 7.942022D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS [illegible] AND 0 EAST WALL
TO LEFT COMP END STEP BTU/HR [illegible] TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -5.252924D+02 [illegible]-02 3.207709D-01 OLIQUID -6.638434D+02 -1.844004D-02 -4.389707D+01
LEFT FILM COEF ,H = 2.925372E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT BULK TEMP = 7.852511E+01 F
RIGHT FILM COEF ,H = 3.462348E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.624551D+01 7.677226D+01 7.781160D+01 7.885202D+01 7.989314D+01 8.093461D+01 8.[illegible]320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.372962D+01 8.477562D+01 8.582156D+01 8.686740D+01
8.756592D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
[illegible]	0.	-5.659059D-01	0.	-1.356608D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	1.550136D-01	0.	1.182376D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470030D+01	1.630250D-01	7.852540D+01	7.852540D+01	3.913990D+05	0.	3.913990D+05	6.853750D-07

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.943950D+03	2.749250+01 0.	0.	2.749250D+01	3.373800D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 4.764300+02 LBM/HR ENERGY BTU/HR = 6.456300+04 (NORMAL= 6.456300+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 9.161400-05 STEP AIR= 1.314300-02 NET VAPOR= 2.639700-01 NET AIR= 3.786900+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 3.786862D+01 WATER VAPOR(LBM)= 2.639744D-01

* * * * * * * * * * * * * * * * * TIME = 8.333333E-02 HR = 5.000000E+00 MIN = 3.000000E+02 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.009808D+02	-2.502717D-02	-7.437830D+01	3 VAPOR	-6.114519D+02	-1.697859D-02	-6.948418D-01

LEFT FILM COEF. ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.151667E+01 F
RIGHT FILM COEF ,H = 3.097547E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 7.956331D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531413D+01 8.502398D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299532D+01
8.161899D+01 8.024323D+01 7.886859D+01 7.749568D+01 7.684545D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-4.283348D+03	-1.189603D-01	-6.813770D+01	OLIQUID	-4.298599D+03	-1.194055D-01	-3.582166D+02

LEFT FILM COEF ,H = 4.885206E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 7.956331E+01 F
RIGHT FILM COEF ,H = [illegible]E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.685296D+01 7.815423D+01 7.900594D+01 8.017988D+01 8.135425D+01 8.252919D+01 8.370455D+01 8.488013D+01 8.605583D+01
8.723158D+01 8.769286D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875719D+03	-2.743255D-01	-8.229762D+02	3 VAPOR	7.052345D+03	1.959484D-01	1.171889D+03

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.625729E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.956331D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489689D+01 8.442585D+01 8.393036D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.239579D+01	-6.181365D-04	7.035208D+01	OLIQUID	-2.227123D+03	-6.186446D-02	-1.850284D+02

LEFT FILM COEF ,H = 1.900000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 7.956331E+01 F
RIGHT FILM COEF ,H = 4.256277E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.943424D+01 7.999902D+01 8.060879D+01 8.121962D+01 8.183047D+01 8.244132D+01 8.305217D+01 8.366291D+01 8.427008D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.415350D+03	-6.709300D-02	-2.006663D+02	3 VAPOR	-2.428859D+01	-6.703789D-04	7.629796D+01

LEFT FILM COEF ,H = 4.256277E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 1.900000E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 7.956331D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427008D+01 8.366291D+01 8.305217D+01 8.244132D+01 8.183047D+01 8.121962D+01 8.060879D+01 7.959902D+01 7.943479D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.317530D+02 -2.309713D-02 -1.038169D+01 OLIQUID -6.662702D+02 -1.850745D-02 -5.498153D+01
LEFT FILM COEF ,H = 3.278141E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 7.956331E+01 F
RIGHT FILM COEF ,H = 3.470142E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.634220D+01 7.679046D+01 7.782472D+01 7.886052D+01 7.989734D+01 8.093464D+01 8.115320D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268359D+01 8.372930D+01 8.477497D+01 8.582058D+01 8.686608D+01
8.756251D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.662231D-01	0.	-1.696247D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	3.562385D-02	0.	1.238724D+03
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470003D+01	1.630260D-01	7.956370+01	7.956370+01	3.913530+05	0.	3.913530+05	8.720970-07

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.936350+03	2.743960+01	0.	0.	2.743960+01	3.260800-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 4.424OD+02 LBM/HR ENERGY BTU/HR = 6.0062D+04 (NORMAL= 6.0062D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 8.5070D-05 STEP AIR= 1.2204D-02 NET VAPOR= 3.1693D-01 NET AIR= 4.5466D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 4.5465760+01 WATER VAPOR(LBM)= 3.169325D-01

* * * * * * * * * * * * * * * * TIME = 1.000000E-01 HR = 6.000000E+00 MIN = 3.600000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.043492D+02 -2.512073D-02 -8.942273D+01 3 VAPOR -8.784713D+02 -2.439585D-02 -1.311399D+01
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.154000E+01 F
RIGHT FILM COEF ,H = 3.387953E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.053265D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531427D+01 8.502398D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299539D+01
8.:625440+01 8.025622D+01 7.888847D+01 7.752298D+01 7.696260D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -5.200298D+03 -1.444319D-01 -1.471303D+02 OLIQUID -4.298599D+03 -1.194055D-01 -4.298599D+02
LEFT FILM COEF ,H = 4.825710E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.053265E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.720151D+01 7.818131D+01 7.901050D+01 8.018305D+01 8.135628D+01 8.253041D+01 8.370525D+01 8.488050D+01 8.605599D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875724D+03 -2.743257D-01 -9.875716D+02 3 VAPOR 5.053160D+03 1.404082D-01 1.272334D+03

PCC

LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.332615E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.053265D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536621D+01 8.489686D+01 8.442552D+01 8.393695D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.252519D+02 -6.251100D-03 6.853262D+01 OLIQUID -2.229797D+03 -6.193874D-02 -2.221694D+02
LEFT FILM COEF ,H = 2.276336E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.053265E+01 F
RIGHT FILM COEF ,H = 4.260901E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.944806D+01 7.999967D+01 8.060881D+01 8.121962D+01 8.183047D+01 8.244132D+01 8.305217D+01 8.366286D+01 8.426943D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.418250D+03 -6.717355D-02 -2.409463D+02 3 VAPOR -2.442851D+02 -6.779417D-03 7.432472D+01
LEFT FILM COEF ,H = 4.260901E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.276336E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.053265D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426943D+01 8.366286D+01 8.305217D+01 8.244132D+01 8.183047D+01 8.121962D+01 8.060881D+01 7.999967D+01 7.944806D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.136765D+03 -3.156985D-02 -2.739533D+01 OLIQUID -6.685793D+02 -1.857160D-02 -6.610543D+01
LEFT FILM COEF ,H = 3.540996E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT BULK TEMP = 8.053265E+01 F
RIGHT FILM COEF ,H = 3.477798E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.645712D+01 7.681535D+01 7.784279D+01 7.887230D+01 7.990317D+01 8.093471D+01 8.115721D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268358D+01 8.372893D+01 8.477425D+01 8.581949D+01 8.686462D+01
8.759845D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	6653580-01	0.	-2.036075D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-7.3(1.92D-02	0.	1.227551D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470003D+01	1.630270-01	8.053320+01	8.053320+01	3.913110+05	0.	3.91311D+05	1.03856D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.929290D+03	2.739030+01	0.	0.	2.739030+01	3.158990-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 4.11520+02 LBM/HR ENERGY BTU/HR = 5.5966D+04 (NORMAL= 5.596' 04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 7.9133D-05 STEP AIR= 1.1352D-02 NET VAPOR= 3.66190-01 NE AIR= 5.2533D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 5.253264D+01 WATER VAPOR(LBM)= 3.66.943D-01

* * * * * * * * * * * * * * * * * TIME = 1.166667E-01 HR = 7.000000E+00 MIN = 4.200000E+02 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.077142D+02 -2.521421D-02 -1.045233D+02 3 VAPOR -1.138826D+03 -3.162810D-02 -2.993848D+01

PCC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.156333E+01 F
RIGHT FILM COEF ,H = 3.611826E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.143676D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531444D+01 8.502399D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299500D+01
8.163371D+01 8.027285D+01 7.891384D+01 7.755764D+01 7.709551D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.038837D+03 -1.677274D-01 -2.409534D+02 OLIQUID -4.298599D+03 -1.194055D-01 -5.015032D+02
LEFT FILM COEF ,H = 4.821822E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.143676E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.756536+01 7.621486D+01 7.901716D+01 8.018782D+01 8.135946D+01 8.253240D+01 8.370645D+01 8.488118D+01 8.605629D+01
8.723158D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875730D+03 -2.743258D-01 -1.152167D+03 3 VAPOR 3.360587D+03 9.338542D-02 1.342035D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.006831E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.143676D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536620D+01 8.489683D+01 8.442532D+01 8.394608D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.997498D+02 -1.387525D-02 -6.253746D+01 OLIQUID -2.232450D+03 -6.201243D-02 -2.593548D+02
LEFT FILM COEF ,H = 2.775666E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.143676E+01 F
RIGHT FILM COEF ,H = 4.265508E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.946516D+01 8.000050D+01 8.060883D+01 8.121962D+01 8.183047D+01 8.244132D+01 8.305217D+01 8.366280D+01 8.426881D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.421127D+03 -6.775347D-02 -2.812745D+02 3 VAPOR -5.419866D+02 -1.504793D-02 6.782288D+01
LEFT FILM COEF ,H = 4.265508E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.775666E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.143676D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426881D+01 8.366280D+01 8.305217D+01 8.244132D+01 8.183047D+01 8.121962D+01 8.060883D+01 8.000050D+01 7.946516D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.431604D+03 -3.974347D-02 -4.881227D+01 OLIQUID -6.707854D+02 -1.863288D-02 -7.726693D+01
LEFT FILM COEF ,H = 3.747357E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.143676E+01 F
RIGHT FILM COEF ,H = 3.485331E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.658885D+01 7.684772D+01 7.786640D+01 7.888776D+01 7.991085D+01 8.093480D+01 8.115321D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268357D+01 8.372855D+01 8.477348D+01 8.581833D+01 8.686307D+01
8.755669D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.668444D-01	0.	-2.376090D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.776368D-01	0.	1.152691D+03
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PA) TOTAL	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01 0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470000D+01 1.630280D-01	8.143730D+01	8.143730D+01	3.912710D+05	0.	3.912710D+05	1.191180D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.922720D+03	2.734450D+01 0.	0.	2.734450D+01	3.067200D-01	0.	0.	0.)

COMP 3 LEAKAGE OUTFLOW- MASS= 3.827500+02 LBM/HR ENERGY BTU/HR = 5.2136D+04 (NORMAL= 5.2136D+04 PENETRATION= 0.
STEP AND NET MASS LOSSES LBM STEP VAPOR= 7.36000-05 STEP AIR= 1.05580-02 [illegible] VAPOR= 4.1196D-01 NET AIR= 5.9101D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 5.9101230+01 WATER VAPOR(LBM)= 4.119826D-01

* * * * * * * * * * * * * * * * * TIME = 1.333333E-01 HR = 8.000000E+00 MIN = 4.800000E+02 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.110758D+02 -2.530758D-02 -1.196798D+02 3 VAPOR -1.387557D+03 -3.853765D-02 -5.100978D+01
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.158667E+01 F
RIGHT FILM COEF .,H = 3.791473E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.228151D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531463D+01 8.502400D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328506D+01 8.299565D+01
8.164386D+01 8.029339D+01 7.894507D+01 7.760018D+01 7.724271D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.769394D+03 -1.880229D-01 -3.478254D+02 OLIQUID -4.298599D+03 -1.194055D-01 -5.731466D+02
LEFT FILM COEF .,H = 4.818190E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.228151E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.793849D+01 7.825475D+01 7.902626D+01 8.019448D+01 8.136404D+01 8.253437D+01 8.370830D+01 8.488225D+01 8.605678D+01
8.723159D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875739D+03 -2.743261D-01 -1.316763D+03 3 VAPOR 1.959418D+03 5.445739D-02 1.385969D+03
LEFT FILM COEF .,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 2.625268E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.228151D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536620D+01 8.489679D+01 8.442528D+01 8.395723D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.963951D+02 -2.211509D-02 -5.175454D+01 OLIQUID -2.235082D+03 -6.208556D-02 -2.965843D+02
LEFT FILM COEF .,H = 3.116002E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.228151E+01 F
RIGHT FILM COEF .,H = 4.270089E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.948275D+01 8.000152D+01 8.060887D+01 8.121963D+01 8.183047D+01 8.244132D+01 8.305217D+01 8.366274D+01 8.426822D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.423983D+03 -6.733278D-02 -3.216504D+02 3 VAPOR -8.637033D+02 -2.398417D-02 5.612862D+01
LEFT FILM COEF .,H = 4.270095E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 3.116002E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.228151D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.425822D+01 8.366274D+01 8.305217D+01 8.244132D+01 8.183047D+01 8.121963D+01 8.060887D+01 8.000152D+01 7.948275D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.710173D+03	-4.749852D-02	-7.501127D+01	OLIQUID	-6.729007D+02	-1.869164D-02	-8.846443D+01

LEFT FILM COEF.,H = 3.914784E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.228151E+01 F
RIGHT FILM COEF ,H = 3.492754E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.673562D+01 7.688808D+01 7.789601D+01 7.890719D+01 7.992053D+01 8.093494D+01 8.115321D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268356D+01 8.372814D+01 8.477267D+01 8.581712D+01 8.686145D+01
8.755419D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.671492D-01	0.	-2.716208D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-2.657010D-01	0.	1.020006D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470030D+01	1.630290D-01	8.228220+01	8.228220+01	3.912350+05	0.	3.912350+05	1.325340-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.916600+03	2.730190+01	0.	0.	2.730190+01	2.984130-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 3.570200+02 LBM/HR ENERGY BTU/HR = 4.870400+04 (NORMAL= 4.870400+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 6.865300-05 STEP AIR= 9.848600-03 NET VAPOR= 4.546300-01 NET AIR= 6.521900+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS O AIR(LBM)= 6.521869D+01 WATER VAPOR(LBM)= 4.546262D-01

* * * * * * * * * * * * * * * * TIME = 1.500000E-01 HR = 9.000000E+00 MIN = 5.400000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.144340D+02	-2.540087D-02	-1.348924D+02	3 VAPOR	-1.622518D+03	-4.506467D-02	-7.611401D+01

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.161600E+01 F
RIGHT FILM COEF ,H = 3.939567E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.307314D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531485D+01 8.502401D+01 8.473415D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328507D+01 8.299586D+01
8.165628D+01 8.031803D+01 7.898245D+01 7.765092D+01 7.740259D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.409351D+03	-2.058181D-01	-4.661020D+02	OLIQUID	-4.298559D+03	-1.194055D-01	-6.447899D+02

LEFT FILM COEF.,H = 4.814786E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.307314E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.831580D+01 7.830075D+01 7.903808D+01 8.020330D+01 8.137025D+01 8.253952D+01 8.371096D+01 8.488382D+01 8.605751D+01
8.723159D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875750D+03	-2.743264D-01	-1.481358D+03	3 VAPOR	7.589254D+02	2.109601D-02	1.408706D+03

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 1.900000E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.307314D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536619D+01 8.489676D+01 8.442543D+01 8.396994D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.101069D+03 -3.057818D-02 3.594710D+01 OLIQUID -2.237695D+03 -6.215814D-02 -3.338575D+02
LEFT FILM COEF ,H = 3.376208E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.307314E+01 F
RIGHT FILM COEF ,H = 4.274674E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.950189D+01 8.000275D+01 8.060892D+01 8.121963D+01 8.183047D-01 8.244132D+01 8.305216D+01 8.366267D+01 8.426766D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.426816D+03 -6.741150D-02 -3.620738D+02 3 VAPOR -1.194127D+03 -3.316253D-02 3.898521D+01
LEFT FILM COEF ,H = 4.274674E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.376208E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.307314D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426766D+01 8.366267D+01 8.305216D+01 8.244132D+01 8.183047D-01 8.121963D+01 8.060892D+01 8.000275D+01 7.950189D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.972601D+03 -5.478860D-02 -1.057252D+02 OLIQUID -6.749356D+02 -1.874816D-02 -9.969651D+01
LEFT FILM COEF ,H = 4.053812E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.307314E+01 F
RIGHT FILM COEF ,H = 3.500078E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.689561D+01 7.633687D+01 7.793190D+01 7.893083D+01 7.993233D+01 8.093513D+01 8.115322D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268355D+01 8.372772D+01 8.477184D+01 8.581588D+01 8.685980D+01
8.755193D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.674506D-01	0.	-3.056668D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-3.483161D-01	0.	-3.356970D+02
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	TEMPERATURE (F) STEAM	ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470038D+01	1.630298D-01	8.307398D+01	8.307398D+01	3.912000D+05	0.	3.912000D+05	1.444820-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB/SEC/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.910880D+03	2.726200D+01	0.	0.	0.	2.726200D+01	2.908559D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 3.3372D+02 LBM/HR ENERGY BTU/HR = 4.5589D+04 (NORMAL= 4.5589D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 6.4172D-05 STEP AIR= 9.2059D-03 NET VAPOR= 4.9447D-01 NET AIR= 7.0934D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 7.093423D+01 WATER VAPOR(LBM)= 4.944681D-01

* * * * * * * * * * * * * * * * * TIME = 1.666667E-01 HR = 1.000000E+01 MIN = 6.000000E+02 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.177890D+02 -2.549406D-02 -1.501610D+02 3 VAPOR -1.843804D+03 -5.121180D-02 -1.050172D+02

PCC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.163333E+01 F
RIGHT FILM COEF ,H = 4.064483E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.381948D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531508D+01 8.502402D+01 8.473415D+01 8.444330D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328508D+01 8.299613D+01
8.167073D+01 8.011688D+01 7.902613D+01 7.771005D+01 7.757361D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.978860D+03 -2.216225D-01 -5.944254D+02 0 LIQUID -4.298599D+03 -1.194055D-01 -7.164332D+02
LEFT FILM COEF ,H = 4.811576E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.381948E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.869348D+01 7.835257D+01 7.905287D+01 8.021450D+01 8.137830D+01 8.254502D+01 8.371457D+01 8.488598D+01 8.605852D+01
8.723160D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 LIQUID -9.875762D+03 -2.743267D-01 -1.645954D+03 3 VAPOR 1.389028D+02 3.842377D-03 1.416141D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 1.900000E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.381948D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536619D+01 8.489673D+01 8.442579D+01 8.398362D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.407674D+03 -3.909496D-02 1.504239D+01 0 LIQUID -2.240289D+03 -6.223019D-02 -3.711740D+02
LEFT FILM COEF ,H = 3.587409E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.381948E+01 F
RIGHT FILM COEF ,H = 4.279232E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.952258D+01 8.000419D+01 8.060899D+01 8.121963D+01 8.183047D+01 8.244132D+01 8.305216D+01 8.366260D+01 8.426713D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 LIQUID -2.429629D+03 -6.748963D-02 -4.025442D+02 3 VAPOR -1.526645D+03 -4.239911D-02 1.631371D+01
LEFT FILM COEF ,H = 4.279232E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.587409E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.381948D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426713D+01 8.366260D+01 8.305216D+01 8.244132D+01 8.183047D+01 8.121963D+01 8.060899D+01 8.000419D+01 7.952258D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.218849D+03 -6.162915D-02 -1.406743D+02 0 LIQUID -6.768987D+02 -1.880270D-02 -1.109619D+02
LEFT FILM COEF ,H = 4.171682E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.381948E+01 F
RIGHT FILM COEF ,H = 3.507311E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.706712D+01 7.699425D+01 7.797424D+01 7.895878D+01 7.994632D+01 8.093538D+01 8.115323D+01 8.137183D+01 8.159046D+01
8.180809D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268354D+01 8.372729D+01 8.477100D+01 8.581463D+01 8.685813D+01
8.754987D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.677488D-01	0.	-3.397209D+03
1	0.	0	0.	0
2	0.	0	0.	0
3	0.	-4.120852D-01	0.	6.073799D+02
4	0	0	0	0

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0	7.34000D+01	7.34000D+01	0	0.	0.	0.
3	1.47003D+01	1.63030D-01	8.38203D+01	8.38203D+01	3.91168D+05	0.	3.91168D+05	1.53559D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.90551D+03	2.72246D+01	0.	2.72246D+01	2.83934D-01	0	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 3.1572D+02 LBM/HR ENERGY BTU/HR = 4.3187D+04 (NORMAL= 4.3187D+04 PENETRATION= 0)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 6.0710D-05 STEP AIR= 8.7092D-03 NET VAPOR= 5.3192D-01 NET AIR= 7.6307D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 7.6307D+01 WATER VAPOR(LBM)= 5.319217D-01

* * * * * * * * * * * * * * * * TIME = 1.833333E-01 HR = 1.100000E+01 MIN = 6.600000E+02 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.211408D+02 -2.558717D-02 -1.65485)+02 3 VAPOR -2.052220D+03 -5.700143D-02 -1.375025D+02
LEFT FILM COEF .H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.165667E+01 F
RIGHT FILM COEF .H = 4.171812E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.452745D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531534D+01 8.502404D+01 8.473416D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328509D+01 8.299647D+01
8.168735D+01 8.037999D+01 7.907615D+01 7.777762D+01 7.775442D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.491072D+03 -2.358519D-01 -7.317491D+02 OLIQUID -4.298599D+03 -1.194055D-01 -7.880765D+02
LEFT FILM COEF .H = 4.808532E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.452745E+01 F
RIGHT FILM COEF .H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.906892D+01 7.840986D+01 7.907081D+01 8.022827D+01 8.138836D+01 8.255203D+01 8.371924D+01 8.488883D+01 8.605988D+01
8.723162D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875775D+03 -2.743271D-01 -1.810550D+03 3 VAPOR -4.482326D+02 -1.243768D-02 1.413519D+03
LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 1.900000E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.452745D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536618D+01 8.486671D+01 8.442635D+01 8.399779D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.713324D+03 -4.758530D-02 -1.096978D+01 OLIQUID -2.242864D+03 -6.230171D-02 -4.085337D+02
LEFT FILM COEF .H = 3.765407E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.452745E+01 F
RIGHT FILM COEF .H = 4.283775E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.954479D+01 8.000586D+01 8.060907D+01 8.121963D+01 8.183047D+01 8.244132D+01 8.305215D+01 8.366252D+01 8.426663D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID 12422D+03 -6.756720D-02 -4.430613D+02 3 VAPOR -1.858127D+03 -5.160702D-02 -1.189690D+01
LEFT FILM COEF .H = 4.283775E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 3.765407E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.452745D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426663D+01 8.366252D+01 8.305215D+01 8.244132D+01 8.183047D+01 8.121963D+01 8.060907D+01 8.000586D+01 7.954479D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.450103D+03 -6.805324D 02 -1.796034D+02 OLIQUID -6.787974D+02 -1.885544D-02 -1.222594D+02
LEFT FILM COEF ,H = 4.273341E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 8.452745E+01 F
RIGHT FILM COEF ,H = 3.514461E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.724872D+01 7.706029D+01 7.802309D+01 7.899109D+01 7.996253D+01 8.093570D+01 8.115324D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246497D+01 8.268352D+01 8.372686D+01 8.477016D+01 8.581337D+01 8.685646D+01
8.754800D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.680441D-01	0.	-3.737967D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-4.725365D-01	0.	3.417969D+02
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470003D+01	1.630310-01	8.452830+01	8.452830+01	3.911380+05	0.	3.911380+05	1.620400-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.900430+03	2.718910+01	0.	0.	2.718910+01	2.775380-0.	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 2.987000+02 LBM/HR ENERGY BTU/HR = 4.090900+04 (NORMAL= 4.090900+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 5.743700-05 STEP AIR= 8.239700-03 NET VAPOR= 5.673600-01 NET AIR= 8.139000+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 8.139026D+01 WATER VAPOR(LBM)= 5.673550D-01

* * * * * * * * * * * * * * * * TIME = 2.000000E-01 HR = 1.200000E+01 MIN = 7.200000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.244895D+02 -2.568019D-02 -1.808656D+02 3 VAPOR -2.246900D+03 -6.240957D-02 -1.733495D+02
LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT BULK TEMP = 9.168000E+01 F
RIGHT FILM COEF ,H = 4.254547E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 8.519808D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531562D+01 8.502406D+01 8.473416D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328511D+01 8.299690D+01
8.170613D+01 8.041734D+01 7.913249D+01 7.785358D+01 7.794379D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.951391E 03 -2.486397D-01 -8.771777D+02 OLIQUID -4.298599D+03 -1.194055D-01 -8.597198D+02
LEFT FILM COEF ,H = 4.805648E 01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU HR FT BULK TEMP = 8.519808E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.944018D+01 7.847278D+01 7.909206D+01 8.024476D+01 8.140058D+01 8.256068D+01 8.372509D+01 8.489244D+01 8.606160D+0.
8.723164D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875789D+03 -2.743275D-01 -1.975147D+03 3 VAPOR -1.230609D+03 -3.416328D-02 1.400507D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 2.330381E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.519808D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536617D+01 8.489670D+01 8.442713D+01 8.401247D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.014405D+03 -5.594881D-02 -4.204430D+01 0LIQUID -2.245420D+03 -6.237273D-02 -4.459361D+02
LEFT FILM COEF.,H = 3.918337E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.519808E+01 F
RIGHT FILM COEF.,H = 4.288302E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.956846D+01 8.000779D+01 8.060917D+01 8.121964D+01 8.183047D+01 8.244132D+01 8.305215D+01 8.366244D+01 8.426615D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.435194D+03 -6.764422D-02 -4.836248D+02 3 VAPOR -2.184654D+03 -6.067738D-02 -4.559772D+01
LEFT FILM COEF.,H = 4.288302E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 3.918337E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.519808D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426615D+01 8.366244D+01 8.305215D+01 8.244132D+01 8.183047D+01 8.121964D+01 8.060917D+01 8.000779D+01 7.956846D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.665606D+03 -7.403982D-02 -2.222582D+02 OLIQUID -6.806378D+02 -1.890656D-02 -1.335881D+02
LEFT FILM COEF.,H = 4.361427E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.519808E+01 F
RIGHT FILM COEF.,H = 3.521535E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.743907D+01 7.713494D+01 7.807842D+01 7.902775D+01 7.998095D+01 8.093610D+01 8.115325D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268351D+01 8.372643D+01 8.476932D+01 8.581212D+01 8.685480D+01
8.754629D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.683367D-01	0.	-4.078881D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-5.358786D-01	0.	4.007991D+01
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470030D+01	1.630310D-01	8.519900D+01	8.519900D+01	3.911090D+05	0.	3.911090D+05	1.707940D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.895630D+03	2.715570D+01	0.	0.	2.715570D+01	2.716300D-01	0.	3.852500D+04	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 2.809600D+02 LBM/HR ENERGY BTU/HR = 3.852500D+04 (NORMAL= 3.852500D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 5.402600D-05 STEP AIR= 7.[illegible]4D-03 NET VAPOR= 6.008400D-01 NET AIR= 8.619300D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 8.619333D+0[illegible] WATER VAPOR(LBM)= 6.008363D-01

* * * * * * * * * * * * * * * * TIME = 2.166667E-01 HR = 1.300000E+01 MIN = 7.800000E+02 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.278352D+02 -2.577312D-02 -1.963017D+02 3 VAPOR -2.425586D+03 -6.737344D-02 -2.123093D+02

PCC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT, BULK TEMP = 9.170333E+01 F
RIGHT FILM COEF ,H = 4.344171E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 8.582807D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531592D+01 8.502408D+01 8.473416D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328513D+01 8.299742D+01
8.272705D+01 8.245887D+01 7.919504D+01 7.793777D+01 7.814042D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -9.357645D+03 -2.599258D-01 -1.029825D+03 OLIQUID -4.298599D+03 -1.194055D-01 -9.313632D+02
LEFT FILM COEF ,H = 4.802939E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT, BULK TEMP = 8.582807E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.980546D+01 7.853947D+01 7.911F.3D+01 8.026408D+01 8.141508D+01 8.257108D+01 8.373221D+01 8.489687D+01 8.606374D+01
8.723167D+01 8.769290D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875803D+03 -2.743279D-01 -2.139743D+03 3 VAPOR -2.145539D+03 -5.957649D-02 1.372462D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT, BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.676156E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.582807D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536617D+01 8.489671D+01 8.442811D+01 8.402806D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.306155D+03 -6.405324D-02 -7.806348D+01 OLIQUID -2.247959D+03 -6.244325D-02 -4.838809D+02
LEFT FILM COEF ,H = 4.050586E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT, BULK TEMP = 8.582807E+01 F
RIGHT FILM COEF ,H = 4.292815E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.959353D+01 8.000996D+01 8.060930D+01 8.121964D+01 8.183047D+01 8.244132D+01 8.305214D+01 8.366236D+01 8.426570D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.437947D+03 -6.772670D-02 -5.242343D+02 3 VAPOR -2.501062D+03 -6.946676D-02 -8.466109D+01
LEFT FILM COEF ,H = 4.292815E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT, BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.050586E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.582807D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426570D+01 8.366236D+01 8.305214D+01 8.244132D+01 8.183047D+01 8.121964D+01 8.060930D+01 8.000996D+01 7.959353D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.863007D+03 -7.952361D-02 -2.683552D+02 OLIQUID -6.824252D+02 -1.895621D-02 -1.449471D+02
LEFT FILM COEF ,H = 4.437219E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT, BULK TEMP = 8.582807E+01 F
RIGHT FILM COEF ,H = 3.528537E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.763682D+01 7.721802D+01 7.814012D+01 7.906869D+01 8.000156D+01 8.093660D+01 8.115327D+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268349D+01 8.372601D+01 8.476849D+01 8.581089D+01 8.685316D+01
8.754473D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.586267D-01	0.	-4.419971D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-5.999193D-01	0.	-3.007521D+02
4	0.	0.	0.	0.

PCC

COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470003D+01	1.630320-01	8.582900+01	8.582900+01	3.910820+05	0	3.910820+05	1.794970-06

COMP	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.891120+03	2.712430+01	0.	0.	2.712430+01	2.662100-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 2.630B0+02 LBM/HR ENERGY BTU/HR = 3.6114D+04 (NORMAL= 3.6114D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 5.0589D-05 STEP AIR= 7.2572D-03 NET VAPOR= 6.3222D-01 NET AIR= 9.0695D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 9.069482D+01 WATER VAPOR(LBM)= 6.322153D-01

* * * * * * * * * * * * * * * * * TIME = 2.333333E-01 HR = 1.400000E+01 MIN = 8.400000E+02 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.311778D+02	-2.586597D-02	-2.117935D+02	3 VAPOR	-2.588090D+03	-7.188783D-02	-2.541124D+02

LEFT FILM COEF. ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.172667E+01 F
RIGHT FILM COEF ,H = 4.412556E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.641856D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531625D+01 8.502411D+01 8.473416D+01 8.444330+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328516D+01 8.299803D+01
8.175005D+01 8.050447D+01 7.926363D+01 7.802995D+01 7.834299D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-9.714209D+03	-2.698314D-01	-1.188823D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-1.003006D+03

LEFT FILM COEF. ,H = 4.800400E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.641856E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.016315D+01 7.861108D+01 7.914482D+01 8.02[illegible] 8.143194D+01 8.258332D+01 8.374068D+01 8.490219D+01 8.606631D+01
8.723171D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875815D+03	-2.743282D-01	-2.304340D+03	3 VAPOR	-3.100718D+03	-8.610876D-02	1.328771D+03

LEFT FILM COEF. ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 2.932518E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.641856D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536616D+01 8.489673D+01 8.442932D+01 8.404461D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.586490D+03	-7.184061D-02	-1.188526D+02	OLIQUID	-2.250480D+03	-6.251328D-02	-5.208679D+02

LEFT FILM COEF. ,H = 4.166018E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.641856E+01 F
RIGHT FILM COEF ,H = 4.297312E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.961989D+01 8.001241D+01 8.060945D+01 8.121965D+01 8.183048D+01 8.244132D+01 8.305213D+01 8.366227D+01 8.426528D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.440682D+03	-6.779665D-02	-5.648896D+02	3 VAPOR	-2.805090D+03	-7.791229D-02	-1.288975D+02

LEFT FILM COEF. ,H = 4.297312E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.166018E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.641856D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426528D+01 8.366227D+01 8.305213D+01 8.244132D+01 8.183048D+01 8.121965D+01 8.060945D+01 8.001241D+01 7.961989D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.042223D+03 -8.450224D-02 -3.175907D+02 LIQUID -6.841638D+02 -1.900451D-02 -1.563754D+02
LEFT FILM COEF.,H = 4.502417E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.641856E+01 F
RIGHT FILM COEF.,H = 3.535473E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.7840590+01 7.730930D+01 7.820802D+01 7.911381D+01 8.002431D+01 8.093719D+01 8.1153300+01 8.137183D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268347D+01 8.372559D+01 8.476768D+01 8.580968D+01 8.685156D+01
8.754330D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.689141D-01	0.	-4.761233D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-6.620831D-01	0.	-6.795053D+02
4	0.	0.	0.	0.

COMP ND	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020+01	1.630330-01	8.641950+01	8.641950+01	3.910560+05	0.	3.910560+05	1.878000-06

	AIR MASS (LBM)	WATER MASS VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.886910+03	2.709490+01 0.	0.	2.709490+01	2.612410-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 2.4578D+02 LBM/HR ENERGY BTU/HR = 3.3773D+04 (NORMAL= 3.3773D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 4.7261D-05 STEP AIR= 6.7799D-03 NET VAPOR= 6.6156D-01 NET AIR= 9.4905D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 9.490473D+01 WATER VAPOR(LBM)= 6.615617D-01

* * * * * * * * * * * * * * * * TIME = 2.500000E-01 HR = 1.500000E+01 MIN = 9.000000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.345176D+02 -2.595874D-02 -2.273409D+02 3 VAPOR -2.734565D+03 -7.595694D-02 -2.984899D+02
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.175000E+01 F
RIGHT FILM COEF.,H = 4.471225E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.697091D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531659D+01 8.502414D+01 8.473416D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328520D+01 8.299876D+01
8.177508D+01 8.055399D+01 7.933804D+01 7.812980D+01 7.855026D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.002532D+04 -2.784743D-01 -1.353379D+03 LIQUID -4.298599D+03 -1.194052D-01 -1.074650D+03
LEFT FILM COEF.,H = 4.798025E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT.F BULK TEMP = 8.697091E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.051197D+01 7.868675D+01 7.917644D+01 8.031151D+01 8.145122D+01 8.259746D+01 8.375054D+01 8.490843D+01 8.606935D+01
8.723177D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
LIQUID -9.875824D+03 -2.743285D-01 -2.468937D+03 3 VAPOR -4.062613D+03 -1.128282D-01 1.269069D+03

PCC

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.135746E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.697091D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536616D+01 8.489678D+01 8.443076D+01 8.406211D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.854001D+03 -7.927178D-02 -1.642085D+02 LIQUID -2.252984D+03 -6.258284D-02 -5.583968D+02
LEFT FILM COEF ,H = 4.267476E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.697091E+01 F
RIGHT FILM COEF ,H = 4.301795E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.964744D+01 8.001514D+01 8.060963D+01 8.121966D+01 8.183048D+01 8.244132D+01 8.305212D+01 8.366218D+01 8.426488D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
LIQUID -2.443398D+03 -6.787200D-02 -6.055903D+02 3 VAPOR -3.095210D+03 -8.597151D-02 -1.780867D+02
LEFT FILM COEF ,H = 4.301795E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.267476E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.697091D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426488D+01 8.366218D+01 8.305212D+01 8.244132D+01 8.183048D+01 8.121966D+01 8.060963D+01 8.001514D+01 7.964744D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.203515D+03 -8.896299D-02 -3.696630D+02 LIQUID -6.858576D+02 -1.905156D-02 -1.677523D+02
LEFT FILM COEF ,H = 4.558413E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.697091E+01 F
RIGHT FILM COEF ,H = 3.542346E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.804912D+01 7.740845D+01 7.828186D+01 7.916294D+01 8.004912D+01 8.093788D+01 8.115370D+01 8.137184D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268345D+01 8.372518D+01 8.476688D+01 8.580850D+01 8.685000D+01
8.754200D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.691992D-01	0.	-5.102567D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-7.214857D-01	0.	-1.094758D+03
4	0.	0.	0.	0.

COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) AIMOS	POOL	ENERGY (BTU) AIMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47002D+01	1.63033D-01	8.697190+01	8.697190+01	3.91033D+05	0.	3.910330+05	1.955930-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	AIMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.88298D+03	2.70675D+01	0.	0.	0.	2.70675D+01	2.56689D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 2.2928D+02 LBM/HR ENERGY BTU/HR = 3.1537D+04 (NORMAL= 3.1537D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 4.4089D-05 STEP AIR= 6.3248D-03 NET VAPOR= 6.8896D-01 NET AIR= 9.8835D+01
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 9.883469D+01 WATER VAPOR(LBM)= 6.889567D-01

* * * * * * * * * * * * * * * * TIME = 2.666667E-01 HR = 1.600000E+01 MIN = 9.600000E+02 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.378545D+02 -2.605144D-02 -2.429440D+02 3 VAPOR -2.865517D+03 -7.959484D-02 -3.451783D+02

PCC

LEFT FILM COEF ,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 9.177333E+01 F
RIGHT FILM COEF ,H = 4.521472E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 8.748694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531695D+01 8.502417D+01 8.473416D+01 8.444433D+01 8.415451D+01 3.386469D+01 8.357488D+01 8.328524D+01 8.299559D+01
8.180203D+01 8.060726D+01 7.941798D+01 7.823695D+01 7.876111D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.029538D+04 -2.859769D-01 -1.522772D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.146293D+03
LEFT FILM COEF ,H = 4.795806E-01BTU/HR FT2 F FIRST MESH K = 3.500000E-02 BTU/HR FT. BULK TEMP = 8.748694E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.085094D+01 7.876611D+01 7.921156D+01 8.033967D+01 8.147296D+01 8.261354D+01 8.376185D+01 8.491562D+01 8.607287D+01
8.723183D+01 8.769296D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875830D+03 -2.743286D-01 -2.633534D+03 3 VAPOR -5.011351D+03 -1.391825D-01 1.193425D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.302998E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.748694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536616D+01 8.485684D+01 8.443244D+01 8.408054D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.107926D+03 -8.632557D-02 -2.139104D+02 OLIQUID -2.255472D+03 -6.265194D-02 -5.959673D+02
LEFT FILM COEF ,H = 4.357176E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 8.748694E+01 F
RIGHT FILM COEF ,H = 4.306264E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.967607D+01 8.001815D+01 8.060985D+01 8.121967D+01 8.183048D+01 8.244132D+01 8.305211D+01 8.366208D+01 8.426450D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.446095D+03 -6.794703D-02 -6.463361D+02 3 VAPOR -3.370596D+03 -9.362146D-02 -2.319892D+02
LEFT FILM COEF ,H = 4.306264E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.357176E-01 BTU/HR FT2 F LAST MESH K = 1.050000E+00 BTU/HR FT F BULK TEMP = 8.748694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426450D+01 8.366208D+01 8.305211D+01 8.244132D+01 8.183048D+01 8.121967D+01 8.060985D+01 8.001815D+01 7.967607D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.347514D+03 -9.298336D-02 -4.242784D+02 OLIQUID -6.875096D+02 -1.909745D-02 -1.791971D+02
LEFT FILM COEF ,H = 4.606405E-01BTU/HR FT2 F FIRST MESH K = 6.700000E-02 BTU/HR FT. BULK TEMP = 8.748694E+01 F
RIGHT FILM COEF ,H = 3.549159E-01 BTU/HR FT2 F LAST MESH K = 6.700000E-02 BTU/HR FT F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.825124D+01 7.751505D+01 7.836138D+01 7.921591D+01 8.007592D+01 8.093870D+01 8.115338D+01 8.137184D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268342D+01 8.372478D+01 8.476611D+01 8.580735D+01 8.684848D+01
8.754081D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.694820D-01	0.	-5.444272D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-7.776847D-01	0.	-1.544704D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470029D+01	1.63034D-01	8.748880D+01	8.748880D+01	3.91011D+05	0.	3.91011D+05	2.02833D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.87932D+03	2.70420D+01	0.	0.	2.70420D+01	2.52517D-01	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 2.1371D+02 LBM/HR ENERGY BTU/HR = 2.9421D+04 (NORMAL= 2.9421D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 4.1094D-05 STEP AIR= 5.8952D-03 NET VAPOR= 7.1450D-01 NET AIR= 1.0250D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.024992D+02 WATER VAPOR(LBM)= 7.1450090-01

* * * * * * * * * * * * * * * * TIME = 2.833333E-01 HR = 1.7[illegible]OE+01 MIN = 1.020000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.411887D+02 -2.614405D-02 -2.586027D+02 3 VAPOR -2.981673D+03 -8.282172D-02 -3.939249D+02
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.179667E+01 F
RIGHT FILM COEF ,H = 4.564397E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.796867D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531733D+01 8.502421D+01 8.473416D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357488D+01 8.328530D+01 8.300055D+01
8.183082D+01 8.066406D+01 7.950373D+01 7.835096D+01 7.897451D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. EN[illegible] STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.052869D+04 -2.924587D-01 -1.696354D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.217936D+03
LEFT FILM COEF ,H = 4.793735E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.796867E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATU[illegible]S (F), [illegible]FT TO RIGHT
8.117935D+01 7.[illegible]48[illegible]83D+01 7.925014D+01 8.037080D+01 8.145[illegible]16D+01 8.263157D+01 8.377462D+01 8.492379D+01 8.607689D+01
8.723192D+01 8.769297D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.9999870+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875830D+03 -2.743286D-01 -2.798131D+03 3 VAPOR -5.934559D+03 -1.648289D-01 1.102167D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.443993E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.796867D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536616D+01 8.489693D+01 8.443436D+01 8.409985D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.347963D+03 -9.299358D-02 -2.677288D+02 OLIQUID -2.257943D+03 -6.272059D-02 -6.335791D-02
LEFT FILM COEF ,H = 4.436874E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.796867E+01 F
RIGHT FILM COEF ,H = 4.310718E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.970567D+01 8.002145D+01 8.061009D+01 8.121968D+01 8.183048D+01 8.244132D+01 8.305210D+01 8.366199D+01 8.426415D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.448776D+03 -6.802149D-02 -6.871267D+02 3 VAPOR -3.630920D+03 -1.008530D-01 -2.903561D+02
LEFT FILM COEF ,H = 4.310718E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.436874E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.796867D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426415D+01 8.366199D+01 8.305213D+01 8.244132D+01 8.183048D+01 8.121966D+01 8.061009D+01 8.002145D+01 7.970567D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.475079D+03 -9.652721D-02 -4.811555D+02 OLIQUID -6.891226D+02 -1.914226D-02 -1.906691D+02
LEFT FILM COEF ,H = 4.647421E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.796867E+01 F
RIGHT FILM COEF ,H = 3.555917E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.847592D+01 7.762868D+01 7.844622D+01 7.927249D+01 8.010458D+01 8.093963D+01 8.115343D+01 8.137184D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268340D+01 8.372440D+01 8.476536D+01 8.580624D+01 8.684702D+01
8.753972D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.697625D-01	0.	-5.786045D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-8.304831D-01	0.	-2.027353D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020D+01	1.630340D-01	8.796980D+01	8.796980D+01	3.909900D+05	0.	3.909900D+05	2.095110D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.875900D+03	2.701820D+01	0.	0.	0.	2.701820D+01	2.486920D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 5.991000D+02 LBM/HR ENERGY BTU/HR = 2.743400D+04 (NORMAL= 2.743400D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP AIR= 0. OR= 3.828600D-05 STEP AIR= 9.492300D-03 NET VAPOR= 7.383000D-01 NET AIR= 1.059100D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.059100D+02 WATER VAPOR(LBM)= 7.383000D-01

* * * * * * * * * * * * * * * * TIME = 3.000000E-01 HR = 1.800000E+01 MIN = 1.080000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.445201D+02 -2.623659D-02 -2.743170D+02 3 VAPOR -3.083894D+03 -8.566151D-02 -4.444900D+02
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.182000E+01 F
RIGHT FILM COEF ,H = 4.600938E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.841819D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531773D+01 8.502425D+01 8.473417D+01 8.444433D+01 8.415451D+01 8.386469D+01 8.357489D+01 8.328537D+01 8.300164D+01
8.186134D+01 8.072417D+01 7.959316D+01 7.847136D+01 7.918956D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.072931D+04 -2.980320D-01 -1.873547D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.289580D+03
LEFT FILM COEF ,H = 4.791802E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.841819E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.149671D+01 7.893458D+01 7.929213D+01 8.040487D+01 8.152381D+01 8.265158D+01 8.378886D+01 8.493294D+01 8.608140D+01
8.723202D+01 8.769297D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875823D+03 -2.743284D-01 -2.962729D+03 3 VAPOR -6.824683D+03 -1.895543D-01 9.957897D+02

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LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 3.564871E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.841819D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536616D+01 8.489706D+01 8.443654D+01 8.411997D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.574139D+03 -9.927656D-02 -3.254321D+02 OLIQUID -2.260399D+03 -6.278881D-02 -6.712320D+02
LEFT FILM COEF .H = 4.507992E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.841819E+01 F
RIGHT FILM COEF .H = 4.315158E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.973614D+01 8.002505D+01 8.061038D+01 8.121970D+01 8.183048D+01 8.244132D+01 8.305209D+01 8.366189D+01 8.426382D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.451439D+03 -6.809546D-02 -7.279618D+02 3 VAPOR -3.876211D+03 -1.076670D-01 -3.529363D+02
LEFT FILM COEF .H = 4.315158E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 4.507992E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.841819D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426382D+01 8.366189D+01 8.305209D+01 8.244132D+01 8.183048D+01 8.121970D+01 8.061038D+01 8.002505D+01 7.973614D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.587203D+03 -9.964209D-02 -5.400285D+02 OLIQUID -6.906990D+02 -1.918605D-02 -2.021676D+02
LEFT FILM COEF .H = 4.682340E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.841819E+01 F
RIGHT FILM COEF .H = 3.562621E-0. BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.869224D+01 7.774884D+01 7.953604D+01 7.933245D+01 8.013501D+01 8.094069D+01 8.115349D+01 8.137184D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246495D+01 8.268337D+01 8.372402D+01 8.476463D+01 8.580517D+01 8.684561D+01
8.753874D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.700409D-01	0.	-6.127987D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-8.798336D-01	0.	-2.540644D+03
4	0.	0.	0.	0.

COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47002D+01	1.63034D-01	8.84193D+01	8.84193D+01	3.90971D+05	0.	3.90971D+05	2.15639D-06

	AIR MASS / LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.6772D+03	2.699600+01	0.	2.699600+01	2.45182D-01	0.	0.	0.

3 LEAKAGE OUTFLOW- MASS= 1.8547D+02 LBM/HR ENERGY BTU/HR = 2.5576D+04 (NORMAL= 2.5576D+04 PENETRATION= 0.
COMP
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.5665D-05 STEP AIR= 5.1163D-03 NET VAPOR= 7.6048D-01 NET AIR= 1.0909D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.0909490+02 WATER VAPOR(LBM)= 7.6047850-01

* * * * * * * * * * * * * * * * * TIME = 3.166667E-01 HR = 1.900000E+01 MIN = 1.140000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.478489D+02 -2.632906D-02 -2.900867D+02 3 VAPOR -3.173112D+03 -8.814008D-02 -4.966491D+02

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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.184333E+01 F
RIGHT FILM COEF  ,H = 4.631697E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 8.883762D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.531814D+01  8.502429D+01  8.473417D+01  8.444433D+01  8.415451D+01  8.386470D+01  8.357489D+01  8.328545D+01  8.300286D+01
  8.189346D+01  8.078734D+01  7.968768D+01  7.859767D+01  7.940547D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -1.090096D+04 -3.028007D-01 -2.053837D+03          OLIQUID      -4.298599D+03 -1.194055D-01 -1.361223D+03
LEFT FILM COEF.,H = 4.789998E-01BTU/HR.FT2.F   FIRST MESH  K = 3.500000E-02 BTU/HR.FT.  BULK TEMP = 8.883762E+01 F
RIGHT FILM COEF  ,H = 1.000000E+04 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.180276D+01  7.902304D+01  7.933745D+01  8.044182D+01  8.155289D+01  8.267354D+01  8.380458D+01  8.494309D+01  8.608642D+01
  8.723214D+01  8.769297D+01  8.815434D+01  8.861572D+01  8.907710D+01  8.953849D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -9.875807D+03 -2.743280D-01 -3.127326D+03          3 VAPOR      -7.677040D+03 -2.132318D-01 8.748875D+02
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  ,H = 3.669807E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 8.883762D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536617D+01  8.489721D+01  8.443897D+01  8.414083D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -3.786714D+03 -1.051817D-01 -3.867912D+02          OLIQUID      -2.262839D+03 -6.285659D-02 -7.089257D+02
LEFT FILM COEF.,H = 4.571694E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 8.883762E+01 F
RIGHT FILM COEF  ,H = 4.319585E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.976736D+01  8.002894D+01  8.061070D+01  8.121972D+01  8.183048D+01  8.244132D+01  8.305208D+01  8.366179D+01  8.426352D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.454085D+03 -6.816897D-02 -7.688412D+02          3 VAPOR      -4.106752D+03 -1.140713D-01 -4.194812D+02
LEFT FILM COEF.,H = 4.319585E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  ,H = 4.571694E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 8.883762D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.426352D+01  8.366179D+01  8.305208D+01  8.244132D+01  8.183048D+01  8.121972D+01  8.061070D+01  8.002894D+01  7.976736D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -3.684944D+03 -1.023574D-01 -6.006490D+02          OLIQUID      -6.922407D+02 -1.922887D-02 -1.369226D+02
LEFT FILM COEF.,H = 4.711976E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 8.883762E+01 F
RIGHT FILM COEF  ,H = 3.669274E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.890937D+01  7.787502D+01  7.863046D+01  7.939554D+01  8.016707D+01  8.094188D+01  8.115357D+01  8.137185D+01  8.159046D+01
  8.180909D+01  8.202771D+01  8.224634D+01  8.246495D+01  8.268335D+01  8.372366D+01  8.476393D+01  8.580414D+01  8.684425D+01
  8.753784D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0   0.             -5.703170D-01   0.            -6.470094D+03
   1   0.              0.             0.             0.
   2   0.              0.             0.             0.
   3   0.             -9.257831D-01   0.            -3.082520D+03
   4   0.              0.             0.             0.
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COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470002D+01	1.630350-01	8.883880+01	8.883880+01	3.909530+05	0.	3.909530+05	2.212400-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0	6.000000-01	0.	0.	0.
3	3.869760+03	2.697540+01	0.	0.	2.697540+01	1.419570-01	0.	0.	0

COMP 3 LEAKAGE OUTFLOW- MASS= 1.728000+02 LBM/HR ENERGY BTU/HR = 2.384600+04 (NORMAL= 2.384600+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.322900-05 STEP AIR= 4.769800-03 NET VAPOR= 7.811400-01 NET AIR= 1.120600+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.120584D+02 WATER VAPOR(LBM)= 7.811363D-01

* * * * * * * * * * * * * * * * * * TIME = 3.333333E-01 HR = 2.000000E+01 MIN = 1.200000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.511750D+02 -2.642145D-02 -3.059119D+02 3 VAPOR -3.250286D+03 -9.028407D-02 -5.501935D+02
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.186667E+01 F
RIGHT FILM COEF ,H = 4.657963E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.922903D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531858D+01 8.502434D+01 8.473418D+01 8.444433D+01 8.415451D+01 8.386470D+01 8.357490D+01 8.328554D+01 8.300421D+01
8.192706D+01 8.085334D+01 7.978633D+01 7.872937D+01 7.962155D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.104704D+04 -3.068592D-01 -2.236770D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.432866D+03
LEFT FILM COEF ,H = 4.788315E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.922903E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.209739D+01 7.911391D+01 7.938601D+01 8.048159D+01 8.158434D+01 8.269742D+01 8.382176D+01 8.495422D+01 8.609194D+01
8.773229D+01 8.769297D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875780D+03 -2.743272D-01 -3.291922D+03 3 VAPOR -8.489206D+03 -2.357930D-01 7.401120D+02
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 3.761795E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.922903D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536618D+01 8.483740D+01 8.444166D+01 8.416237D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.986112D+03 -1.107209D-01 -4.515827D+02 OLIQUID -2.265264D+03 -6.292395D-02 -7.466599D+02
LEFT FILM COEF ,H = 4.628947E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.922903E+01 F
RIGHT FILM COEF ,H = 4.323998E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.979925D+01 8.003314D+01 8.061107D+01 8.121974D+01 8.183048D+01 8.244132D+01 8.305206D+01 8.366169D+01 8.426323D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.456715D+03 -6.824203D-02 -8.097646D+02 3 VAPOR -4.323003D+03 -1.200786D-01 -4.897486D+02
LEFT FILM COEF ,H = 4.323998E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.628947E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.922903D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426323D+01 8.366169D+01 8.305206D+01 8.244132D+01 8.183048D+01 8.121974D+01 8.061107D+01 8.003314D+01 7.979925D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.769384D+03 -1.047033D-01 -6.627651D+02 OLIQUID -6.937497D+02 -1.927079D-02 -2.252421D+02
LEFT FILM COEF.,H = 4.736806E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.922903E+01 F
RIGHT FILM COEF .,H = 3.575878E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.912664D+01 7.800672D+01 7.872909D+01 7.946151D+01 8.020065D+01 8.094321D+01 8.115366D+01 8.137185D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246496D+01 8.268332D+01 8.372331D+01 8.476326D+01 8.580316D+01 8.684295D+01
8.753703D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.705910D-01	0.	-6.812367D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-9.684390D-01	0.	-3.650969D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0	7.340000D+01	7.340000D+01	0	0.	0	0
3	1.470002D+01	1.63035D-01	8.923020+01	8.923020+01	3.909360+05	0	3.909360+05	2.263430-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.867000D+03	2.695610+01 0.	0.	2.695610+01	2.389910-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.6106D+02 LBM/HR ENERGY BTU/HR = 2.2241D+04 (NORMAL= 2.2241D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.0970D-05 STEP AIR= 4.4428D-03 NET VAPOR= 8.0059D-01 NET AIR= 1.1482D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.148198D+02 WATER VAPOR(LBM)= 8.003861D-01

* * * * * * * * * * * * * * * * TIME = 3.500000E-01 HR = 2.100000E+01 MIN = 1.260000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.544986D+02 -2.651377D-02 -3.217925D+02 3 VAPOR -3.316372D+03 -9.212005D-02 -6.049304D+02
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.189000E+01 F
RIGHT FILM COEF .,H = 4.679729E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.959443D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531903D+01 8.502440D+01 8.473418D+01 8.444433D+01 8.415451D+01 8.386470D+01 8.357490D+01 8.328565D+01 8.300571D+01
8.196202D+01 8.092190D+01 7.988873D+01 7.886597D+01 7.983720D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.117062D+04 -3.102925D-01 -2.421947D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.504510D+03
LEFT FILM COEF.,H = 4.786744E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.959443E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.238065D+01 7.920692D+01 7.943770D+01 8.052409D+01 8.161812D+01 8.272319D+01 8.384037D+01 8.496632D+01 8.609797D+01
8.723246D+01 8.769298D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875740D+03 -2.743261D-01 -3.456518D+03 3 VAPOR -9.260190D+03 -2.572101D-01 5.921729D+02

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LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .H = 3.843067E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 8.959443D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536620D+01  8.489763D+01  8.444462D+01  8.418450D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR      -4.172867D+03 -1.159088D-01 -5.195913D+02          OLIQUID      -2.267671D+03 -6.299090D-02 -7.844344D+02
LEFT FILM COEF.,H = 4.680560E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 8.959443E+01 F
RIGHT FILM COEF  .H = 4.328398E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.983171D+01  8.003764D+01  8.061148D+01  8.121977D+01  8.183048D+01  8.244132D+01  8.305205D+01  8.366158D+01  8.426296D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID      -2.459329D+03 -6.831464D-02 -8.507317D+02          3 VAPOR      -4.525540D+03 -1.257049D-01 -5.635051D+02
LEFT FILM COEF.,H = 4.328398E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .H = 4.680560E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 8.959443D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.426296D+01  8.366158D+01  8.305205D+01  8.244132D+01  8.183048D+01  8.121977D+01  8.061148D+01  8.003764D+01  7.983171D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR      -3.841597D+03 -1.067095D-01 -7.262272D+02          OLIQUID      -6.952273D+02 -1.931184D-02 -2.368170D+02
LEFT FILM COEF.,H = 4.757569E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 8.959443E+01 F
RIGHT FILM COEF  .H = 3.582434E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.934344D+01  7.814340D+01  7.883154D+01  7.953009D+01  8.023561D+01  8.094468D+01  8.115377D+01  8.137186D+01  8.159046D+01
  8.180909D+01  8.202771D+01  8.224634D+01  8.246497D+01  8.268329D+01  8.372297D+01  8.476262D+01  8.580221D+01  8.684171D+01
  8.753630D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.             -5.708628D-01  0.             -7.154803D+03
    1  0.              0.            0.              0.
    2  0.              0.            0.              0.
    3  0.              1.007946D+00  0.             -4.244058D+03
    4  0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)     T E M P E R A T U R E  (F)          E N E R G Y  (BTU)                          CONVERGENCE
NO.         TOTAL          STEAM          ATMOS          POOL          ATMOS          POOL          TOTAL            DE/E
  1     1.470000D+01   0.             7.340000D+01   7.340000D+01   0.             0.             0.             0.
  3     1.470027D+01   1.630360D-01   8.959570D+01   8.959570D+01   3.909210D+05   0.             3.909210D+05   2.309810D-06

                                                                                                  TRANSFER COEFFICIENTS
          AIR MASS                 W A T E R    M A S S    (LBM)                 HUMIDITY   CONDENSATION     MASS        HEAT
           (LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                   (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
  1     0.             0.             0.             0.             0.             6.000000D-01   0.             0.             0.
  3     3.864420D+03   2.693820D+01   0.             0.             2.693820D+01   2.362590D-01   0.             0.             0.
COMP    3 LEAKAGE OUTFLOW-  MASS= 1.501900+02 LBM/HR   ENERGY BTU/HR = 2.075400+04 (NORMAL= 2.075400+04 PENETRATION= 0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.888100-05 STEP AIR= 4.143100-03 NET VAPOR= 8.183300-01 NET AIR= 1.173900+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.173943D+02 WATER VAPOR(LBM)= 8.183322D-01

* * * * * * * * * * * * * * * * * TIME = 3.666667E-01 HR = 2.200000E+01 MIN = 1.320000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    0 VAPOR      -9.578197D+02 -2.660602D-02 -3.377280D+02          3 VAPOR      -3.372303D+03 -9.367389D-02 -6.606828D+02
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LEFT FILM COEF. ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.191333E+01 F
RIGHT FILM COEF. ,H = 4.697708E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 8.993573D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531950D+01 8.502446D+01 8.473418D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357491D+01 8.328578D+01 8.300734D+01
8.199822D+01 8.099277D+01 7.999450D+01 7.900695D+01 8.005192D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.127443D+04 -3.131765D-01 -2.609015D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.576153D+03
LEFT FILM COEF. ,H = 4.785276E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 8.993573E+01 F
RIGHT FILM COEF. ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.765266D+01 7.930180D+01 7.949240D+01 8.056923D+01 8.165415D+01 8.275081D+01 8.386039D+01 8.497937D+01 8.610448D+01
8.723265D+01 8.769298D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875684D+03 -2.743246D-01 -3.621113D+03 3 VAPOR -9.990029D+03 -2.774844D-01 4.316677D+02
LEFT FILM COEF. ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF. ,H = 3.915342E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.993573D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536622D+01 8.489790D+01 8.444783D+01 8.420715D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.347561D+03 -1.207622D-01 -5.906113D+02 OLIQUID -2.270070D+03 -6.305745D-02 -8.222490D+02
LEFT FILM COEF. ,H = 4.727219E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 8.993573E+01 F
RIGHT FILM COEF. ,H = 4.332785E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.986465D+01 8.004244D+01 8.061194D+01 8.121981D+01 8.183048D+01 8.244132D+01 8.305203D+01 8.366148D+01 8.426272D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.461927D+03 -6.838681D-02 -8.917421D+02 3 VAPOR -4.715022D+03 -1.309686D-01 -6.405274D+02
LEFT FILM COEF. ,H = 4.332785E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF. ,H = 4.727219E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 8.993573D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426272D+01 8.366148D+01 8.305203D+01 8.244132D+01 8.183048D+01 8.121981D+01 8.061194D+01 8.004244D+01 7.986465D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.902621D+03 -1.084048D-01 -7.907772D+02 OLIQUID -6.966751D+02 -1.935205D-02 -2.484162D+02
LEFT FILM COEF. ,H = 4.774986E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.993573E+01 F
RIGHT FILM COEF. ,H = 3.588945E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.955926D+01 7.828456D+01 7.893743D+01 7.960103D+01 8.027182D+01 8.094629D+01 8.115389D+01 8.137186D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246494D+01 8.268326D+01 8.372265D+01 8.476201D+01 8.580132D+01 8.684053D+01
8.753565D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.711324D-01	0.	-7.497402D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.044470D+00	0.	-4.859946D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47002D+01	1.63036D-01	8.99370D+01	8.99370D+01	3.90906D+05	0.	3.90906D+05	2.351900-06

	AIR MASS (LBM)	WATER MASS (LB) VAPOR--ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.96202D+03	2.69214D+01 0.	0.	2.69214D+01	2.33738D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.4016D+02 LBM/HR ENERGY BTU/HR = 1.9379D+04 (NORMAL= 1.9379D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.6952D-05 STEP AIR= 3.8664D-03 NET VAPOR= 8.3507D-01 NET AIR= 1.1980D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.197959D+02 WATER VAPOR(LBM)= 8.350734D-01

* * * * * * * * * * * * * * * * * TIME = 3.833333E-01 HR = 2.300000E+01 MIN = 1.380000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.611383D+02	-2.669821D-02	-3.537198D+02	3 VAPOR	-3.418971D+03	-9.497042D-02	-7.172890D+02

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.193667E+01 F
RIGHT FILM COEF.,H = 4.712348E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.025474D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.531999D+01 8.502452D+01 8.473419D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357492D+01 8.328592D+01 8.300913D+01
8.203553D+01 8.106571D+01 8.010327D+01 7.915182D+01 8.026528D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.136090D+04	-3.155787D-01	-2.797665D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-1.647796D+03

LEFT FILM COEF.,H = 4.783905E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.025474E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.291373D+01 7.939830D+01 7.954998D+01 8.061690D+01 8.169235D+01 8.278020D+01 8.388178D+01 8.499335D+01 8.[illegible]148D+01
8.723288D+01 8.769299D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875611D+03	-2.743225D-01	-3.785708D+03	3 VAPOR	-1.067947D+04	-2.966366D-01	2.593665D+02

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 3.979971E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.025474D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536626D+01 8.489821D+01 8.445132D+01 8.423026D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-4.510900D+03	-1.252991D-01	-6.644474D+02	OLIQUID	-2.272452D+03	-6.312360D-02	-8.601033D+02

LEFT FILM COEF.,H = 4.769509E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.025474E+01 F
RIGHT FILM COEF.,H = 4.337158E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.989799D+01 8.004754D+01 8.061245D+01 8.121984D+01 8.183048D+01 8.244131D+01 8.305202D+01 8.366138D+01 8.426249D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.464510D+03	-6.845856D-02	-9.327958D+02	3 VAPOR	-4.892143D+03	-1.358889D-01	-7.206038D+02

LEFT FILM COEF.,H = 4.337158E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.769509E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.025474D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426249D+01 8.366138D+01 8.305202D+01 8.244131D+01 8.183048D+01 8.121984D+01 8.061245D+01 8.004754D+01 7.989799D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.953451D+03 -1.098170D-01 -8.562579D+02 OLIQUID -6.980941D+02 -1.939147D-02 -2.600393D+02
LEFT FILM COEF.,H = 4.788614E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.025474E+01 F
RIGHT FILM COEF .,H = 3.595411E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.977366D+01 7.842967D+01 7.904636D+01 7.967407D+01 8.030917D+01 8.094805D+01 8.115403D+01 8.137187D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246494D+01 8.268323D+01 8.372234D+01 8.476143D+01 8.580046D+01 8.683941D+01
8.753507D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.713999D-01	0.	-7.840162D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.078191D+00	0.	-5.496897D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0	7.340000D+01	7.340000D+01	0	0	0	0
3	1.470020D+01	1.630360-01	9.025600D+01	9.025600D+01	3.908930D+05	0.	3.908930D+05	2.390020-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.859780+03	2.690580+01	0.	0.	0.	2.690580+01	2.314100-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.3091D+02 LBM/HR ENERGY BTU/HR = 1.811OD+04 (NORMAL= 1.811OD+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.5173D-05 STEP AIR= 3.6112D-03 NET VAPOR= 8.5070D-01 NET AIR= 1.2204D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.220380D+02 WATER VAPOR(LBM)= 8.507026D-01

* * * * * * * * * * * * * * * * TIME = 4.000000E-01 HR = 2.400000E+01 MIN = 1.440000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.644545D+02 -2.679033D-02 -3.697665D+02 3 VAPOR -3.457223D+03 -9.603319D-02 -7.746017D+02
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.196000E+01 F
RIGHT FILM COEF .,H = 4.724037E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.055316D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532050D+01 8.502459D+01 8.473420D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357493D+01 8.328608D+01 8.301105D+01
8.207383D+01 8.114048D+01 8.021467D+01 7.930011D+01 8.047693D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.143218D+04 -3.175590D-01 -2.987627D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.719440D+03
LEFT FILM COEF.,H = 4.782621E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.055316E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.316411D+01 7.949622D+01 7.961030D+01 8.066699D+01 8.173263D+01 8.281131D+01 8.390448D+01 8.500824D+01 8.611894D+01
8.723313D+01 8.769300D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953843D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875518D+03 -2.743200D-01 -3.950300D+03 3 VAPOR -1.132977D+04 -3.147011D-01 7.590277D+01

DCC

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.038043E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.055316D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536630D+01 8.489858D+01 8.445506D+01 8.425375D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-4.663484D+03	-1.295378D-01	-7.409150D+02	OLIQUID	-2.274819D+03	-6.318938D-02	-8.979973D+02

LEFT FILM COEF ,H = 4.807933E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.055316E+01 F
RIGHT FILM COEF ,H = 4.341519E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.993165D+01 8.005294D+01 8.061301D+01 8.121989D+01 8.183049D+01 8.244131D+01 8.305200D+01 8.366127D+01 8.426228D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.467078D+03	-6.852989D-02	-9.738924D+02	3 VAPOR	-5.057623D+03	-1.404858D-01	-8.035342D+02

LEFT FILM COEF ,H = 4.341519E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.807933E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.055316D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426228D+01 8.366127D+01 8.305200D+01 8.244131D+01 8.183049D+01 8.121989D+01 8.061301D+01 8.005294D+01 7.993165D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-3.995029D+03	-1.109722D-01	-9.225075D+02	OLIQUID	-6.994854D+02	-1.943012D-02	-2.716859D+02

LEFT FILM COEF ,H = 4.799695E-01BTU/HR.FT2. FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.055316E+01 F
RIGHT FILM COEF ,H = 3.601834E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.998631D+01 7.857827D+01 7.915799D+01 7.974898D+01 8.034753D+01 8.094996D+01 8.115419D+01 8.137188D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246493D+01 8.268320D+01 8.372205D+01 8.476088D+01 8.579965D+01 8.683835D+01
8.753456D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.716652D-01	0.	-8.183082D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.109289D+00	0.	-6.153283D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020D+01	1.630360D-01	9.055450+01	9.055450+01	3.908800+05	0.	3.908800+05	2.424520-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID--POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.857690+03	2.689120+01	0.	2.689120+01	2.292550-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.223800+02 LBM/HR ENERGY BTU/HR = 1.693900+04 (NORMAL= 1.693900+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.353400-05 STEP AIR= 3.376000-03 NET VAPOR= 8.653100-01 NET AIR= 1.241300+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.241331D+02 WATER VAPOR(LBM)= 8.653070D-01

* * * * * * * * * * * * * * * * * TIME = 4.166667E-01 HR = 2.500000E+01 MIN = 1.500000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.677683D+02	-2.688238D-02	-3.858683D+02	3 VAPOR	-3.487856D+03	-9.688426D-02	-8.324875D+02

PCC

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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.198333E+01 F
RIGHT FILM COEF  .,H = 4.733116E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.083258D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.532102D+01  8.502466D+01  8.473420D+01  8.444434D+01  8.415451D+01  8.386470D+01  8.357494D+01  8.328625D+01  8.301313D+01
  8.211301D+01  8.121684D+01  8.032836D+01  7.945134D+01  8.068657D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR      -1.149016D+04 -3.191698D-01 -3.178664D+03          OLIQUID      -4.298599D+03 -1.194055D-01 -1.791083D+03
LEFT FILM COEF.,H = 4.781420E-01BTU/HR.FT2.F   FIRST MESH  K = 3.500000E-02 BTU/HR.FT.  BULK TEMP = 9.083258E+01 F
RIGHT FILM COEF  .,H = 1.000000E+04 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.340419D+01  7.959535D+01  7.967321D+01  8.071939D+01  8.177491D+01  8.284407D+01  8.392845D+01  8.502399D+01  8.612686D+01
  8.723342D+01  8.769301D+01  8.815434D+01  8.861572D+01  8.907710D+01  8.953849D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID      -9.875402D+03 -2.743167D-01 -4.114891D+03          3 VAPOR      -1.194247D+04 -3.317215D-01 -1.180836D+02
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.090445E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.083258D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536636D+01  8.489899D+01  8.445906D+01  8.427757D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR      -4.805997D+03 -1.334967D-01 -8.198409D+02          OLIQUID      -2.277174D+03 -6.325477D-02 -9.359306D+02
LEFT FILM COEF.,H = 4.842924E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.083258E+01 F
RIGHT FILM COEF  .,H = 4.345868E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  7.996558D+01  8.005863D+01  8.061363D+01  8.121994D+01  8.183049D+01  8.244131D+01  8.305198D+01  8.366117D+01  8.426209D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    OLIQUID      -2.469631D+03 -6.860081D-02 -1.015032D+03          3 VAPOR      -5.212180D+03 -1.447793D-01 -8.891306D+02
LEFT FILM COEF.,H = 4.345868E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.842924E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.083258D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.426209D+01  8.366117D+01  8.305198D+01  8.244131D+01  8.183049D+01  8.121994D+01  8.061363D+01  8.005863D+01  7.996558D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR      STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR      STEP BTU TOTAL NET BTU
    3 VAPOR      -4.028235D+03 -1.118947D-01 -9.893791D+02          OLIQUID      -7.008571D+02 -1.946803D-02 -2.833554D+02
LEFT FILM COEF.,H = 4.808265E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.083258E+01 F
RIGHT FILM COEF  .,H = 3.608216E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.019689D+01  7.872986D+01  7.927194D+01  7.982550D+01  8.038678D+01  8.095202D+01  8.151137D+01  8.137190D+01  8.159046D+01
  8.180909D+01  8.202771D+01  8.224634D+01  8.246493D+01  8.268316D+01  8.372177D+01  8.476036D+01  8.579889D+01  8.683750D+01
  8.753412D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.             -5.719282D-01  0.             -8.526160D+03
    1  0.              0.            0.              0.
    2  0.              0.            0.              0.
    3  0.             -1.137946D+00  0.             -6.827585D+03
    4  0.              0.            0.              0.
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COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47002D+01	1.63037D-01	9.08339D+01	9.08339D+01	3.90868D+05	0.	3.90868D+05	2.45572D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.85573D+03	2.68775D+01	0.	2.68775D+01	2.27258D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.1454D+02 LBM/HR ENERGY BTU/HR = 1.5861D+04 (NORMAL= 1.5861D+04 PENETRATION= 0)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.2024D-05 STEP AIR= 3.1595D-03 NET VAPOR= 8.7897D-01 NET AIR= 1.2609D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.260928D+02 WATER VAPOR(LBM)= 8.789674D-01

* * * * * * * * * * * * * * * * * TIME = 4.333333E-01 HR = 2.600000E+01 MIN = 1.560000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.710798D+02	-2.697436D-02	-4.020254D+02	3 VAPOR	-3.511609D+03	-9.754423D-02	-8.908254D+02

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.200667E+01 F
RIGHT FILM COEF .,H = 4.739884E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.109449D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532155D+01 8.502473D+01 8.473421D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357496D+01 8.328648D+01 8.301536D+01
8.215295D+01 8.129457D+01 8.044402D+01 7.960509D+01 8.089396D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.153651D+04	-3.204576D-01	-3.370568D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-1.862726D+03

LEFT FILM COEF.,H = 4.780294E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.109449E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.363437D+01 7.969550D+01 7.973857D+01 8.077397D+01 8.181907D+01 8.287840D+01 8.395364D+01 8.504057D+01 8.613521D+01
8.723374D+01 8.769302D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.875261D+03	-2.743128D-01	-4.279480D+03	3 VAPOR	-1.251935D+04	-3.477469D-01	-3.219806D+02

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.137912E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.109449D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536642D+01 8.489945D+01 8.446333D+01 8.430166D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-4.939092D+03	-1.371940D-01	-9.010626D+02	OLIQUID	-2.279515D+03	-6.331980D-02	-9.739030D+02

LEFT FILM COEF.,H = 4.874858E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.109449E+01 F
RIGHT FILM COEF .,H = 4.350204E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
7.999969D+01 8.006462D+01 8.061431D+01 8.121999D+01 8.183049D+01 8.244131D+01 8.305196D+01 8.366106D+01 8.426192D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.472370D+03	-6.867133D-02	-1.056213D+03	3 VAPOR	-5.356524D+03	-1.487891D-01	-9.772168D+02

LEFT FILM COEF.,H = 4.350204E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.874858E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.109449D+01 F

PDC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426192D+01 8.366106D+01 8.305196D+01 8.244131D+01 8.183049D+01 8.121999D+01 8.061431D+01 8.006462D+01 7.999969D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.053888D+03 -1.126075D-01 -1.056740D+03 OLIQUID -7.021890D+02 -1.950522D-02 -2.950474D+02
LEFT FILM COEF.,H = 4.814611E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.109449E+01 F
RIGHT FILM COEF .,H = 3.614556E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.040518D+01 7.888401D+01 7.938788D+01 7.990342D+01 8.042681D+01 8.095422D+01 8.115457D+01 8.137191D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246492D+01 8.268313D+01 8.372151D+01 8.475987D+01 8.579817D+01 8.683641D+01
8.753374D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.721890D-01	0.	-8.869396D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.164339D+00	0.	-7.518393D+03
4	0.	0.	0.	0.

COMP	PRESSURE (PSIA)		TEMPERATURE (F)		ENERGY (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020D+01	1.630370D-01	9.109580D+01	9.109580D+01	3.908570D+05	0.	3.908570D+05	2.483910-05

	AIR MASS	WATER MASS (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS	--LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.853890D+03	2.686470D+01	0.	0.	2.686470D+01	2.254030D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.0731D+02 LBM/HR ENERGY BTU/HR = 1.4867D+04 (NORMAL= 1.4867D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.0636D-05 STEP AIR= 2.9603D-03 NET VAPOR= 8.9176D-01 NET AIR= 1.2793D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.279278D+02 WATER VAPOR(LB)= 8.917590D-01

* * * * * * * * * * * * * * * * * * TIME = 4.500000E-01 HR = 2.700000E+01 MIN = 1.620000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.743891D+02 -2.706629D-02 -4.182376D+02 3 VAPOR -3.529170D+03 -9.803215D-02 -9.495067D+02
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.203000E+01 F
RIGHT FILM COEF .,H = 4.744602E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.134025D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.532210D+01 8.502482D+01 8.473422D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357497D+01 8.328671D+01 8.301773D+01
8.219356D+01 8.137347D+01 8.056132D+01 7.976094D+01 8.109891D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.157268D+04 -3.214627D-01 -3.563157D+03 OLIQUID -4.298599D+03 -1.194055D-01 -1.934370D+03
LEFT FILM COEF.,H = 4.779237E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.134025E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.385509D+01 7.979650D+01 7.980624D+01 8.083061D+01 8.186503D+01 8.291422D+01 8.397999D+01 8.505796D+01 8.614359D+01
8.723409D+01 8.769303D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.875051D+03 -2.743081D-01 -4.444067D+03 3 VAPOR -1.306230D+04 -3.628295D-01 -5.352068D+02

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.181059E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.134025D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536650D+01 8.489998D+01 8.446784D+01 8.432597D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-5.063402D+03	-1.406473D-01	-9.844285D+02	OLIQUID	-2.281842D+03	-6.338446D-02	-1.011914D+03

LEFT FILM COEF.,H = 4.904064E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.134025E+01 F
RIGHT FILM COEF.,H = 4.354528E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.003395D+01 8.007089D+01 8.061505D+01 8.122006D+01 8.183050D+01 8.244131D+01 8.305194D+01 8.366096D+01 8.426176D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.474695D+03	-6.874146D-02	-1.097437D+03	3 VAPOR	-5.491341D+03	-1.525342D-01	-1.067628D+03

LEFT FILM COEF.,H = 4.354528E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.904064E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.134025D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426176D+01 8.366096D+01 8.305194D+01 8.244131D+01 8.183050D+01 8.122006D+01 8.061505D+01 8.007089D+01 8.003395D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-4.072746D+03	-1.131315D-01	-1.124471D+03	OLIQUID	-7.035028D+02	-1.954171D-02	-3.067615D+02

LEFT FILM COEF.,H = 4.818985E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.134025E+01 F
RIGHT FILM COEF.,H = 3.620858E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.061096D+01 7.904029D+01 7.950550D+01 7.998252D+01 8.046750D+01 8.095658D+01 8.115480D+01 8.137193D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246492D+01 8.268310D+01 8.372126D+01 8.475940D+01 8.579750D+01 8.683553D+01
8.753343D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.724475D-01	0.	-9.212787D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.188637D+00	0.	-8.224399D+03
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020D+01	1.630370-01	9.134160+01	9.134160+01	3.908470+05	0.	3.908470+05	2.509360-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.852170+03	2.685270+01 0.	0.	2.685270+01	2.236780-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.0067D+02 LBM/HR ENERGY BTU/HR = 1.3953D+04 (NORMAL= 1.3953D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.9350D-05 STEP AIR= 2.7770D-03 NET VAPOR= 9.0375D-01 NET AIR= 1.2965D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.296481D+02 WATER VAPOR(LBM)= 9.037512D-01

* * * * * * * * * * * * * * TIME = 4.666667E-01 HR = 2.800000E+01 MIN = 1.680000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.776961D+02	-2.715815D-02	-4.345050D+02	3 VAPOR	-3.541170D+03	-9.836561D-02	-1.008434D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.205333E+01 F
RIGHT FILM COEF.,H = 4.747504E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.157114D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532267D+01 8.502490D+01 8.473423D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357499D+01 8.328697D+01 8.302025D+01
8.223473D+01 8.145334D+01 8.067996D+01 7.991849D+01 8.130126D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.159997D+04 -3.222207D-01 -3.756274D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.006013D+03
LEFT FILM COEF.,H = 4.778244E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.157114E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.406677D+01 7.989821D+01 7.987607D+01 8.088918D+01 8.191268D+01 8.295146D+01 8.400744D+01 8.507611D+01 8.615317D+01
8.723448D+01 8.769305D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.874891D+03 -2.743025D-01 -4.608650D+03 3 VAPOR -1.357323D+04 -3.770228D-01 -7.572127D+02
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.220405E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.157114D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536660D+01 8.490056D+01 8.447261D+01 8.435045D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -5.179538D+03 -1.438735D-01 -1.069797D+03 OLIQUID -2.284158D+03 -6.344877D-02 -1.049964D+03
LEFT FILM COEF.,H = 4.930829E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.157114E+01 F
RIGHT FILM COEF.,H = 4.358839E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.006830D+01 8.007744D+01 8.061585D+01 8.122013D+01 8.183050D+01 8.244130D+01 8.305192D+01 8.366086D+01 8.426162D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.477205D+03 -6.881120D-02 -1.138703D+03 3 VAPOR -5.617292D+03 -1.560331D-01 -1.160212D+03
LEFT FILM COEF.,H = 4.358839E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.930829E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.157114D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426162D+01 8.366086D+01 8.305192D+01 8.244130D+01 8.183050D+01 8.122013D+01 8.061585D+01 8.007744D+01 8.006830D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.085507D+03 -1.134861D-01 -1.192464D+03 OLIQUID -7.047923D+02 -1.957753D-02 -3.184973D+02
LEFT FILM COEF.,H = 4.821611E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.157114E+01 F
RIGHT FILM COEF.,H = 3.627120E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.081410D+01 7.919830D+01 7.962448D+01 8.006261D+01 8.050877D+01 8.095908D+01 8.115505D+01 8.137195D+01 8.159046D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246491D+01 8.268306D+01 8.372103D+01 8.475897D+01 8.579687D+01 8.683471D+01
8.753317D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.727037D-01	0.	-9.556332D+03
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.211002D+00	0.	-8.944395D+03
4	0.	0.	0.	0.

PCC

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47002D+01	1.63037D-01	9.15725D+01	9.15725D+01	3.90837D+05	0.	3.90837D+05	2.53235D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.85056D+03	2.68415D+01 0.	0.	2.68415D+01	2.22071D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 9.4560D+01 LBM/HR ENERGY BTU/HR = 1.3111D+04 (NORMAL= 1.3111D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.8183D-05 STEP AIR= 2.6085D-03 NET VAPOR= 9.1501D-01 NET AIR= 1.3126D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.312630D+02 WATER VAPOR(LBM)= 9.150081D-01

* * * * * * * * * * * * * * * * * * TIME = 4.833333E-01 HR = 2.900000E+01 MIN = 1.740000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.810009D+02	-2.724995D-02	-4.508275D+02	3 VAPOR	-3.548190D+03	-9.856072D-02	-1.067518D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.207667E+01 F
RIGHT FILM COEF .,H = 4.748792E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.178834D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532325D+01 8.502500D+01 8.473424D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357502D+01 8.328725D+01 8.302292D+01
8.227636D+01 8.153398D+01 8.079968D+01 8.007739D+01 8.150089D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.161947D+04	-3.227627D-01	-3.949780D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-2.077656D+03

LEFT FILM COEF.,H = 4.777310E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.178834E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426988D+01 8.000148D+01 7.984791D+01 8.094957D+01 8.196192D+01 8.299003D+01 8.403593D+01 8.509497D+01 8.616273D+01
8.723490D+01 8.767307D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.874656D+03	-2.742960D-01	-4.773229D+03	3 VAPOR	-1.405409D+04	-3.903807D-01	-9.874809D+02

LEFT FILM COEF .,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.256394E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.178834D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536611D+01 8.490120D+01 8.447763D+01 8.437505D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-5.288079D+03	-1.468887D-01	-1.157038D+03	OLIQUID	-2.286460D+03	-6.351273D-02	-1.088053D+03

LEFT FILM COEF.,H = 4.955404E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.178834E+01 F
RIGHT FILM COEF .,H = 4.363139E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.010268D+01 8.008427D+01 8.061672D+01 8.122021D+01 8.183051D+01 8.244130D+01 8.305190D+01 8.366075D+01 8.426150D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.479703D+03	-6.888057D-02	-1.180011D+03	3 VAPOR	-5.735006D+03	-1.593031D-01	-1.254826D+03

LEFT FILM COEF.,H = 4.363139E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.955404E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 3.178834D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426150D+01 8.366075D+01 8.305190D+01 8.244130D+01 8.183051D+01 8.122021D+01 8.061672D+01 8.008427D+01 8.010268D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.092811D+03 -1.136891D-01 -1.260624D+03 OLIQUID -7.060582D+02 -1.961270D-02 -3.302545D+02
LEFT FILM COEF.,H = 4.822686E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.178834E+01 F
RIGHT FILM COEF.,H = 3.633345E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.101446D+01 7.935767D+01 7.974456D+01 8.014348D+01 8.055051D+01 8.096173D+01 8.115533D+01 8.137197D+01 8.159047D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246491D+01 8.268303D+01 8.372081D+01 8.475856D+01 8.579628D+01 8.683394D+01
8.753298D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP. STEP-LIQUID STEP-VAPOR NET-LIQUID NET-VAPOR
0 0. -5.729575D-01 0. -9.900031D+03
1 0. 0. 0. 0.
2 0. 0. 0. 0.
3 0. -1.231585D+00 0. -9.677266D+03
4 0. 0 0. 0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470002D+01	1.63037D-01	9.17897D+01	9.17897D+01	3.90828D+05	0	3.90828D+05	2.553100-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.84904D+03	2.68309D+01 0.	0.	2.68309D+01	2.20572D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 8.8939D+01 LBM/HR ENERGY BTU/HR = 1.2337D+04 (NORMAL= 1.2337D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.7102D-05 STEP AIR= 2.4534D-03 NET VAPOR= 9.2559D-01 NET AIR= 1.3278D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.327808D+02 WATER VAPOR(LBM)= 9.255888D-01

* * * * * * * * * * * * * * * * TIME = 5.000000E-01 HR = 3.000000E+01 MIN = 1.800000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -9.843035D+02 -2.734169D-02 -4.672050D+02 3 VAPOR -3.550762D+03 -9.863227D-02 -1.126682D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.210000E+01 F
RIGHT FILM COEF.,H = 4.748650E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.199292D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532385D+01 8.502509D+01 8.473425D+01 8.444434D+01 8.415451D+01 8.386470D+01 8.357504D+01 8.328756D+01 8.302573D+01
8.231837D+01 8.161523D+01 8.092022D+01 8.023728D+01 8.169770D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.163217D+04 -3.231157D-01 -4.143552D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.149300D+03
LEFT FILM COEF.,H = 4.776430E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.199292E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.446486D+01 8.010318D+01 8.002162D+01 8.101165D+01 8.201264D+01 8.302985D+01 8.406540D+01 8.511452D+01 8.617265D+01
8.723537D+01 8.769309D+01 8.815434D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.874385D+03 -2.742885D-01 -4.937805D+03 3 VAPOR -1.450678D+04 -4.029558D-01 -1.225526D+03

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LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.289403E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.199292D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536683D+01 8.490190D+01 8.448288D+01 8.439973D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-5.389576D+03	-1.497062D-01 -1.246027D+03	0LIQUID	-2.288751D+03	-6.357635D-02 -1.126180D+03

LEFT FILM COEF.,H = 4.978013E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.199292E+01 F
RIGHT FILM COEF ,H = 4.367427E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.013707D+01 8.009136D+01 8.061765D+01 8.122030D+01 8.183052D+01 8.244130D+01 8.305188D+01 8.366065D+01 8.426139D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU
0LIQUID	-2.482187D+03	-6.894957D-02 -1.221360D+03	3 VAPOR	-5.845082D+03	-1.623609D-01 -1.351337D+03

LEFT FILM COEF.,H = 4.367427E-01BTU/HR.FT2.F FIRST MESH K = 1.000000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.978013E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.199292D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426139D+01 8.365065D+01 8.305188D+01 8.244130D+01 8.183052D+01 8.122030D+01 8.061765D+01 8.009136D+01 8.013707D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-4.095244D+03	-1.137588D-01 -1.328864D+03	0LIQUID	-7.073011D+02	-1.964722D-02 -3.420325D+02

LEFT FILM COEF.,H = 4.822383E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.199292E+01 F
RIGHT FILM COEF ,H = 3.639533E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.121196D+01 7.951805D+01 7.986546D+01 8.022496D+01 8.059263D+01 8.096452D+01 8.115563D+01 8.137199D+01 8.159047D+01
8.180909D+01 8.202771D+01 8.224634D+01 8.246490D+01 8.268300D+01 8.372060D+01 8.475819D+01 8.579574D+01 8.683323D+01
8.753284D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.732088D-01	0.	-1.024388D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.250530D+00	0.	-1.042199D+04
4	0.	0.	0.	0.

COMP NO	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0
3	1.470029D+01	1.630388D-01	9.199430+01	9.199430+01	3.908190+05	0.	3.908190+05	2.571830-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.847510+03	2.682090+01 0.	0	2.682090+01	2.191690-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 8.3769D+01 LBM/HR ENERGY BTU/HR = 1.1624D+04 (NORMAL= 1.1624D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.6108D-05 STEP AIR= 2.3108D-03 NET VAPOR= 9.3555D-01 NET AIR= 1.3421D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.342095D+02 WATER VAPOR(LBM)= 9.355473D-01

* * * * * * * * * * * * * * * * * * TIME = 5.166667E-01 HR = 3.100000E+01 MIN = 1.860000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP	END STEP BTU/HR	STEP BTU TOTAL NET BTU
0 VAPOR	-9.876040D+02	-2.743337D-02 -4.836376D+02	3 VAPOR	-3.549371D+03	-9.859372D-02 -1.185855D+03

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LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.212333E+01 F
RIGHT FILM COEF ,H = 4.747237E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.218588D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532446D+01 8.502520D+01 8.473426D+01 8.444434D+01 8.415452D+01 8.386471D+01 8.357507D+01 8.328790D+01 8.302868D+01
8.236068D+01 8.169692D+01 8.104133D+01 8.039786D+01 8.189164D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.163892D+04 -3.233032D-01 -4.337486D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.220943D+03
LEFT FILM COEF ,H = 4.775601E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.218588E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.467214D+01 8.020621D+01 8.009707D+01 8.107530D+01 8.206475D+01 8.307085D+01 8.409579D+01 8.513471D+01 8.618292D+01
8.721587D+01 8.769311D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.874073D+03 -2.742798D-01 -5.102375D+03 3 VAPOR -1.493312D+04 -4.147994D-01 -1.470894D+03
LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.319762E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.218588D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536698D+01 8.490267D+01 8.448837D+01 8.442447D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -5.484547D+03 -1.523464D-01 -1.336654D+03 OLIQUID -2.291029D+03 -6.363964D-02 -1.164344D+03
LEFT FILM COEF ,H = 4.998852E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.218588E+01 F
RIGHT FILM COEF ,H = 4.371703E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.017141D+01 8.009872D+01 8.061865D+01 8.122040D+01 8.183052D+01 8.244130D+01 8.305185D+01 8.366055D+01 8.426129D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.484657D+03 -6.901821D-02 -1.262750D+03 3 VAPOR -5.948078D+03 -1.652221D-01 -1.449622D+03
LEFT FILM COEF ,H = 4.371703E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.998852E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.218588D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426129D+01 8.366055D+01 8.305185D+01 8.244130D+01 8.183052D+01 8.122040D+01 8.061865D+01 8.009872D+01 8.017141D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.093339D+03 -1.137039D-01 -1.397108D+03 OLIQUID -7.085215D+02 -1.968112D-02 -3.538310D+02
LEFT FILM COEF ,H = 4.820860E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.218588E+01 F
RIGHT FILM COEF ,H = 3.645685E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.140653D+01 7.967913D+01 7.998694D+01 8.030690D+01 8.063505D+01 8.096746D+01 8.115597D+01 8.137202D+01 8.159047D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246490D+01 8.268296D+01 8.372041D+01 8.475784D+01 8.579523D+01 8.683258D+01
8.753275D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.734577D-01	0.	-1.058788D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.267969D+00	0.	-1.117762D+04
4	0.	0.	0.	0.

PCC

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470020D+01	1.630380D-01	9.218730D+01	9.218730D+01	3.908110D+05	0.	3.908110D+05	2.588750D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.846260D+03	2.681160D+01 0.	0.	2.681160D+01	2.178560D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 7.9013D+01 LBM/HR ENERGY BTU/HR = 1.0967D+04 (NORMAL = 1.0967D+04 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.5194D-05 STEP AIR= 2.1796D-03 NET VAPOR= 9.4493D-01 NET AIR= 1.3556D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.355560D+02 WATER VAPOR(LBM)= 9.449336D-01

* * * * * * * * * * * * * * * * * * TIME = 5.333333E-01 HR = 3.200000E+01 MIN = 1.920000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-9.909025D+02	-2.752499D-02	-5.001252D+02	3 VAPOR	-3.544459D+03	-9.845734D-02	-1.244975D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.214667E+01 F
RIGHT FILM COEF .,H = 4.744697E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.236814D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532509D+01 8.502530D+01 8.473428D+01 8.444434D+01 8.415452D+01 8.386471D+01 8.357511D+01 8.328827D+01 8.303178D+01
8.240322D+01 8.177891D+01 8.116280D+01 8.055883D+01 8.208264D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.164045D+04	-3.233458D-01	-4.531487D+03	OLIQUID	-4.298599D+03	-1.940550-01	-2.292586D+03

LEFT FILM COEF.,H = 4.774817E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.236814E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.483218D+01 8.030946D+01 8.017411D+01 8.114040D+01 8.211815D+01 8.311293D+01 8.412704D+01 8.515550D+01 8.619352D+01
8.723641D+01 8.769313D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.873719D+03	-2.742700D-01	-5.266940D+03	3 VAPOR	-1.533491D+04	-4.259606D-01	-1.723160D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.347754E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.236814D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536715D+01 8.490350D+01 8.449409D+01 8.444922D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-5.573476D+03	-1.548168D-01	-1.428812D+03	OLIQUID	-2.293295D+03	-6.370260D-02	-1.202547D+03

LEFT FILM COEF.,H = 5.018095E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.236814E+01 F
RIGHT FILM COEF .,H = 4.375968E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.020560D+01 8.010634D+01 8.061972D+01 8.122052D+01 8.183053D+01 8.244129D+01 8.305183D+01 8.366045D+01 8.426121D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.487116D+03	-6.908649D-02	-1.304182D+03	3 VAPOR	-6.044524D+03	-1.679013D-01	-1.549570D+03

LEFT FILM COEF.,H = 4.375968E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.018095E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.236814D+01 F

POOR

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.426121D+01  8.366045D+01  8.305183D+01  8.244129D+01  8.183053D+01  8.122052D+01  8.061972D+01  8.010634D+01  8.020568D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -4.087581D+03 -1.135441D-01 -1.465288D+03          OLIQUID      -7.097200D+02 -1.971442D-02 -3.656497D+02
LEFT FILM COEF.,H =  4.818253E-01BTU/HR.FT2.F   FIRST MESH   K =  6.700000E-02 BTU/HR.FT.  BULK TEMP =  9.236814E+01 F
RIGHT FILM COEF  .,H =  3.651802E-01 BTU/HR.FT2.F   LAST MESH K =  6.700000E-02 BTU/HR.FT.F     BULK TEMP =  9.0000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.159813D+01  7.984061D+01  8.010878D+01  8.038913D+01  8.067770D+01  8.097054D+01  8.115633D+01  8.137205D+01  8.159047D+01
  8.180909D+01  8.202771D+01  8.224633D+01  8.246489D+01  8.268293D+01  8.372023D+01  8.475752D+01  8.579477D+01  8.683199D+01
  8.753272D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.             -5.737040D-01  0.             -1.093203D+04
    1  0.              0.            0.              0.
    2  0.              0.            0.              0.
    3  0.             -1.284026D+00  0.             -1.194329D+04
    4  0.              0.            0.              0.

COMP      P R E S S U R E (PSIA)   T E M P E R A T U R E (F)        E N E R G Y (BTU)                          CONVERGENCE
 NO.       TOTAL        STEAM        ATMOS        POOL        ATMOS        POOL        TOTAL                 DE/E
   1   1.470000D+01   0.           7.340000D+01 7.340000D+01 0.           0.          0.                    0.
   3   1.470019D+01   1.630380-01  9.236960+01  9.236960+01  3.908040+05  0.          3.908040+05           2.604020-06

                                                                                                  TRANSFER COEFFICIENTS
          AIR MASS                W A T E R   M A S S   ( LBM)                HUMIDITY   CONDENSATION    MASS        HEAT
            ( LBM)      VAPOR--ATMOS--LIQUID      POOL        TOTAL                      (LB/S)    (LB MOL/S FT2)(BTU/S FT2 R)
   1   0.              0.           0.           0.          0.           6.000000-01  0.              0.          0.
   3   3.844990+03     2.680270+01  0.           0.          2.680270+01  2.166240-01  0.              0.          0.
COMP.   3 LEAKAGE OUTFLOW-  MASS=  7.4636D+01 LBM/HR   ENERGY BTU/HR  =  1.0363D+04 (NORMAL=  1.0363D+04 PENETRATION=  0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR=  1.4352D-05 STEP AIR=  2.0589D-03 NET VAPOR=  9.5379D-01 NET AIR=  1.3683D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)=  1.368270D+02 WATER VAPOR(LBM)=  9.537934D-01


 * * * * * * * * * * * * * * * * * * TIME =  5.500000E-01  HR =  3.300000E+01 MIN =  1.980000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -5.941988D+02 -2.761656D-02 -5.166677D+02          3 VAPOR      -3.536427D+03 -9.823429D-02 -1.303986D+03
LEFT FILM COEF.,H =  2.000000E-01BTU/HR.FT2.F   FIRST MESH   K =  1.050000E+00 BTU/HR.FT.  BULK TEMP =  9.217000E+01 F
RIGHT FILM COEF  .,H =  4.741157E-01 BTU/HR.FT2.F   LAST MESH K =  6.700000E-02 BTU/HR.FT.F     BULK TEMP =  9.254054D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.532573D+01  8.502542D+01  8.473429D+01  8.444434D+01  8.415452D+01  8.386471D+01  8.357514D+01  8.328867D+01  8.303501D+01
  8.244590D+01  8.186106D+01  8.128442D+01  8.071993D+01  8.227069D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -1.163741D+04 -3.232616D-01 -4.725475D+03          OLIQUID      -4.298599D+03 -1.194055D-01 -2.364230D+03
LEFT FILM COEF.,H =  4.774076E-01BTU/HR.FT2.F   FIRST MESH   K =  3.500000E-02 BTU/HR.FT.  BULK TEMP =  9.254054E+01 F
RIGHT FILM COEF  .,H =  1.000000E+04 BTU/HR.FT2.F   LAST MESH K =  1.050000E+00 BTU/HR.FT.F     BULK TEMP =  9.0000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.500538D+01  8.041285D+01  8.025263D+01  8.120683D+01  8.217274D+01  8.315603D+01  8.415909D+01  8.517685D+01  8.620442D+01
  8.723700D+01  8.769316D+01  8.815435D+01  8.861572D+01  8.907710D+01  8.953849D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -9.873319D+03 -2.742589D-01 -5.431499D+03          3 VAPOR      -1.571381D+04 -4.364862D-01 -1.981930D+03
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LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.373628E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.254054D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.536733D+01  8.490440D+01  8.450003D+01  8.447396D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -5.656818D+03 -1.571320D-01 -1.522405D+03          OLIQUID      -2.295550D+03 -6.376524D-02 -1.240788D+03
LEFT FILM COEF.,H = 5.035897E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.254054E+01 F
RIGHT FILM COEF  .,H = 4.380221E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.023985D+01  8.011421D+01  8.062086D+01  8.122064D+01  8.183054D+01  8.244129D+01  8.305181D+01  8.366035D+01  8.426115D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.489561D+03 -6.915442D-02 -1.345654D+03          3 VAPOR      -6.134909D+03 -1.704121D-01 -1.651073D+03
LEFT FILM COEF.,H = 4.380221E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.035897E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.254054D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.426115D+01  8.366035D+01  8.305181D+01  8.244129D+01  8.183054D+01  8.122064D+01  8.062086D+01  8.011421D+01  8.023985D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -4.078413D+03 -1.132895D-01 -1.533342D+03          OLIQUID      -7.108972D+02 -1.974712D-02 -3.774882D+02
LEFT FILM COEF.,H = 4.814685E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.254054E+01 F
RIGHT FILM COEF  .,H = 3.657884E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.178673D+01  8.000221D+01  8.023077D+01  8.047152D+01  8.072050D+01  8.097376D+01  8.115673D+01  8.137209D+01  8.159047D+01
 8.180909D+01  8.202771D+01  8.224633D+01  8.246488D+01  8.268289D+01  8.372007D+01  8.475722D+01  8.579435D+01  8.683144D+01
 8.753273D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.          -5.739477D-01  0.          -1.127633D+04
    1  0.           0.            0.           0.
    2  0.           0.            0.           0.
    3  0.          -1.298816D+00  0.          -1.271821D+04
    4  0.           0.            0.           0.

COMP      P R E S S U R E  (PSIA)   T E M P E R A T U R E  (F)        E N E R G Y  (BTU)                          CONVERGENCE
 NO      TOTAL          STEAM          ATMOS          POOL          ATMOS          POOL          TOTAL            DE/E
  1   1.470000D+01   0.             7.340000D+01   7.340000D+01   0.             0.             0.             0.
  3   1.470001D+01   1.630380-01    9.254200+01    9.254200+01    3.907960+05    0.             3.907960+05    2.617810-06

                                                                                                TRANSFER COEFFICIENTS
          AIR MASS              W A T E R   M A S S  (LBM)                HUMIDITY    CONDENSATION     MASS          HEAT
            (LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                        (LB/S)   (LB MOL/S FT2)(BTU/S FT2 R)
  1   0.             0.             0.             0.             0.             6.000000-01    0.             0.             0.
  3   3.843790+03    2.679430+01    0.             0.             2.679430+01    2.154650-01    0.             0.             0.
COMP.  3 LEAKAGE OUTFLOW-  MASS= 7.0606D+01 LBM/HR   ENERGY BTU/HR = 9.8064D+03 (NORMAL= 9.8064D+03 PENETRATION= 0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.3577D-05 STEP AIR= 1.9477D-03 NET VAPOR= 9.6217D-01 NET AIR= 1.3803D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.380284D+02 WATER VAPOR(LBM)= 9.621685D-01


 * * * * * * * * * * * * * * * * * TIME = 5.666667E-01 HR = 3.400000E+01 MIN = 2.040000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -9.974932D+02 -2.770807D-02 -5.332651D+02          3 VAPOR      -3.525638D+03 -9.793468D-02 -1.362840D+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.219333E+01 F
RIGHT FILM COEF .,H = 4.736731E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.270386D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532638D+01 8.502554D+01 8.473431D+01 8.444435D+01 8.415452D+01 8.386471D+01 8.357518D+01 8.328910D+01 8.303838D+01
8.248867D+01 8.194324D+01 8.140601D+01 8.088091D+01 8.245577D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.163037D+04 -3.230660D-01 -4.919379D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.435873D+03
LEFT FILM COEF.,H = 4.773373E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.270386E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.517215D+01 8.051630D+01 8.033248D+01 8.127450D+01 8.222843D+01 8.320007D+01 8.419188D+01 8.519873D+01 8.621561D+01
8.723763D+01 8.769319D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.872870D+03 -2.742464D-01 -5.596051D+03 3 VAPOR -1.607144D+04 -4.464207D-01 -9.[illegible]D+03
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.397600E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.270386D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536754D+01 8.490537D+01 8.450619D+01 8.449867D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -5.734994D+03 -1.593036D-01 -1.617344D+03 OLIQUID -2.297794D+03 -6.382756D-02 -1.279065D+03
LEFT FILM COEF.,H = 5.052395E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.270386E+01 F
RIGHT FILM COEF .,H = 4.384463E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.027390D+01 8.012232D+01 8.062207D+01 8.122077D+01 8.183055D+01 8.244129D+01 8.305178D+01 8.366025D+01 8.426110D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.491994D+03 -6.922201D-02 -1.387167D+03 3 VAPOR -6.219693D+03 -1.727674D-01 -1.754035D+03
LEFT FILM COEF.,H = 4.384463E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.052395E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.270386D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426110D+01 8.366025D+01 8.305178D+01 8.244129D+01 8.183055D+01 8.122077D+01 8.062207D+01 8.012232D+01 8.027390D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.066233D+03 -1.129512D-01 -1.601218D+03 OLIQUID -7.120534D+02 -1.977924D-02 -3.893462D+02
LEFT FILM COEF.,H = 4.810268E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.270386E+01 F
RIGHT FILM COEF .,H = 3.663932E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.197232D+01 8.016369D+01 8.035273D+01 8.055395D+01 8.076339D+01 8.097711D+01 8.115715D+01 8.137213D+01 8.159048D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246488D+01 8.268286D+01 8.371991D+01 8.475696D+01 8.579397D+01 8.683095D+01
8.753280D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.		STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.		-5.741688D-01	0.	-1.162077D+04
1	0.		0.	0.	0.
2	0.		0.	0.	0.
3	0.		-1.312444D+00	0.	-1.350[illegible]65D+04
4	0.		0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63038D-01	9.27053D+01	9.27053D+01	3.90789D+05	0.	3.90789D+05	2.63028D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID ATMOS	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.84265D+03	2.67864D+01	0.	0.	2.67864D+01	2.14375D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.6894D+01 LBM/HR ENERGY BTU/HR = 9.2935D+03 (NORMAL= 9.2935D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2863D-05 STEP AIR= 1.8453D-03 NET VAPOR= 9.7010D-01 NET AIR= 1.3917D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.3916590+02 WATER VAPOR(LBM)= 9.700974D-01

* * * * * * * * * * * * * * * * * * TIME = 5.833333E-01 HR = 3.500000E+01 MIN = 2.100000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.000786D+03	-2.779952D-02	-5.499174D+02	3 VAPOR	-3.512424D+03	-9.756767D-02	-1.421494D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.221667E+01 F
RIGHT FILM COEF .,H = 4.731521E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.285879D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532705D+01 8.502566D+01 8.473432D+01 8.444435D+01 8.415452D+01 8.386472D+01 8.357523D+01 8.328956D+01 8.304188D+01
8.253147D+01 8.202534D+01 8.152740D+01 8.104156D+01 8.263787D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.161981D+04	-3.227727D-01	-5.113135D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-2.507516D+03

LEFT FILM COEF.,H = 4.772707E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.285879E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.533287D+01 8.061973D+01 8.041356D+01 8.134330D+01 8.228513D+01 8.324497D+01 8.422537D+01 8.522109D+01 8.622707D+01
8.723830D+01 8.769323D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.872369D+03	-2.742325D-01	-5.760594D+03	3 VAPOR	-1.640929D+04	-4.558059D-01	-2.517535D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.419861E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.285879D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536778D+01 8.490642D+01 8.451256D+01 8.452331D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-5.808399D+03	-1.613428D-01	-1.713545D+03	OLIQUID	-2.300026D+03	-6.388957D-02	-1.317381D+03

LEFT FILM COEF.,H = 5.067713E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.285879E+01 F
RIGHT FILM COEF .,H = 4.388694E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.030779D+01 8.013067D+01 8.062336D+01 8.122092D+01 8.183057D+01 8.244128D+01 8.305175D+01 8.366016D+01 8.426106D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.494415D+03	-6.928926D-02	-1.428720D+03	3 VAPOR	-6.299302D+03	-1.749788D-01	-1.858367D+03

LEFT FILM COEF.,H = 4.388694E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.067713E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.285879D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426106D+01 8.366016D+01 8.305175D+01 8.244128D+01 8.183057D+01 8.122092D+01 8.062336D+01 8.013067D+01 8.030779D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.051404D+03 -1.125394D-01 -1.668668D+03 OLIQUID -7.131892D+02 -1.981079D-02 -4.012233D+02
LEFT FILM COEF.,H = 4.805099E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.285879E+01 F
RIGHT FILM COEF .,H = 3.669947E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.215489D+01 8.032482D+01 8.047448D+01 8.063628D+01 8.080630D+01 8.098060D+01 8.115761D+01 8.137217D+01 8.159048D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246487D+01 8.268282D+01 8.371978D+01 8.475671D+01 8.579363D+01 8.683052D+01
8.753291D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.744272D-01	0.	-1.196535D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.325007D+00	0.	-1.429294D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470019D+01	1.630380-01	9.286030+01	9.286030+01	3.907830+05	0.	3.907830+05	2.641540-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.841570+03	2.677890+01 0.	0.	2.677890+01	2.133460-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.3474D+01 LBM/HR ENERGY BTU/HR = 8.8207D+03 (NORMAL= 8.8207D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2206D-05 STEP AIR= 1.7510D-03 NET VAPOR= 9.7762D-01 NET AIR= 1.4024D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.402443D+02 WATER VAPOR(LBM)= 9.776150D-01

* * * * * * * * * * * * * * * * * TIME = 6.000000E-01 HR = 3.600000E+01 MIN = 2.160000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.004076D+03 -2.789092D-02 -5.666246D+02 3 VAPOR -3.497082D+03 -9.714154D-02 -1.479909D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.300600E+01 F
RIGHT FILM COEF .,H = 4.725618E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.300600D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532773D+01 8.502579D+01 8.473434D+01 8.444435D+01 8.415452D+01 8.386472D+01 8.357528D+01 8.329006D+01 8.304551D+01
8.257425D+01 8.210725D+01 8.164843D+01 8.120166D+01 8.281701D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.160615D+04 -3.223935D-01 -5.306688D+03 OLIQUID -4.238599D+03 -1.194055D-01 -2.579159D+03
LEFT FILM COEF.,H = 4.772074E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.300600E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.548792D+01 8.072307D+01 8.049574D+01 8.141311D+01 8.234275D+01 8.329067D+01 8.425949D+01 8.524391D+01 8.623878D+01
8.723901D+01 8.769327D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.871814D+03 -2.742171D-01 -5.925129D+03 3 VAPOR -1.672877D+04 -4.646809D-01 -2.793710D+03

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LEFT FILM COEF .,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.440579E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.300600D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.536804D+01  8.490753D+01  8.451913D+01  8.454787D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -5.877395D+03 -1.632594D-01 -1.810933D+03       OLIQUID      -2.302248D+03 -6.395128D-02 -1.355733D+03
LEFT FILM COEF .,H = 5.081960E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.300600E+01 F
RIGHT FILM COEF  .,H = 4.392914E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.034151D+01  8.013925D+01  8.062472D+01  8.122108D+01  8.183058D+01  8.244128D+01  8.305173D+01  8.366006D+01  8.426104D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.496825D+03 -6.935618D-02 -1.470314D+03       3 VAPOR      -6.374129D+03 -1.770575D-01 -1.963986D+03
LEFT FILM COEF .,H = 4.392914E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.081960E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.300600D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.426104D+01  8.366006D+01  8.305173D+01  8.244128D+01  8.183058D+01  8.122108D+01  8.062472D+01  8.013925D+01  8.034151D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -4.034254D+03 -1.120630D-01 -1.736252D+03       OLIQUID      -7.143051D+02 -1.984178D-02 -4.131191D+02
LEFT FILM COEF .,H = 4.799266E-01BTU/HR.FT2.F   FIRST MESH   K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.300600E+01 F
RIGHT FILM COEF  .,H = 3.675930E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F    BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.233445D+01  8.048541D+01  8.059587D+01  8.071843D+01  8.084919D+01  8.098422D+01  8.115810D+01  8.137222D+01  8.159049D+01
  8.180909D+01  8.202771D+01  8.224633D+01  8.246486D+01  8.268279D+01  8.371965D+01  8.475650D+01  8.579333D+01  8.683013D+01
  8.753308D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.          -5.746628D-01  0.          -1.231008D+04
    1  0.           0.            0.           0.
    2  0.           0.            0.           0.
    3  0.          -1.336596D+00  0.          -1.509148D+04
    4  0.           0.            0.           0.

COMP      P R E S S U R E  (PSIA)    T E M P E R A T U R E  (F)        E N E R G Y  (BTU)                          CONVERGENCE
 NO.      TOTAL          STEAM       AIMOS          POOL           ATMOS          POOL          TOTAL             DE/E
   1   1.47000D+01   0.            7.34000D+01   7.34000D+01   0.             0.            0.                0.
   3   1.47001D+01   1.63038D-01   9.30075D+01   9.30075D+01   3.90777D+05    0.            3.90777D+05       2.651730-06

                                                                                                  TRANSFER COEFFICIENTS
         AIR MASS                W A T E R   M A S S   ( LBM)                 HUMIDITY    CONDENSATION    MASS          HEAT
          ( LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                 (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
   1   0.            0.            0.            0.            0.            6.00000D-01   0.          0.            0.
   3   3.84055D+03   2.67717D+01   0.            0.            2.67717D+01   2.12373D-01   0.          0.            0.
COMP.  3 LEAKAGE OUTFLOW-  MASS=  6.0320D+01 LBM/HR   ENERGY BTU/HR  =  8.3846D+03 (NORMAL=  8.3846D+03 PENETRATION=  0.        )
STEP AND NET MASS LOSSES LBM STEP VAPOR=  1.1599D-05 STEP AIR=  1.6640D-03 NET VAPOR=  9.8475D-01 NET AIR=  1.4127D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)=  1.412684D+02 WATER VAPOR(LBM)=  9.847537D-01


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HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -1.007365D+03 -2.798227D-02 -5.833866D+02       3 VAPOR      -3.479882D+03 -9.666380D-02 -1.538053D+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.226333E+01 F
RIGHT FILM COEF.,H = 4.719103E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.314607D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532843D+01 8.502593D+01 8.473436D+01 8.444435D+01 8.415452D+01 8.386473D+01 8.357534D+01 8.329059D+01 8.304926D+01
8.261685D+01 8.218889D+01 8.176896D+01 8.136104D+01 8.299320D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.158978D+04 -3.219387D-01 -5.499991D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.650803D+03
LEFT FILM COEF.,H = 4.771472E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.314607E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.563765D+01 8.082628D+01 8.057893D+01 8.148386D+01 8.240120D+01 8.333709D+01 8.429419D+01 8.526714D+01 8.625072D+01
8.723976D+01 8.769331D+01 8.815435D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.871199D+03 -2.742000D-01 -6.089655D+03 3 VAPOR -1.703122D+04 -4.730826D-01 -3.075066D+03
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.459903E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.314607D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536833D+01 8.490872D+01 8.452580D+01 8.457233D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 -5.942320D+03 -1.650630D-01 -1.909436D+03 OLIQUID -2.304459D+03 -6.401269D-02 -1.394122D+03
LEFT FILM COEF.,H = 5.095235E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.314607E+01 F
RIGHT FILM COEF.,H = 4.397123E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.037504D+01 8.014806D+01 8.062616D+01 8.122125D+01 8.183060D+01 8.244128D+01 8.305170D+01 8.365997D+01 8.426102D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.499222D+03 -6.942278D-02 -1.511948D+03 3 VAPOR -6.444541D+03 -1.790135D-01 -2.070814D+03
LEFT FILM COEF.,H = 4.397123E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.095235E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.314607D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426102D+01 8.365997D+01 8.305170D+01 8.244128D+01 8.183060D+01 8.122125D+01 8.062616D+01 8.014806D+01 8.037504D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -4.015078D+03 -1.115304D-01 -1.803332D+03 OLIQUID -7.154014D+02 -1.987223D-02 -4.250333D+02
LEFT FILM COEF.,H = 4.792849E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.314607E+01 F
RIGHT FILM COEF.,H = 3.681880E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.251102D+01 8.064526D+01 8.071676D+01 8.080030D+01 8.089200D+01 8.098796D+01 8.115863D+01 8.137228D+01 8.159049D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246485D+01 8.268275D+01 8.371954D+01 8.475631D+01 8.579306D+01 8.682979D+01
8.753328D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.748955D-01	0.	-1.265495D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.347292D+00	0.	-1.589669D+04
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63039D-01	9.31475D+01	9.31475D+01	3.90771D+05	0.	3.90771D+05	2.66095D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.83958D+03	2.67650D+01 0.	0.	2.67650D+01	2.11452D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 5.7410E+01 LBM/HR ENERGY BTU/HR = 7.9821D+03 (NORMAL= 7.9821D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.1040D-05 STEP AIR= 1.5837D-03 NET VAPOR= 9.9154D-01 NET AIR= 1.4224D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.422423D+02 WATER VAPOR(LBM)= 9.915428D-01

* * * * * * * * * * * * * * * * * TIME = 6.333333E-01 HR = 3.800000E+01 MIN = 2.280000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.010651D+03	-2.807357D-02	-6.002034D+02	3 VAPOR	-3.461066D+03	-9.614118D-02	-1.595896D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.228667E+01 F
RIGHT FILM COEF .,H = 4.712050E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.327955D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532913D+01 8.502607D+01 8.473438D+01 8.444435D+01 8.415452D+01 8.386473D+01 8.357540D+01 8.329115D+01 8.305314D+01
8.265953D+01 8.227016D+01 8.188888D+01 8.151954D+01 8.116646D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.157101D+04	-3.214173D-01	-5.693001D+03	OLIQUID	-4.298599D+03	-1.194055D-01	-2.722446D+03

LEFT FILM COEF.,H = 4.770898E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.327955E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.578239D+01 8.092930D+01 8.066300D+01 8.155544D+01 8.246042D+01 8.338417D+01 8.432942D+01 8.529075D+01 8.626288D+01
8.724056D+01 8.769336D+01 8.815436D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.870524D+03	-2.741812D-01	-6.254169D+03	3 VAPOR	-1.731785D+04	-4.810450D-01	-3.361329D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.477965E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.327955D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536864D+01 8.490999D+01 8.453287D+01 8.459668D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.003485D+03	-1.667621D-01	-2.008989D+03	OLIQUID	-2.306659D+03	-6.407380D-02	-1.432548D+03

LEFT FILM COEF.,H = 5.107625E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.327955E+01 F
RIGHT FILM COEF .,H = 4.401322E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.040837D+01 8.015708D+01 8.062768D+01 8.12.144D+01 8 '93061D+01 8.244127D+01 8.305167D+01 8.365988D+01 8.426103D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.501608D+03	-6.948906D-02	-1.553621D+03	3 VAPOR	-6.510875D+03	-1.808562D-01	-2.178781D+03

LEFT FILM COEF.,H = 4.401322E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.107625E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.327955D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426103D+01 8.365988D+01 8.305167D+01 8.244127D+01 8.183061D+01 8.122144D+01 8.062768D+01 8.015708D+01 8.040837D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.994142D+03 -1.109489D-01 -1.870078D+03 OLIQUID -7.164785D+02 -1.990216D-02 -4.369657D+02
LEFT FILM COEF.,H = 4.785917E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.327955E+01 F
RIGHT FILM COEF .,H = 3.687800E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.268464D+01 8.080421D+01 8.083701D+01 8.088179D+01 8.093468D+01 8.099183D+01 8.115919D+01 8.137234D+01 8.159050D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246485D+01 8.268272D+01 8.371944D+01 8.475614D+01 8.579283D+01 8.682950D+01
8.753353D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP. STEP-LIQUID STEP-VAPOR NET-LIQUID NET-VAPOR
0 0. -5.751254D-01 0. -1.299995D+04
1 0. 0. 0. 0.
2 0. 0. 0. 0.
3 0. -1.357171D+00 0. -1.670808D+04
4 0. 0. 0. 0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) AIMOS	POOL	ENERGY (BTU) AIMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63039D-01	9.328100D+01	9.328100D+01	3.90765D+05	0.	3.90765D+05	2.66930D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.83865D+03	2.67585D+01 0.	0.	2.67585D+01	2.10579D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 5.4724D+01 LBM/HR ENERGY BTU/HR = 7.6103D+03 (NORMAL= 7.6103D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.0523D-05 STEP AIR= 1.5096D-03 NET VAPOR= 9.9801D-01 NET AIR= 1.4317D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.431700D+02 WATER VAPOR(LBM)= 9.980093D-01

* * * * * * * * * * * * * * * * * TIME = 6.500000E-01 HR = 3.900000E+01 MIN = 2.340000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.013936D+03 -2.816481D-02 -6.170750D+02 3 VAPOR -3.440855D+03 -9.557979D-02 -1.653414D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.231000E+01 F
RIGHT FILM COEF .,H = 4.704525E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.340694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.532985D+01 8.502621D+01 8.473440D+01 8.444436D+01 8.415452D+01 8.386474D+01 8.357546D+01 8.329176D+01 8.305714D+01
8.270195D+01 8.235098D+01 8.200806D+01 8.167700D+01 8.133682D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.155012D+04 -3.208373D-01 -5.885680D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.794089D+03
LEFT FILM COEF.,H = 4.770350E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.340694E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.592245D+01 8.103208D+01 8.074788D+01 8.162776D+01 8.252032D+01 8.343185D+01 8.436513D+01 8.531471D+01 8.627524D+01
8.724141D+01 8.769341D+01 8.815436D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.869785D+03 -2.741607D-01 -6.418672D+03 3 VAPOR -1.758982D+04 -4.886000D-01 -3.652246D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.494882E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.340694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536899D+01 8.491133D+01 8.454001D+01 8.462091D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.061176D+03	-1.683647D-01	-2.109533D+03	OLIQUID	-2.308848D+03	-6.413462D-02	1.471011D+03

LEFT FILM COEF.,H = 5.119209E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.340654E+01 F
RIGHT FILM COEF.,H = 4.405509E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.044147D+01 8.016630D+01 8.062928D+01 8.122164D+01 8.183063D+01 8.244127D+01 8.305165D+01 8.365979D+01 8.426104D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.503983D+03	-6.955502D-02	-1.595335D+03	3 VAPOR	-6.573443D+03	-1.825942D-01	-2.287822D+03

LEFT FILM COEF.,H = 4.405509E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.119209E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.340694D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426104D+01 8.365979D+01 8.305165D+01 8.244127D+01 8.183063D+01 8.122164D+01 8.062928D+01 8.016630D+01 8.044147D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-3.971688D+03	-1.103252D-01	-1.936462D+03	OLIQUID	-7.175369D+02	-1.993156D-02	-4.489158D+02

LEFT FILM COEF.,H = 4.778536E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.340694E+01 F
RIGHT FILM COEF.,H = 3.693688E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.285531D+01 8.096211D+01 8.095653D+01 8.096283D+01 8.097721D+01 8.099582D+01 8.115978D+01 8.137241D+01 8.159050D+01
8.180909D+01 8.202771D+01 8.224633D+01 8.246484D+01 8.268269D+01 8.371935D+01 8.475600D+01 8.579264D+01 8.682926D+01
8.753383D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.753523D-01	0.	-1.334510D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.366301D+00	0.	-1.395516D+04
4	0.	0.	0.	0.

COMP	P R E S S U R E (PSIA)	T E M P E R A T U R E (F)		E N E R G Y (BTU)			CONVERGENCE
NO	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630390-01	9.340840+01	9.340840+01	3.907600+05	0.	3.907600+05	2.676860-06

	AIR MASS	W A T E R M A S S (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR	ATMOS	LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.		0	0.	6.000000-01	0.	0.	0.
3	3.837760+03	2.675230+01	0.		0.	2.675230+01	2.097500-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 5.2241D+01 LBM/HR ENERGY BTU/HR = 7.2666D+03 (NORMAL= 7.2666D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.0046D-05 STEP AIR= 1.4411D-03 NET VAPOR= 1.0042D+00 NET AIR= 1.4405D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.440549D+02 WATER VAPOR(LBM)= 1.004178D+00

* * * * * * * * * * * * * * * * * TIME = 6.666[illegible]E-01 HR = 4.000000E+01 MIN = 2.400000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.017219D+03	-2.825600D-02	-6.340013D+02	3 VAPOR	-3.419446D+03	-9.498512D-02	-1.710585D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.233333E+01 F
RIGHT FILM COEF.,H = 4.696587E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.352870D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.533059D+01 8.502637D+01 8.473442D+01 8.444436D+01 8.415452D+01 8.386475D+01 8.357554D+01 8.329240D+01 8.306125D+01
8.274417D+01 8.243130D+01 8.212641D+01 8.183330D+01 8.350432D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.152737D+04 -3.202054D-01 -6.077995D+03 OLIQUID -4.298599D+03 -1.194055D-01 -2.865733D+03
LEFT FILM COEF.,H = 4.769827E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.352870E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.605813D+01 8.113459D+01 8.083345D+01 8.170075D+01 8.258084D+01 8.348007D+01 8.440129D+01 8.533900D+01 8.628778D+01
8.724229D+01 8.769346D+01 8.815436D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.868979D+03 -2.741383D-01 -6.583161D+03 3 VAPOR -1.784818D+04 -4.957771D-01 -3.947581D+03
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.510759E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.352870D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536937D+01 8.491275D+01 8.454733D+01 8.464499D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.115660D+03 -1.698782D-01 -2.211011D+03 OLIQUID -2.311028D+03 -6.419516D-02 -1.509510D+03
LEFT FILM COEF.,H = 5.130059E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.352870E+01 F
RIGHT FILM COEF.,H = 4.409687E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.047435D+01 8.017573D+01 8.063095D+01 8.122186D+01 8.183066D+01 8.244127D+01 8.305162D+01 8.365971D+01 8.426106D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.506346D+03 -6.962068D-02 -1.637087D+03 3 VAPOR -6.632531D+03 -1.842356D-01 -2.397876D+03
LEFT FILM COEF.,H = 4.409687E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.130059E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.352870D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426106D+01 8.365971D+01 8.305162D+01 8.244127D+01 8.183066D+01 8.122186D+01 8.063095D+01 8.017573D+01 8.047435D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.947932D+03 -1.096653D-01 -2.002460D+03 OLIQUID -7.185769D+02 -1.996044D-02 -4.608835D+02
LEFT FILM COEF.,H = 1.770761E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.352870E+01 F
RIGHT FILM COEF.,H = 3.699546E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.302309D+01 8.111884D+01 8.107519D+01 8.104336D+01 8.101953D+01 8.099992D+01 8.116042D+01 8.137248D+01 8.159051D+01
8.180909D+01 8.202771D+01 8.224632D+01 8.246483D+01 8.268265D+01 8.371927D+01 8.475588D+01 8.579248D+01 8.682907D+01
8.753417D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.755762D-01	0.	-1.369038D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.374747D+00	0.	-1.834751D+04
4	0.	0.	0.	0.

COMP	PRESSURE (PSIA)		TEMPERATURE (F)		ENERGY (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.47000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63039D-01	9.35302D+01	9.35302D+01	3.755D+05	0.	3.90755D+05	2.68372D-06

COMP	AIR MASS	WATER MASS (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	TRANSFER COEFFICIENTS HEAT
NO.	(LBM)	VAPOR--ATMOS	LIQUID POOL		TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.83692D+03	2.67464D+01	0.	0.	2.67464D+01	2.08960D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 4.9946D+01 LBM/HR ENERGY BTU/HR = 6.9488D+03 (NORMAL= 6.94E [illegible] TRATION= 0.)

STEP AND NET MASS LOSSES LBM STEP VAPOR= 9.6042D-06 STEP AIR= 1.3778D-03 NET VAPOR= 1.0101D+00 NE [illegible] 1.4490D+02

TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.449003D+02 WATER VAPOR(LBM)= 1.010071D+00

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HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.033607D+03	-2.871123D-02	-7.194526D+02	3 VAPOR	-3.300052D+03	-9.166869D-02	-1.990678D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.245000E+01 F
RIGHT FILM COEF .,H = 4.652386E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.406649D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.533444D+01 8.502721D+01 8.473456D+01 8.444438D+01 8.415452D+01 8.386479D+01 8.357601D+01 8.329616D+01 8.308341D+01
8.295133D+01 8.282331D+01 8.270293D+01 8.259379D+01 8.430021D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.139231D+04	-3.164538D-01	-7.033195D+03	OLIQUID	-4.298600D+03	-1.194056D-01	-3.223949D+03

LEFT FILM COEF.,H = 4.767514E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = [illegible].406649E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.667987D+01 8.164192D+01 8.126901D+01 8.207312D+01 8.289038D+01 8.372740D+01 8.458722D+01 8.546421D+01 8.635279D+01
8.724740D+01 8.769381D+01 8.815438D+01 8.861572D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.863845D+03	-2.739957D-01	-7.405376D+03	3 VAPOR	-1.896798D+04	-5.268837D-01	-5.483411D+03

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.577489E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.406649D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.537178D+01 8.492104D+01 8.458637D+01 8.476305D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.347844D+03	-1.763281D-01	-2.730748D+03	OLIQUID	-2.321777D+03	-6.449374D-02	-1.702545D+03

LEFT FILM COEF.,H = 5.175326E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.406649E+01 F
RIGHT FILM COEF .,H = 4.430419E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.063505D+01 8.022567D+01 8.064054D+01 8.122321D+01 8.183080D+01 8.244125D+01 8.305147D+01 8.365931D+01 8.426135D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.518004D+03	-6.994450D-02	-1.846437D+03	3 VAPOR	-6.884339D+03	-1.912306D-01	-2.961540D+03

LEFT FILM COEF.,H = 4.430419E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.175326E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.406649D+01 F

ccc

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426135D+01 8.365931D+01 8.305147D+01 8.244125D+01 8.183080D+01 8.122321D+01 8.060454D+01 8.022567D+01 8.063505D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-3.815777D+03	-1.059945D-01	-2.326072D+03	OLIQUID	-7.235139D+02	-2.009759D-02	-5.209736D+02

LEFT FILM COEF.,H = 4.727626E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.406649E+01 F
RIGHT FILM COEF .,H = 3.728504E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.381991D+01 8.188114D+01 8.165308D+01 8.143627D+01 8.122712D+01 8.102205D+01 8.116415D+01 8.137294D+01 8.159055D+01
8.180909D+01 8.202771D+01 8.224632D+01 8.246478D+01 8.268250D+01 8.371906D+01 8.475563D+01 8.579220D+01 8.682877D+01
8.753644D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.766483D-01	0.	1.941873D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.085559D+00	0.	-2.252564D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630390D-01	9.406800D+01	9.406800D+01	3.907320D+05	0.	3.907320D+05	2.709690-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.833190+03	2.672040+01	0.	0.	2.672040+01	2.055140-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 4.076ID+01 LBM/HR ENERGY BTU/HR = 5.6763D+03 (NORMAL= 5.6763D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 7.8381D-06 STEP AIR= 1.1244D-03 NET VAPOR= 1.0361D+00 NET AIR= 1.4863D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.486297D+02 WATER VAPOR(LBM)= 1.036068D+00

* * * * * * * * * * * * * * * * TIME = 8.333333E-01 HR = 5.000000E+01 MIN = 3.000000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.049953D+03	-2.916528D-02	-8.062679D+02	2 VAPOR	-3.170857D+03	-8.807996D-02	-2.260328D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.256567E+01 F
RIGHT FILM COEF .,H = 4.603966E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.451340D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.533857D+01 8.502821D+01 8.473474D+01 8.444440D+01 8.415453D+01 8.386487D+01 8.357668D+01 8.330089D+01 8.310789D+01
8.314999D+01 8.319595D+01 8.324914D+01 8.331291D+01 8.503078D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.123383D+04	-3.120515D-01	-7.976071D+03	OLIQUID	-4.298600D+03	-1.194056D-01	-3.582166D+03

LEFT FILM COEF.,H = 4.765592E-01BTU/HR.FT2.F FIRST MESH K = 3.500300E-02 BTU/HR.FT. BULK TEMP = 9.451340E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.722661D+01 8.738140D+01 8.171113D+01 8.245225D+01 8.320664D+01 8.398103D+01 8.477858D+01 8.559361D+01 8.642050D+01
8.725361D+01 8.769431D+01 8.815441D+01 8.861573D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.358628D+03	-2.737953D-01	-8.227078D+03	3 VAPOR	-1.986760D+04	-5.518733D-01	-7.102825D+03

LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.628793E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.451340D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.537517D+01 8.493133D+01 8.462889D+01 8.487672D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.529162D+03	-1.813649D-01	-3.267579D+03	OLIQUID	-2.332292D+03	-6.478585D-02	-1.896466D+03

LEFT FILM COEF ,H = 5.209591E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.451340E+01 F
RIGHT FILM COEF ,H = 4.450903E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.078918D+01 8.027965D+01 8.065217D+01 8.122503D+01 8.183102D+01 8.244124D+01 8.305132D+01 8.365898D+01 8.426189D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.529408D+03	-7.026129D-02	-2.056748D+03	3 VAPOR	-7.080980D+03	-1.966931D-01	-3.543742D+03

LEFT FILM COEF ,H = 4.450903E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 5.209591E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.451340D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426189D+01 8.365898D+01 8.305132D+01 8.244124D+01 8.183102D+01 8.122503D+01 8.065217D+01 8.027965D+01 8.078918D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-3.673137D+03	-1.020322D-01	-2.638139D+03	OLIQUID	-7.280434D+02	-2.022341D-02	-5.814578D+02

LEFT FILM COEF ,H = 4.680572E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.451340E+01 F
RIGHT FILM COEF ,H = 3.756582E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.455070D+01 8.260154D+01 8.220025D+01 8.160955D+01 8.142609D+01 8.104651D+01 8.116886D+01 8.127361D+01 8.159063D+01
8.180910D+01 8.202771D+01 8.224631D+01 8.246473D+01 8.268235D+01 8.371912D+01 8.475590D+01 8.579268D+01 8.682948D+01
8.753961D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.776367D-01	0.	-1.715018D+04
1	0.	0	0.	0.
2	0	0	0.	0.
3	0.	-1.432095D+00	0.	-2.678868D+04
4	0	0.	0.	0.

COMP	PRESSURE (PSIA)		TEMPERATURE (F)		ENERGY (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	
3	1.470019D+01	1.630400-01	9.45149D+01	9.45149D+01	3.90714D+05	0.	3.90714D+05	2.72608D-06

	AIR MASS	WATER MASS (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS	--LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.830100D+03	2.669890D+01	0.	0.	2.669890D+01	2.026990-01	0.	0	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 3.4374D+01 LBM/HR ENERGY BTU/HR = 4.7905D+03 (NORMAL= 4.7905D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 6.6093D-06 STEP AIR= 9.4822D-04 NET VAPOR= 1.0576D+00 NET AIR= 1.5172D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.517232D+02 WATER VAPOR(LBM)= 1.057632D+00

* * * * * * * * * * * * * * * * * * TIME = 9.166667E-01 HR = 5.500000E+01 MIN = 3.300000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.066259D+03	-2.961824D-02	-2.944437D+02	3 VAPOR	-3.041373D+03	-8.448217D-02	-2.519150D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.268333E+01 F
RIGHT FILM COEF .,H = 4.554351E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.489618D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.534298D+01 8.502935D+01 8.473496D+01 8.444444D+01 8.415455D+01 8.386498D+01 8.357759D+01 8.330662D+01 8.313426D+01
8.333865D+01 8.354670D+01 8.376153D+01 8.398624D+01 8.570170D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.106216D+04 -3.072829D-01 -8.905137D+03 OLIQUID -4.298601D+03 -1.194056D-01 -3.940383D+03
LEFT FILM COEF.,H = 4.763946E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.489618E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.771826D+01 8.262277D+01 8.215339D+01 8.283234D+01 8.352452D+01 8.423667D+01 8.497201D+01 8.572491D+01 8.648974D+01
8.726090D+01 8.769497D+01 8.815445D+01 8.861573D+01 8.907700D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.847032D+03 -2.735287D-01 -9.048041D+03 3 VAPOR -2.061308D+04 -5.725825D-01 -8.790416D+03
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.669858E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.489618D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.537967D+01 8.494365D+01 8.467418D+01 8.498583D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.675473D+03 -1.854292D-01 -3.817974D+03 OLIQUID -2.342591D+03 -6.507193D-02 -2.091254D+03
LEFT FILM COEF.,H = 5.236549E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.489618E+01 F
RIGHT FILM COEF .,H = 4.471150E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.093665D+01 8.033692D+01 8.066586D+01 8.122741D+01 8.183134D+01 8.244124D+01 8.305117D+01 8.365871D+01 8.426265D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.540577D+03 -7.057154D-02 -2.267999D+03 3 VAPOR -7.239657D+03 -2.011009D-01 -4.140654D+03
LEFT FILM COEF.,H = 4.471150E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.236549E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.489618D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426265D+01 8.365871D+01 8.305117D+01 8.244124D+01 8.183134D+01 8.122741D+01 8.066586D+01 8.033692D+01 8.093665D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.530399D+03 -9.806729D-02 -2.938262D+03 OLIQUID -7.322034D+02 -2.033897D-02 -6.423039D+02
LEFT FILM COEF.,H = 4.632515E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.489618E+01 F
RIGHT FILM COEF .,H = 3.784134E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.522129D+01 8.327563D+01 8.271321D+01 8.216068D+01 8.161494D+01 8.107236D+01 8.117457D+01 8.137451D+01 8.159074D+01
8.180911D+01 8.202771D+01 8.224630D+01 8.246468D+01 8.268223D+01 8.319942D+01 8.475662D+01 8.579384D+01 8.683109D+01
8.754357D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.785350D-01	0.	-1.888446D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.448946D+00	0.	-3.111159D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0
3	1.470010D+01	1.630400D-01	9.489770D+01	9.489770D+01	3.906980D+05	0.	3.906980D+05	2.734730D-05

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0
3	3.827450+03	2.668040+01	0.	0.	2.668040+01	2.003230-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 2.9804D+01 LBM/HR ENERGY BTU/HR = 4.1563D+03 (NORMAL= 4.1563D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 5.7310D-06 STEP AIR= 8.2215D-04 NET VAPOR= 1.0761D+00 NET AIR= 1.5437D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.543686D+02 WATER VAPOR(LBM)= 1.076073D+00

* * * * * * * * * * * * * * * * TIME = 1.000000E+00 HR = 6.000000E+01 MIN = 3.600000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.082529D+03	-3.007017D-02	-9.839768D+02	3 VAPOR	-2.915830D+03	-8.102363D-02	-2.767363D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.280000E+01 F
RIGHT FILM COEF .,H = 4.505357E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.523235D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.534765D+01 8.503064D+01 8.473523D+01 8.444448D+01 8.415458D+01 8.386515D+01 8.357877D+01 8.331335D+01 8.316212D+01
8.351676D+01 8.387485D+01 8.423927D+01 8.461288D+01 8.631848D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.088308D+04	-3.023087D-01	-9.819560D+03	OLIQUID	-4.298601D+03	-1.194056D-01	-4.298600D+03

LEFT FILM COEF.,H = 4.762501E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.523235E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.816848D+01 8.309377D+01 8.259137D+01 8.320939D+01 8.384047D+01 8.448133D+01 8.516517D+01 8.585646D+01 8.655966D+01
8.726921D+01 8.769583D+01 8.815452D+01 8.861573D+01 8.907710D+01 8.953843D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.834814D+03	-2.731893D-01	-9.868177D+03	3 VAPOR	-2.124821D+04	-5.902253D-01	-1.053529D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.703864E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.523235D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.538540D+01 8.495796D+01 8.472167D+01 8.509049D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.797148D+03	-1.888092D-01	-4.378477D+03	OLIQUID	-2.352687D+03	-6.535236D-02	-2.286892D+03

LEFT FILM COEF.,H = 5.258496E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.523235E+01 F
RIGHT FILM COEF .,H = 4.491170E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.107769D+01 8.035683D+01 8.068156D+01 8.123041D+01 8.183179D+01 8.244125D+01 8.305102D+01 8.365852D+01 8.426361D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.551526D+03	-7.087568D-02	-2.480171D+03	3 VAPOR	-7.371616D+03	-2.047665D-01	-4.749613D+03

LEFT FILM COEF.,H = 4.491170E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.258496E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.523235D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426361D+01 8.365852D+01 8.305102D+01 8.244125D+01 8.183179D+01 8.123041D+01 8.063156D+01 8.039683D+01 8.107769D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.393278D+03 -9.425833D-02 -3.226697D+03 OLIQUID -7.360280D+02 -2.044521D-02 -7.034824D+02
LEFT FILM COEF.,H = 4.585197E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.523235E+01 F
RIGHT FILM COEF .,H = 3.811109E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.583726D+01 8.390252D+01 8.319114D+01 8.248896D+01 8.179310D+01 8.110070D+01 8.118127D+01 8.137568D+01 8.159090D+01
8.180913D+01 8.202771D+01 8.224628D+01 8.246463D+01 8.268213D+01 8.371994D+01 8.475776D+01 8.579561D+01 8.683.30D+01
8.754822D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.793383D-01	0.	-2.062130D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.461392D+00	0.	-3.547800D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630400D-01	9.523390D+01	9.523390D+01	3.90684D+05	0.	3.90684D+05	2.743880D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.82513D+03	2.66642D+01 0.	0.	2.66642D+01	1.982620-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 2.64300D+01 LBM/HR ENERGY BTU/HR = 3.68790D+03 (NORMAL= 3.68790D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 5.0823D-06 STEP AIR= 7.2908D-04 NET VAPOR= 1.0922D+00 NET AIR= 1.5669D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.566888D+02 WATER VAPOR(LBM)= 1.092246D+00

* * * * * * * * * * * * * * * * * TIME = 1.083333E+00 HR = 6.500000E+01 MIN = 3.900000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.092728D+03 -3.035352D-02 -1.074613D+03 3 VAPOR -2.799902D+03 -7.777559D-02 -3.005501D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.287500E+01 F
RIGHT FILM COEF .,H = 4.458056E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.553353D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.535243D+01 8.503208D+01 8.473555D+01 8.444454D+01 8.415461D+01 8.386537D+01 8.358025D+01 8.332104D+01 8.319110D+01
8.368431D+01 8.418076D+01 8.468311D+01 8.519399D+01 8.688622D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.070010D+04 -2.972259D-01 -1.071888D+04 OLIQUID -4.298601D+03 -1.194056D-01 -4.656816D+03
LEFT FILM COEF.,H = 4.761206E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.553353E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.858654D+01 8.3E5119D+01 8.302214D+01 8.358071D+01 8.415212D+01 8.474296D+01 8.535644D+01 8.598715D+01 8.662964D+01
8.727848D+01 8.769689D+01 8.815460D+01 8.861574D+01 8.907710D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.819783D+03 -2.727718D-01 -1.068714D+04 3 VAPOR -2.180204D+04 -6.056098D-01 -1.232953D+04

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LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.732816E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.5533530+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.5392450+01  8.4974210+01  8.4770840+01  8.5190990+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -6.9010010+03 -1.9169400-01 -4.9503390+03          OLIQUID     -2.3588910+03 -6.5524710-02 -2.4832080+03
LEFT FILM COEF.,H = 5.276890E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.553353E+01 F
RIGHT FILM COEF  .,H = 4.503860E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.0000000+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.1212710+01  8.0458800+01  8.0699220+01  8.1234070+01  8.1832370+01  8.2441280+01  8.3050860+01  8.3658410+01  8.4264690+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.5582550+03 -7.1062600-02 -2.6930790+03          3 VAPOR     -7.4842460+03 -2.0789520-01 -5.3687220+03
LEFT FILM COEF.,H = 4.503860E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.276890E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.5533530+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.4264690+01  8.3658410+01  8.3050880+01  8.2441280+01  8.1832370+01  8.1234070+01  8.0699220+01  8.0458800+01  8.1212710+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -3.2646740+03 -9.0685950-02 -3.5040470+03          OLIQUID     -7.3776530+02 -2.0493470-02 -7.6489060+02
LEFT FILM COEF.,H = 4.5396415-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.553353E+01 F
RIGHT FILM COEF  .,H = 3.827777E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.0000000+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.6403810+01  8.4483440+01  8.3634840+01  8.2794780+01  8.1960600+01  8.1129660+01  8.1188940+01  8.1377150+01  8.1531120+01
  8.1809160+01  8.2027710+01  8.2246270+01  8.2464580+01  8.2682050+01  8.3720640+01  8.4759250+01  8.5797890+01  8.6836570+01
  8.7553130+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.             -5.7961170-01  0.             -2.2359750+04
    1  0.              0.            0.              0.
    2  0.              0.            0.              0.
    3  0.             -1.4708860+00  0.             -3.9877020+04
    4  0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)     T E M P E R A T U R E  (F)          E N E R G Y  (BTU)                          CONVERGENCE
 NO.        TOTAL          STEAM          ATMOS          POOL          ATMOS          POOL          TOTAL              DE/E
  1      1.4700000+01   0.             7.3400000+01   7.3400000+01   0.             0.             0.             0.
  3      1.4700100+01   1.6304100-01   9.5535100+01   9.5535100+01   3.9067100+05   0.             3.9067100+05   2.7488600-06

                                                                                                  TRANSFER COEFFICIENTS
         AIR MASS                W A T E R    M A S S    ( LBM)                 HUMIDITY    CONDENSATION     MASS          HEAT
          ( LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                  (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
  1      0.              0.             0              0.             0.             6.0000000-01   0.             0.             0.
  3      3.8230500+03    2.6649800+01   0.             0.             2.6649800+01   1.9643600-01   0.             0.             0.
COMP.  3 LEAKAGE OUTFLOW-  MASS= 2.3857D+01 LBM/HR   ENERGY BTU/HR = 3.3306D+03 (NORMAL= 3.3306D+03 PENETRATION= 0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR= 4.5875D-06 STEP AIR= 6.5810D-04 NET VAPOR= 1.1067D+00 NET AIR= 1.5876D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.5876500+02 WATER VAPOR(LBM)= 1.1067190+00

 * * * * * * * * * * * * * * * * TIME = 1.166667E+00 HR = 7.000000E+01 MIN = 4.200000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -1.1029270+03 -3.0636810-02 -1.1660980+03          3 VAPOR     -2.6917550+03 -7.4771450-02 -3.2342580+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.295000E+01 F
RIGHT FILM COEF.,H = 4.413058E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.580761D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.535722D+01 8.503365D+01 8.473593D+01 8.444462D+01 8.415466D+01 8.386567D+01 8.358205D+01 8.332967D+01 8.322090D+01
8.384164D+01 8.446542D+01 8.509468D+01 8.573185D+01 8.740954D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.051550D+04 -2.920980D-01 -1.160287D+04 OLIQUID -4.298601D+03 -1.194056D-01 -5.015033D+03
LEFT FILM COEF.,H = 4.760027E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.580761E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.897879D+01 8.399494D+01 8.344382D+01 8.394458D+01 8.445788D+01 8.499022D+01 8.554475D+01 8.611621D+01 8.669928D+01
8.728864D+01 8.769817D+01 8.815472D+01 8.861575D+01 8.907711D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.801801D+03 -2.722723D-01 -1.150473D+04 3 VAPOR -2.229407D+04 -6.192775D-01 -1.416725D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.758010E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.580761D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.540089D+01 8.499231D+01 8.482129D+01 8.528766D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.991553D+03 -1.942094D-01 -5.529276D+03 OLIQUID -2.365026D+03 -6.569513D-02 -2.680039D+03
LEFT FILM COEF.,H = 5.292674E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.580761E+01 F
RIGHT FILM COEF.,H = 4.516465E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.134214D+01 8.052237D+01 8.071874D+01 8.123844D+01 8.183313D+01 8.244134D+01 8.305076D+01 8.365836D+01 8.426582D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.564908D+03 -7.124142D-02 -2.906545D+03 3 VAPOR -7.582451D+03 -2.106232D-01 -5.996588D+03
LEFT FILM COEF.,H = 4.516465E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.292674E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.580761D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426582D+01 8.365836D+01 8.305076D+01 8.244134D+01 8.183313D+01 8.123844D+01 8.071874D+01 8.052237D+01 8.134214D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.145841D+03 -8.738500D-02 -3.771082D+03 OLIQUID -7.394498D+02 -2.054026D-02 -8.864417D+02
LEFT FILM COEF.,H = 4.496419E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.580761E+01 F
RIGHT FILM COEF.,H = 3.844287E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.692565D+01 8.502072D+01 8.404598D+01 8.307914D+01 8.211778D+01 8.115945D+01 8.119755D+01 8.137894D+01 8.159142D+01
8.180920D+01 8.202771D+01 8.224625D+01 8.246452D+01 8.268199D+01 8.372147D+01 8.476096D+01 8.580049D+01 8.684008D+01
8.755808D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.797975D-01	0.	-2.409888D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.478365D+00	0.	-4.430132D+04
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63041D-01	9.58092D+01	9.58092D+01	3.90660D+05	0.	3.90660D+05	2.75245D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.82117D+03	2.66366D+01 0.	0.	2.66366D+01	1.94791D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 2.1831D+01 LBM/HR ENERGY BTU/HR = 3.0492D+03 (NORMAL= 3.0492D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 4.1979D-06 STEP AIR= 6.0221D-01 NET VAPOR= 1.1199D+00 NET AIR= 1.6065D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.6065230+02 WATER VAPOR(LBM)= 1.119875D+00

* * * * * * * * * * * * * * * * * * TIME = 1.250000E+00 HR = 7.500000E+01 MIN = 4.500000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.113122D+03	-3.092001D-02	-1.258434D+03	3 VAPOR	-2.592679D+03	-7.201931D-02	-3.454380D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.302500E+01 F
RIGHT FILM COEF .,H = 4.370682E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.606003D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536204D+01 8.503534D+01 8.473636D+01 8.444471D+01 8.415474D+01 8.386606D+01 8.358420D+01 8.333918D+01 8.325123D+01
8.398926D+01 8.473010D+01 8.547603D+01 8.622929D+01 8.789263D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-1.033086D+04	-2.869691D-01	-1.247146D+04	OLIQUID	-4.298601D+03	-1.194056D-01	-5.373250D+03

LEFT FILM COEF.,H = 4.758942E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.606000E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.934958D+01 8.442507D+01 8.385522D+01 8.429988D+01 8.475678D+01 8.523224D+01 8.572941D+01 8.624313D+01 8.676827D+01
8.729962D+01 8.763968D+01 8.815487D+01 8.861576D+01 8.907711D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.780778D+03	-2.716884D-01	-1.232069D+04	3 VAPOR	-2.273756D+04	-6.315969D-01	-1.604387D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.780308E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.606003D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.541076D+01 8.501218D+01 8.487271D+01 8.538085D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.071853D+03	-1.964400D-01	-6.115314D+03	OLIQUID	-2.371092D+03	-6.586365D-02	-2.877377D+03

LEFT FILM COEF.,H = 5.306474E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.606003E+01 F
RIGHT FILM COEF .,H = 4.528986E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.146647D+01 8.058712D+01 8.074005D+01 8.124356D+01 8.183409D+01 8.244143D+01 8.305065D+01 8.365839D+01 8.426701D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.571487D+03	-7.143018D-02	-3.120562D+03	3 VAPOR	-7.669537D+03	-2.130423D-01	-6.632156D+03

LEFT FILM COEF.,H = 4.528986E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.306474E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.606003D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426701D+01 8.365839D+01 8.305065D+01 8.244143D+01 8.183409D+01 8.124356D+01 8.074005D+01 8.058712D+01 8.146647D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -3.037078D+03 -8.436376D-02 -4.028634D+03 OLIQUID -7.410525D+02 -2.058478D-02 -8.881299D+02
LEFT FILM COEF ,H = 4.455822E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.606003E+01 F
RIGHT FILM COEF ,H = 3.860624E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.740702D+01 8.551725D+01 8.442665D+01 8.334336D+01 8.226516D+01 8.118980D+01 8.120704D+01 8.138108D+01 8.159180D+01
8.180925D+01 8.202771D+01 8.224623D+01 8.246447D+01 8.268196D+01 8.372239D+01 8.476284D+01 8.580333D+01 8.684387D+01
8.756314D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP. STEP-LIQUID STEP-VAPOR NET-LIQUID NET-VAPOR
0 0. -5.798926D-01 0. -2.583844D+04
1 0. 0. 0. 0.
2 0. 0. 0. 0.
3 0. -1.484431D+00 0. -4.874581D+04
4 0. 0. 0. 0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010+01	1.63041D-01	9.606160+01	9.606160+01	3.906490D+05	0.	3.906490D+05	2.755100-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.819430+03	2.662450+01	0.	0.	2.662450+01	1.932900-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 2.0188D+01 LBM/HR ENERGY BTU/HR = 2.821000+03 (NORMAL= 2.82100+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.88200-06 STEP AIR= 5.56890-04 NET VAPOR= 1.13200+00 NET AIR= 1.62390+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.623887D+02 WATER VAPOR(LBM)= 1.131980D+00

* * * * * * * * * * * * * * * * * TIME = 1.333333E+00 HR = 8.000000E+01 MIN = 4.800000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.123312D+03 -3.120307D-02 -1.351618D+03 3 VAPOR -2.502476D+03 -6.951362D-02 -3.466618D+03
LEFT FILM COEF ,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.310000E+01 F
RIGHT FILM COEF ,H = 4.331061E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.629463D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.536689D+01 8.503715D+01 8.473685D+01 8.444483D+01 8.415433D+01 8.386654D+01 8.358671D+01 8.334955D+01 8.328210+01
8.412777D+01 8.497620D+01 8.582937D+01 8.668934D+01 8.633928D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -1.014734D+04 -2.818714D-01 -1.332471D+04 OLIQUID -4.298601D+03 -1.194056D-01 -5.731466D+03
LEFT FILM COEF ,H = 4.757933E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 5.629463E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.970199D+01 8.484172D+01 8.425565D+01 8.464597D+01 8.504819D+01 8.546850D+01 8.590996D+01 8.636760D+01 8.683641D+01
8.731136D+01 8.770145D+01 8.815506D+01 8.861577D+01 8.907711D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.756667D+03 -2.710186D-01 -1.313477D+04 3 VAPOR -2.314173D+04 -6.428241D-01 -1.795575D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.800300E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.629463D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.542207D+01 8.503373D+01 8.492482D+01 8.547089D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.143991D+03	-1.984439D-01	-6.707692D+03	0LIQUID	-2.377091D+03	-6.603029D-02	-3.075219D+03

LEFT FILM COEF.,H = 5.318713E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.629463E+01 F
RIGHT FILM COEF .,H = 4.541426E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.158613D+01 8.065274D+01 8.076302D+01 8.124945D+01 8.183527D+01 8.244158D+01 8.305057D+01 8.365847D+01 8.426824D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0LIQUID	-2.577994D+03	-7.161090D-02	-3.335124D+03	3 VAPOR	-7.747773D+03	-2.152156D-01	-7.274599D+03

LEFT FILM COEF.,H = 4.541426E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.318713E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.629463D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426824D+01 8.365847D+01 8.305057D+01 8.244158D+01 8.183527D+01 8.124945D+01 8.076302D+01 8.065274D+01 8.158613D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.938147D+03	-8.161563D-02	-4.277535D+03	0LIQUID	-7.425677D+02	-2.062687D-02	-9.499481D+02

LEFT FILM COEF.,H = 4.417963E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.629463E+01 F
RIGHT FILM COEF .,H = 3.876786E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.785175D+01 8.597614D+01 8.477912D+01 8.358887D+01 8.240335D+01 8.122051D+01 8.121735D+01 8.138358D+01 8.159227D+01
8.180932D+01 8.202772D+01 8.224622D+01 8.246443D+01 8.268195D+01 8.372339D+01 8.476484D+01 8.580634D+01 8.684789D+01
8.756834D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.798954D-01	0.	-2.757815D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.489484D+00	0.	-5.320690D+04
4	0.	0.	0	0.

COMP NO	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0
3	1.470019D+01	1.630419D-01	9.629629D+01	9.629629D+01	3.906400D+05	0.	3.906400D+05	2.757120D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS	--LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000E-01	0.	0.	0.
3	3.617820D+03	2.561330D+01	0.	2.561330D+01	1.919070D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.882000D+01 LBM/HR ENERGY BTU/HR = 2.630900D+03 (NORMAL= 2.630900D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.618900-06 STEP AIR= 5.191500-04 NET VAPOR= 1.143200+00 NET AIR= 1.640000+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.640012D+02 WATER VAPOR(LBM)= 1.143220D+00

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HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.133497D+03	-3.148597D-02	-1.445652D+03	3 VAPOR	-2.420683D+03	-6.724156D-02	-3.871693D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.317500E+01 F
RIGHT FILM COEF .,H = 4.294210E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.651423D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.537177D+01 8.503906D+01 8.473741D+01 8.444497D+01 8.415495D+01 8.386713D+01 8.358959D+01 8.330661D+01 8.331293D+01
8.425779D+01 8.520516D+01 8.615694D+01 8.711502D+01 8.875285D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -9.965836D+03 -2.768296D-01 -1.416274D+04 OLIQUID -4.298601D+03 -1.194056D-01 -6.089683D+03
LEFT FILM COEF.,H = 4.756989E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.651423E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.003822D+01 8.524524D+01 8.464474D+01 8.498248D+01 8.533178D+01 8.569866D+01 8.608614D+01 8.648940D+01 8.690357D+01
8.732379D+01 8.770346D+01 8.815530D+01 8.861579D+01 8.907711D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.729459D+03 -2.702629D-01 -1.394671D+04 3 VAPOR -2.351316D+04 -6.531416D-01 -1.989992D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.818402E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.651423D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.543483D+01 8.505685D+01 8.497743D+01 8.555808D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.209442D+03 -2.002620D-01 -7.305794D+03 OLIQUID -2.383024D+03 -6.619508D-02 -3.273558D+03
LEFT FILM COEF.,H = 5.329688E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.651423E+01 F
RIGHT FILM COEF .,H = 4.553785E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.170154D+01 8.071896D+01 8.078756D+01 8.125613D+01 8.183669D+01 8.244178D+01 8.305052D+01 8.365862D+01 8.426953D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.584428D+03 -7.178963D-02 -3.550225D+03 3 VAPOR -7.818755D+03 -2.171873D-01 -7.923250D+03
LEFT FILM COEF.,H = 4.553785E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.329688E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.651423D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.426953D+01 8.365862D+01 8.305052D+01 8.244178D+01 8.183669D+01 8.125613D+01 8.078756D+01 8.071896D+01 8.170154D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.848525D+03 -7.912608D-02 -4.518584D+03 OLIQUID -7.439980D+02 -2.066660D-02 -1.011889D+03
LEFT FILM COEF.,H = 4.382841E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.651423E+01 F
RIGHT FILM COEF .,H = 3.892779E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.826329D+01 8.640044D+01 8.510565D+01 8.381713D+01 8.253301D+01 8.125139D+01 8.122843D+01 8.138645D+01 8.159286D+01
8.180942D+01 8.202773D+01 8.224620D+01 8.246439D+01 8.268196D+01 8.372444D+01 8.476695D+01 8.580949D+01 8.685210D+01
8.757366D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.798057D-01	0.	-2.931772D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.493788D+00	0.	-5.768197D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63042D-01	9.651580+01	9.65158D+01	3.90631D+05	0.	3.90631D+05	2.75868D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.81631D+03	2.66028D+01	0.	0.	2.66028D+01	1.30622D-01	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.7655D+01 LBM/HR ENERGY BTU/HR = 2.4689D+03 (NORMAL= 2.4689D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.3949D-06 STEP AIR= 4.8701D-04 NET VAPOR= 1.1527D+00 NET AIR= 1.6551D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.6550920+02 WATER VAPOR(LBM)= 1.153732D+00

* * * * * * * * * * * * * * * * * TIME = 1.500000E+00 HR = 9.000000E+01 MIN = 5.400000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.143674D+03	-3.176867D-02	-1.540534D+03	3 VAPOR	-2.346714D+03	-6.518682D-02	-4.070282D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.325000E+01 F
RIGHT FILM COEF ,H = 4.260074E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.672092D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.537671D+01 8.504107D+01 8.473802D+01 8.444514D+01 8.415511D+01 8.386784D+01 8.359285D+01 8.337241D+01 8.334390D+01
8.437995D+01 8.541836D+01 8.646088D+01 8.750925D+01 8.913641D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-9.787021D+03	-2.718625D-01	-1.498575D+04	OLIQUID	-4.298598D+03	-1.194055D-01	-6.447900D+03

LEFT FILM COEF.,H = 4.756100E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.672092E+01 F
RIGHT FILM COEF ,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.035992D+01 8.563578D+01 8.502235D+01 8.530925D+01 8.560738D+01 8.592258D+01 8.625781D+01 8.660840D+01 8.696365D+01
8.733685D+01 8.770574D+01 8.815558D+01 8.861582D+01 8.907711D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.699176D+03	-2.694217D-01	-1.475626D+04	3 VAPOR	-2.385664D+04	-6.626829D-01	-2.187384D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 4.834916E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.672092D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.544904D+01 8.508146D+01 8.503037D+01 8.564269D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.269268D+03	-2.019238D-01	-7.909109D+03	OLIQUID	-2.388891D+03	-6.635806D-02	-3.472388D+03

LEFT FILM COEF.,H = 5.339611E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.672092E+01 F
RIGHT FILM COEF ,H = 4.566065E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.181306D+01 8.078555D+01 8.081354D+01 8.126361D+01 8.183837D+01 8.244204D+01 8.305049D+01 8.365883D+01 8.427087D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.590791D+03	-7.196638D-02	-3.765860D+03	3 VAPOR	-7.883637D+03	-2.189896D-01	-8.577556D+03

LEFT FILM COEF.,H = 4.566065E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF ,H = 5.339611E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.672092D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427087D+01 8.365883D+01 8.305049D+01 8.244204D+01 8.183837D+01 8.126361D+01 8.081354D+01 8.078555D+01 8.181306D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.767553D+03 -7.687682D-02 -4.752529D+03 OLIQUID -7.453488D+02 -2.070115D-02 -1.073946D+03
LEFT FILM COEF .,H = 4.350388E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 8.672092E+01 F
RIGHT FILM COEF .,H = 3.908610E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.864472D+01 8.679312D+01 8.540841D+01 8.402953D+01 8.265475D+01 8.128231D+01 8.124021D+01 8.138970D+01 8.159356D+01
8.180955D+01 8.202774D+01 8.224618D+01 8.246435D+01 8.268199D+01 8.372556D+01 8.476914D+01 8.581277D+01 8.685646D+01
8.757910D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.796244D-01	0.	-3.105689D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.497523D+00	0.	-6.216907D+04
4	0.	0	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.47001D+01	1.630420-01	9.672250+01	9.672250+01	3.90622D+05	0.	3.90622D+05	2.75991D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.81489D+03	2.659290+01 0.	0.	2.659290+01	1.894220-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.6644D+01 LBM/HR ENERGY BTU/HR = 2.3284D+03 (NORMAL= 2.3284D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 3.2005D-06 STEP AIR= 4.5914D-04 NET VAPOR= 1.163[illegible]D+00 NET AIR= 1.6693D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.669274D+02 WATER VAPOR(LBM)= 1.1[illegible]36180+00

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HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.153843D+03 -3.205115D-02 -1.636264D+03 3 VAPOR -2.279936D+03 -6.333184D-02 -4.263011D+03
LEFT FILM COEF .,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.332500E+01 F
RIGHT FILM COEF .,H = 4.228550E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.691632D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.538171D+01 8.504318D+01 8.473869D+01 8.445533D+01 8.415530D+01 8.386868D+01 8.359649D+01 8.338485D+01 8.337480D+01
8.449484D+01 8.561711D+01 8.674321D+01 8.787475D+01 8.949271D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -9.611428D+03 -2.669849D-01 -1.579400D+04 OLIQUID -4.298598D+03 -1.194055D-01 -6.806116D+03
LEFT FILM COEF .,H = 4.755260E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.691632E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.066834D+01 8.601366D+01 8.538848D+01 8.562627D+01 8.587495D+01 8.614020D+01 8.642490D+01 8.672454D+01 8.703458D+01
8.735047D+01 8.770827D+01 8.815591D+01 8.861586D+01 8.907711D+01 8.953849D+01 8.999587D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.665867D+03 -2.684965D-01 -1.556316D+04 3 VAPOR -2.417581D+04 -6.715488D-01 -2.387535D+04

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LEFT FILM COEF ,H = 4.785000E-01BTU/HR.FT2.F  FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  ,H = 4.850070E-01 BTU/HR.FT2.F  LAST MESH K = 1.050000E+00 BTU/HR.FT.F  BULK TEMP = 9.691632D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.546467D+01  8.510745D+01  8.508352D+01  8.572496D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.324262D+03 -2.034515D-01 -8.517204D+03          OLIQUID      -2.394694D+03 -6.651924D-02 -3.671704D+03
LEFT FILM COEF ,H = 5.348640E-01BTU/HR.FT2.F  FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.691632E+01 F
RIGHT FILM COEF  .,H = 4.578266E-01 BTU/HR.FT2.F  LAST MESH K = 1.050000E+00 BTU/HR.FT.F  BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.192104D+01  8.085232D+01  8.084087D+01  8.127189D+01  8.184035D+01  8.244239D+01  8.305050D+01  8.365909D+01  8.427226D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.597084D+03 -7.214118D-02 -3.982022D+03          3 VAPOR      -7.943279D+03 -2.206464D-01 -9.237044D+03
LEFT FILM COEF ,H = 4.578266E-01BTU/HR.FT2.F  FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.348640E-01 BTU/HR.FT2.F  LAST MESH K = 1.050000E+00 BTU/HR.FT.F  BULK TEMP = 9.691632D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.427226D+01  8.365909D+01  8.305050D+01  8.244239D+01  8.184035D+01  8.127189D+01  8.084087D+01  8.085232D+01  8.192104D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.694526D+03 -7.484827D-02 -4.980063D+03          OLIQUID      -7.466265D+02 -2.073962D-02 -1.136112D+03
LEFT FILM COEF ,H = 4.320494E-01BTU/HR.FT2.F  FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.691632E+01 F
RIGHT FILM COEF  .,H = 3.924287E-01 BTU/HR.FT2.F  LAST MESH K = 6.700000E-02 BTU/HR.FT.F  BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.899882D+01  8.715693D+01  8.568947D+01  8.422742D+01  8.276918D+01  8.131316D+01  8.125263D+01  8.139332D+01  8.159439D+01
 8.180970D+01  8.202776D+01  8.224616D+01  8.246432D+01  8.268205D+01  8.372671D+01  8.477141D+01  8.581614D+01  8.686095D+01
 8.758464D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP   STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0  0.             -5.793532D-01  0.             -3.279538D+04
   1  0.              0.            0.              0.
   2  0.              0.            0.              0.
   3  0.             -1.500812D+00  0.             -6.666667D+04
   4  0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)   T E M P E R A T U R E  (F)        E N E R G Y  (BTU)                    CONVERGENCE
 NO.       TOTAL        STEAM        ATMOS         POOL          ATMOS         POOL          TOTAL            DE/E
   1   1.470000D+01   0.           7.340000D+01  7.340000D+01  0.            0.            0.               0.
   3   1.470001D+01   1.630420-01  9.691790+01   9.691790+01   3.906140+05   0.            3.906140+05      2.760880-06

                                                                                          TRANSFER COEFFICIENTS
        AIR MASS              W A T E R   M A S S  ( LBM)                 HUMIDITY   CONDENSATION     MASS          HEAT
          ( LBM)          VAPOR--ATMOS--LIQUID       POOL          TOTAL                (LB/S)    (LB MOL/S FT2)(BTU/S FT2 R)
   1   0.              0.           0.            0.            0.            6.000000-01   0.          0.            0.
   3   3.813550+03     2.658350+01  0.            0.            2.658350+01   1.882950-01   0.          0.            0.
COMP.   3 LEAKAGE OUTFLOW-  MASS=  1.5754D+01 LBM/HR   ENERGY BTU/HR  =  2.2047D+03 (NORMAL=  2.2047D+03 PENETRATION=  0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR=  3.0294D-06 STEP AIR=  4.3459D-04 NET VAPOR=  1.1730D+00 NET AIR=  1.6827D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)=  1.682673D+02 WATER VAPOR(LBM)=  1.172958D+00


 * * * * * * * * * * * * * * * * * * TIME =  1.666667E+00  HR =  1.000000E+02 MIN =  6.000000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -1.164004D+03 -3.233339D-02 -1.732841D+03          3 VAPOR      -2.219719D+03 -6.165911D-02 -4.450454D+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.340000E+01 F
RIGHT FILM COEF .,H = 4.199513E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.710177D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.538676D+01 8.504537D+01 8.473943D+01 8.444556D+01 8.415554D+01 8.386967D+01 8.360050D+01 8.339787D+01 8.340554D+01
8.460304D+01 8.580263D+01 8.700580D+01 8.821404D+01 8.982420D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -9.439469D+03 -2.622083D-01 -1.658776D+04 OLIQUID -4.298595D+03 -1.194054D-01 -7.164333D+03
LEFT FILM COEF.,H = 4.754463E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.710172E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.096449D+01 8.637921D+01 8.574324D+01 8.593361D+01 8.613453D+01 8.635152D+01 8.658739D+01 8.683779D+01 8.709833D+01
8.736460D+01 8.771108D+01 8.815631D+01 8.861590D+01 8.907712D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.629601D+03 -2.674891D-01 -1.636716D+04 3 VAPOR -2.447349D+04 -6.798177D-01 -2.590254D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.864041E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.710172D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.548169D+01 8.513474D+01 8.513678D+01 8.580510D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.375031D+03 -2.048617D-01 -9.129702D+03 OLIQUID -2.400433D+03 -6.667867D-02 -3.871502D+03
LEFT FILM COEF.,H = 5.356894E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.710172E+01 F
RIGHT FILM COEF .,H = 4.590391E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.202576D+01 8.091910D+01 8.086944D+01 8.128098D+01 8.184263D+01 8.244281D+01 8.305055D+01 8.365941D+01 8.427370D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.603308D+03 -7.231408D-02 -4.198705D+03 3 VAPOR -7.958339D+03 -2.221758D-01 -9.901308D+03
LEFT FILM COEF.,H = 4.590391E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.357894E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.710172D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427370D+01 8.365941D+01 8.305055D+01 8.244281D+01 8.184263D+01 8.128098D+01 8.086944D+01 8.091914D+01 8.202576D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.628742D+03 -7.302089D-02 -5.201818D+03 OLIQUID -7.478371D+02 -2.077325D-02 -1.198381D+03
LEFT FILM COEF.,H = 4.293026E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.710172E+01 F
RIGHT FILM COEF .,H = 3.939815E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.932809D+01 8.749446D+01 8.595073D+01 8.441203D+01 8.287689D+01 8.134385D+01 8.126562D+01 8.139733D+01 8.159536D+01
8.180989D+01 8.202778D+01 8.224615D+01 8.246430D+01 8.268212D+01 8.372792D+01 8.477374D+01 8.581961D+01 8.686555D+01
8.759026D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.789939D-01	0.	-3.453292D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.503744D+00	0.	-7.117358D+04
4	0.	0.	0.	0.

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COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63042D-01	9.71033D+01	9.71033D+01	3.90606D+05	0.	3.90606D+05	2.76166D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0	0.	0.	6.00000D-01	0.	0.	0.
3	3.81228D+03	2.65747D+01	0	0.	2.65747D+01	1.87232D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.4961D+01 LBM/HR ENERGY BTU/HR = 2.0944D+03 (NORMAL= 2.0944D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.8770D-06 STEP AIR= 4.1272D-04 NET VAPOR= 1.1818D+00 NET AIR= 1.6954D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.6953760+02 WATER VAPOR(LBM)= 1.181813D+00

* * * * * * * * * * * * * * * * * TIME = 1.750000E+00 HR = 1.050000E+02 MIN = 6.300000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.174156D+03	-3.261539D-02	-1.830265D+03	3 VAPOR	-2.165457D+03	-6.015182D-02	-4.633130D+0

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.347500E+01 F
RIGHT FILM COEF .,H = 4.172822E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.727815D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.539187D+01 8.504766D+01 8.474022D+01 8.444582D+01 8.415583D+01 8.387080D+01 8.360489D+01 8.341141D+01 8.343605D+01
8.470506D+01 8.597605D+01 8.725039D+01 8.852944D+01 9.013313D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-9.271462D+03	-2.575414D-01	-1.736735D+04	OLIQUID	-4.298591D+03	-1.194053D-01	-7.522549D+03

LEFT FILM COEF.,H = 4.753704E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.727815E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.124920D+01 8.673277D+01 8.608681D+01 8.623140D+01 8.638622D+01 8.655661D+01 8.674532D+01 8.694815D+01 8.716086D+01
8.737918D+01 8.771414D+01 8.815677D+01 8.861595D+01 8.907712D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.590464D+03	-2.664020D-01	-1.716801D+04	3 VAPOR	-2.475193D+04	-6.875524D-01	-2.795373D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.876966E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.727815D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.550005D+01 8.516325D+01 8.519008D+01 8.588329D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.422056D+03	-2.061680D-01	-9.746272D+03	OLIQUID	-2.406110D+03	-6.683636D-02	-4.071775D+03

LEFT FILM COEF.,H = 5.364469E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.727815E+01 F
RIGHT FILM COEF .,H = 4.602440E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.212749D+01 8.098588D+01 8.089914D+01 8.129086D+01 8.184522D+01 8.244334D+01 8.305065D+01 8.365978D+01 8.427519D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.609465D+03	-7.248510D-02	-4.415905D+03	3 VAPOR	-8.049338D+03	-2.235925D-01	-1.056999D+04

LEFT FILM COEF.,H = 4.602440E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.364469E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.727815D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427519D+01 8.365978D+01 8.305065D+01 8.244334D+01 8.184522D+01 8.129086D+01 8.089914D+01 8.098588D+01 8.212749D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.569526D+03	-7.137600D-02	-5.418369D+03	OLIQUID	-7.489863D+02	-2.080517D-02	-1.260749D+03

LEFT FILM COEF.,H = 4.267837E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.727815E+01 F
RIGHT FILM COEF .,H = 3.955201E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.963479D+01 8.780803D+01 8.619392D+01 8.458450D+01 8.297842D+01 8.137430D+01 8.127914D+01 8.140171D+01 8.159648D+01
8.181013D+01 8.202782D+01 8.224614D+01 8.246428D+01 8.269220D+01 8.372915D+01 8.477613D+01 8.582315D+01 8.687025D+01
8.759594D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.785493D-01	0.	3.626925D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.506382D+00	0.	-7.568884D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470018D+01	1.630420-01	9.727970+01	9.727970+01	3.905990+05	0.	3.905990+05	2.762270-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.811070+03	2.656630+01	0.	0.	0.	2.656630+01	1.862280-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.4248D+01 LBM/HR ENERGY BTU/HR = 1.9952D+03 (NORMAL= 1.9952D+03 PENETRATION= 0)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.7398D-06 STEP AIR= 3.9304D-04 NET VAPOR= 1.1902D+00 NET AIR= 1.7075D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.707458D+02 WATER VAPOR(LBM)= 1.190235D+00

* * * * * * * * * * * * * * * * TIME = 1.833333E+00 HR = 1.100000E+02 MIN = 6.600000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.842980+03	-3.289712D-02	-1.928534D+03	3 VAPOR	-2.116585D+03	-5.879425D-02	-4.811513D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.355000E+01 F
RIGHT FILM COEF .,H = 4.148331E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.744648D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.539705D+01 8.500020+01 8.474107D+01 8.444612D+01 8.415617D+01 8.387209D+01 8.360966D+01 8.342542D+01 8.346629D+01
8.480141D+01 8.613841D+01 8.747854D+01 8.882307D+01 9.042148D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-9.107646D+03	-2.529909D-01	-1.813312D+04	OLIQUID	-4.298586D+03	-1.194052D-01	-7.880765D+03

LEFT FILM COEF.,H = 4.752980E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.744648E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.152315D+01 8.707465D+01 8.641939D+01 8.651982D+01 8.663015D+01 8.675557D+01 8.689875D+01 8.705565D+01 8.722216D+01
8.739418D+01 8.771748D+01 8.815730D+01 8.861602D+01 8.907713D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.548553D+03	-2.652378D-01	-1.796549D+04	3 VAPOR	-2.501299D+04	-6.948042D-01	-3.002738D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.888962E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.744648D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.551972D+01 8.519289D+01 8.524337D+01 8.595969D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.465726D+03 -2.073811D-01 -1.036662D+04 OLIQUID -2.411725D+03 -6.699235D-02 -4.272518D+03
LEFT FILM COEF.,H = 5.371440E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.744648E+01 F
RIGHT FILM COEF .,H = 4.614415E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.222646D+01 8.105244D+01 8.092988D+01 8.130153D+01 8.184816D+01 8.244398D+01 8.305079D+01 8.366020D+01 8.427672D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.615555D+03 -7.265427D-02 -4.633614D+03 3 VAPOR -8.096699D+03 -2.249081D-01 -1.124276D+04
LEFT FILM COEF.,H = 4.614415E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.371440E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.744648D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427672D+01 8.366020D+01 8.305079D+01 8.244398D+01 8.184816D+01 8.130153D+01 8.092988D+01 8.105244D+01 8.222646D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.516252D+03 -6.989611D-02 -5.630237D+03 OLIQUID -7.500794D+02 -2.083554D-02 -1.323211D+03
LEFT FILM COEF.,H = 4.244779E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.744648E+01 F
RIGHT FILM COEF .,H = 3.970452E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.992094D+01 8.809980D+01 8.642066D+01 8.474589D+01 8.307425D+01 8.140446D+01 8.129313D+01 8.140645D+01 8.159775D+01
8.181041D+01 8.202786D+01 8.224613D+01 8.246427D+01 8.268231D+01 8.373042D+01 8.477856D+01 8.582676D+01 8.687502D+01
8.760168D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.780222D-01	0.	-3.800413D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.508775D+00	0.	-8.021163D+04
4	0.	0.	0.	0.

COMP NO	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630430-01	9.744810D+01	9.744810D+01	3.905920D+05	0.	3.905920D+05	2.762750-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.809920D+03	2.655820+01 0.	0.	2.655820+01	1.852750-01	0.	0.	0.

ENERGY BTU/HR = 1.9052D+03 (NORMAL= 1.9052D+03 PENETRATION= 0)
COMP 3 LEAKAGE OUTFLOW- MASS= 1.3602D+01 LBM/HR
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.6155D-06 STEP AIR= 3.7520D-04 NET VAPOR= 1.1983D+00 NET AIR= 1.7190D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.718977D+02 WATER VAPOR(LBM)= 1.198265D+00

* * * * * * * * * * * * * * * * TIME = 1.916667E+00 HR = 1.150000E+02 MIN = 6.900000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.194431D+03 -3.317860D-02 -2.027647D+03 3 VAPOR -2.072582D+03 -5.757192D-02 -4.986029D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.362500E+01 F
RIGHT FILM COEF.,H = 4.125893E-01 BTU/HR.FT2.F LAST MESH K = 2.700000E-02 BTU/HR.FT.F BULK TEMP = 9.760744D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.540229D+01 8.505247D+01 8.474199D+01 8.444645D+01 8.416657D+01 8.387354D+01 8.361479D+01 8.343985D+01 8.349620D+01
8.489253D+01 8.629064D+01 8.769169D+01 8.909685D+01 9.063108D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.948198D+03 -2.485618D-01 -1.888542D+04 OLIQUID -4.298579D+03 -1.194050D-01 -8.238980D+03
LEFT FILM COEF.,H = 4.752288E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.760744E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.178697D+01 8.740521D+01 8.674125D+01 8.679908D+01 8.686648D+01 8.694850D+01 8.704774D+01 8.716030D+01 8.728223D+01
8.740954D+01 8.772107D+01 8.815769D+01 8.861610D+01 8.907714D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.503976D+03 -2.639995D-01 -1.875936D+04 3 VAPOR -2.525823D+04 -7.016165D-01 -3.212212D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.900121E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.760744D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.554063D+01 8.522359D+01 8.529659D+01 8.603444D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.506367D+03 -2.085100D-01 -1.099048D+04 OLIQUID -2.417281D+03 -6.714666D-02 -4.473727D+03
LEFT FILM COEF.,H = 5.377872E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.760744E+01 F
RIGHT FILM COEF.,H = 4.626317E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.232287D+01 8.111876D+01 8.096158D+01 8.131297D+01 8.185145D+01 8.244473D+01 8.305098D+01 8.366067D+01 8.427829D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.621579D+03 -7.282162D-02 -4.851829D+03 3 VAPOR -8.140775D+03 -2.261324D-01 -1.191935D+04
LEFT FILM COEF.,H = 4.626317E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.377872E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.760744D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427829D+01 8.366067D+01 8.305098D+01 8.244473D+01 8.185145D+01 8.131297D+01 8.096158D+01 8.111876D+01 8.232287D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.468338D+03 -6.856516D-02 -5.837893D+03 OLIQUID -7.511214D+02 -2.086448D-02 -1.385761D+03
LEFT FILM COEF.,H = 4.223703E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.760744E+01 F
RIGHT FILM COEF.,H = 3.985572E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.018836D+01 8.837170D+01 8.663238D+01 8.489715D+01 8.316484D+01 8.143429D+01 8.130752D+01 8.141156D+01 8.159918D+01
8.181074D+01 8.202792D+01 8.224612D+01 8.246427D+01 8.268243D+01 8.373172D+01 8.478104D+01 8.583041D+01 8.687985D+01
8.760746D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.774159D-01	0.	-3.973731D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.510958D+00	0.	-8.474128D+04
4	0.	0.	0.	0.

bcc

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0	0	0
3	1.470001D+01	1.630430-01	9.760900+01	9.760900+01	3.905860+05	0.	3.905860+05	2.763130-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000 01	0.	0.	0.
3	3.808820+03	2.655060+01	0.	0.	2.655060+01	1.843690- 1	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 1.3012D+01 LBM/HR ENERGY BTU/HR = 1.8231D+03 (NORMAL= 1.8231D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.5021D-06 STEP AIR= 3.5893D-04 NET VAPOR= 1.0590+00 NET AIR= 1.7300D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.729985D+02 WATER VAPOR(LBM)= .205939D+00

* * * * * * * * * * * * * * * * * TIME = 2.000000E+00 HR = 1.200000E+02 MIN = 7.200000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.204554D+03	-3.345980D-02	-2.127605D+03	3 VAPOR	-2.012971D+03	-5.647160D-02	-5.157065D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.370000E+01 F
RIGHT FILM COEF .,H = 4.105365E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/H .FT.F BULK TEMP = 9.776166D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.540760D+01 8.505499D+01 8.474296D+01 8.444683D+01 8.415704D+01 8.387516D+01 8.362025D+01 8.345464D+01 8.352575D+01
8.497884D+01 8.643361D+01 8.789114D+01 8.935253D+01 9.094356D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-8.793242D+03	-2.442574D-01	-1.962461D+04	OLIQUID	4.298569D+03	-1.194047D-01	-8.597194D+03

LEFT FILM COEF.,H = 4.751625E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.776166E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.204118D+01 8.772480D+01 8.705266D+01 8.706939D+01 8.709539D+01 8.713554D+01 8.719239D+01 8.726217D+01 8.734106D+01
8.742523D+01 8.772492D+01 8.815857D+01 8.861619D+01 8.907715D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.456843D+03	-2.626903D-01	-1.954941D+04	3 VAPOR	-2.548898D+04	-7.080262D-01	-3.423668D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.910525E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.776166D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.556275D+01 8.525527D+01 8.534972D+01 8.610768D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.544253D+03	-2.095624D-01	-1.161760D+04	OLIQUID	-2.422776D+03	-6.729932D-02	-4.675397D+03

LEFT FILM COEF.,H = 5.383816E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.776166E+01 F
RIGHT FILM COEF .,H = 4.638147E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.241690D+01 8.118476D+01 8.099414D+01 8.132517D+01 8.185509D+01 8.244562D+01 8.305122D+01 8.366120D+01 8.427991D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.627540D+03	-7.298719D-02	-5.070542D+03	3 VAPOR	-8.181864D+03	-2.272738D-01	-1.259948D+04

LEFT FILM COEF.,H = 4.638147E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.383816E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.776166D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.427991D+01 8.366120D+01 8.305122D+01 8.244562D+01 8.185509D+01 8.132517D+01 8.099414D+01 8.118476D+01 8.241690D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.425257D+03 -6.736845D-02 -6.041761D+03 OLIQUID -7.521164D+02 -2.089212D-02 -1.448396D+03
LEFT FILM COEF.,H = 4.204464E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.776166E+01 F
RIGHT FILM COEF.,H = 4.000566E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.043871D+01 8.862550D+01 8.683041D+01 8.503914D+01 8.325062D+01 8.146376D+01 8.132228D+01 8.141701D+01 8.160078D+01
8.181112D+01 8.202799D+01 8.224612D+01 8.246427D+01 8.268256D+01 8.373304D+01 8.478355D+01 8.583411D+01 8.688474D+01
8.761327D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.767334D-01	0.	-4.146855D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.512960D+00	0.	-8.927720D+04
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470015D+01	1.630430-01	9.776330+01	9.776330+01	3.905790+05	0.	3.905790+05	2.763420-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.807770+03	2.654320+01	0.		0.	2.654320+01	1.835060-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.247ID+01 LBM/HR ENERGY BTU/HR = 1.747BD+03 (NORMAL= 1.747BD+03 PENETRATION= 0.
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.398ID-06 STEP AIR= 3.440ZD-04 NET VAPOR= 1.213ID+00 NET AIR= 1.740SD+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.740526D+02 WATER VAPOR(LBM)= 1.213286D+00

* * * * * * * * * * * * * * * * TIME = 2.083333E+00 HR = 1.250000E+02 MIN = 7.500000E+03 SEC * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.207426D+03 -3.353959D-02 -2.228104D+03 3 VAPOR -1.997321D+03 -5.548129D-02 -5.324968D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.372500E+01 F
RIGHT FILM COEF.,H = 4.086606E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.790968D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.541283D+01 8.505759D+01 8.474400D+01 8.444726D+01 8.415757D+01 8.387695D+01 8.362606D+01 8.346975D+01 8.355493D+01
8.506071D+01 8.656810D+01 8.807808D+01 8.959168D+01 9.118039D+01

HEAT STRUCTURE 2 BETWEE COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.642856D+03 -2.400800D-01 -2.035108D+04 OLIQUID -4.298559D+03 -1.194044D-01 -8.955408D+03
LEFT FILM COEF.,H = 4.750988E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.790968E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.228628D+01 8.803375D+01 8.735390D+01 8.733100D+01 8.731707D+01 8.731684D+01 8.733279D+01 8.736129D+01 8.739866D+01
8.744120D+01 8.772903D+01 8.815932D+01 8.861630D+01 8.907716D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.407271D+03 -2.613133D-01 -2.033544D+04 3 VAPOR -2.570638D+04 -7.140652D-01 -3.636991D+04

LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 4.920241E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.790968D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.558601D+01 8.528786D+01 8.540273D+01 8.617950D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.579624D+03 -2.105450D-01 -1.224778D+04 OLIQUID -2.424061D+03 -6.733501D-02 -4.877348D+03
LEFT FILM COEF .H = 5.389318E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.790968E+01 F
RIGHT FILM COEF .H = 4.641900E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.250871D+01 8.125039D+01 8.102749D+01 8.133811D+01 8.185911D+01 8.244664D+01 8.305153D+01 8.366178D+01 8.428150D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.628932D+03 -7.302589D-02 -5.289562D+03 3 VAPOR -8.220223D+[illegible] -2.283394D-01 -1.328291D+04
LEFT FILM COEF .H = 4.641900E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 5.389318E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.790968D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.428150D+01 8.366178D+01 8.305153D+01 8.244664D+01 8.185911D+01 8.133811D+01 8.102749D+01 8.125039D+01 8.250871D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.386531D+03 -6.629270D-02 -6.242224D+03 OLIQUID -7.511759D+02 -2.086600D-02 -1.511032D+03
LEFT FILM COEF .H = 4.186923E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.790968E+01 F
RIGHT FILM COEF .H = 4.004754E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.067346D+01 8.886281D+01 8.701594D+01 8.517266D+01 8.333196D+01 8.149285D+01 8.133736D+01 8.142281D+01 8.160254D+01
8.181156D+01 8.202808D+01 8.224612D+01 8.246428D+01 8.268271D+01 8.373438D+01 8.478607D+01 8.583781D+01 8.688963D+01
8.761875D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.754842D-01	0.	-4.319689D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.514804D+00	0.	-9.381888D+04
4	0.	0.	0.	0.

COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0	7.340000D+01	7.340000D+01	0.	0.	0.	0
3	1.470016D+01	1.630430-01	9.791130D+01	9.791130D+01	3.905730D+05	0.	3.905730D+05	2.763620-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.806750+03	2.653620+01	0.	0.	0.	2.653620+01	1.826810-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.1973D+01 LBM/HR ENERGY BTU/HR = 1.6784D+03 (NORMAL= 1.6784D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.3023D-06 STEP AIR= 3.3028D-04 NET VAPOR= 1.2203D+00 NET AIR= 1.7506D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.7506380+02 WATER VAPOR(LBM)= 1.2203350+00

* * * * * * * * * * * * * * * * * TIME = 2.166667E+00 HR = 1.300000E+02 MIN = 7.800000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.210326D+03 -3.362014D-02 -2.328844D+03 3 VAPOR -1.965211D+03 -5.459017D-02 -5.490051D+03

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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.375000E+01 F
RIGHT FILM COEF  .,H = 4.069486E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.805197D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.541787D+01  8.506025D+01  8.474509D+01  8.444773D+01  8.415818D+01  8.387892D+01  8.363220D+01  8.348515D+01  8.358371D+01
 8.513851D+01  8.669481D+01  8.825358D+01  8.981574D+01  9.140291D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -8.497083D+03 -2.360308D-01 -2.106521D+04        OLIQUID      -4.298545D+03 -1.194040D-01 -9.313621D+03
LEFT FILM COEF.,H = 4.750377E-01BTU/HR.FT2.F   FIRST MESH   K = 3.500000E-02 BTU/HR.FT.  BULK TEMP = 9.805197E+01 F
RIGHT FILM COEF  .,H = 1.000000E+04 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.252270D+01  8.833240D+01  8.764526D+01  8.758415D+01  8.753171D+01  8.749254D+01  8.746905D+01  8.745773D+01  8.745504D+01
 8.745741D+01  8.773339D+01  8.816015D+01  8.861642D+01  8.907718D+01  8.953849D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -9.355377D+03 -2.598718D-01 -2.111723D+04        3 VAPOR      -2.591146D+04 -7.197618D-01 -3.852074D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.929330E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.805197D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.561036D+01  8.532132D+01  8.545560D+01  8.625002D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.612687D+03 -2.114634D-01 -1.288081D+04        OLIQUID      -2.425380D+03 -6.737166D-02 -5.079408D+03
LEFT FILM COEF.,H = 5.394419E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.805197E+01 F
RIGHT FILM COEF  .,H = 4.645659E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.259845D+01  8.131562D+01  8.106155D+01  8.135176D+01  8.186350D+01  8.244782D+01  8.305190D+01  8.366240D+01  8.428302D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.630363D+03 -7.306564D-02 -5.508699D+03        3 VAPOR      -8.256081D+03 -2.293354D-01 -1.396944D+04
LEFT FILM COEF.,H = 4.645659E-01BTU/HR.FT2.F   FIRST MESH   K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.394419E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.805197D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.428302D+01  8.366240D+01  8.305190D+01  8.244782D+01  8.186350D+01  8.135176D+01  8.106155D+01  8.131562D+01  8.259845D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.351727D+03 -6.532590D-02 -6.439625D+03        OLIQUID      -7.504129D+02 -2.084481D-02 -1.573597D+03
LEFT FILM COEF.,H = 4.170947E-01BTU/HR.FT2.F   FIRST MESH   K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.805197E+01 F
RIGHT FILM COEF  .,H = 4.009047E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.089397D+01  8.908505D+01  8.719005D+01  8.529842D+01  8.340923D+01  8.152154D+01  8.135272D+01  8.142893D+01  8.160448D+01
 8.181207D+01  8.202819D+01  8.224614D+01  8.246431D+01  8.268288D+01  8.373568D+01  8.478851D+01  8.584139D+01  8.689434D+01
 8.762372D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0  0.             -5.741781D-01  0.             -4.492140D+04
   1  0.              0.            0.              0.
   2  0.              0.            0.              0.
   3  0.             -1.516507D+00  0.             -9.836588D+04
   4  0.              0.            0.              0.
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COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63043D-01	9.80536D+01	9.80536D+01	3.90567D+05	0.	3.90567D+05	2.76377D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS	--LIQUID ATMOS	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.80578D+03	2.65254D+01	0.	0.	2.65294D+01	1.81893D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW MASS= 1.1513D+01 LBM/HR ENERGY BTU/HR = 1.6143D+03 (NORMAL= 1.6143D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.2139D-06 STEP AIR= 3.1759D-04 NET VAPOR= 1.2271D+00 NET AIR= 1.7604D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.760354D+02 WATER VAPOR(LBM)= 1.2271080+00

* * * * * * * * * * * * * * * * TIME = 2.250000E+00 HR = 1.350000E+02 MIN = 8.100000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.213250D+03 -3.370137D-02 -2.429826D+03 3 VAPOR -1.936380D+03 -5.378847D-02 -5.652597D+03
LEFT FILM COEF .H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.377500E+01 F
RIGHT FILM COEF .H = 4.053877E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.818897D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.542274D+01 8.506296D+01 8.474625D+01 8.444825D+01 8.415887D+01 8.388106D+01 8.363865D+01 8.350079D+01 8.361209D+01
8.521253D+01 8.681441D+01 8.841861D+01 9.002601D+01 9.161233D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.355937D+03 -2.321100D-01 -2.176739D+04 OLIQUID -4.298525D+03 -1.194035D-01 -9.671832D+03
LEFT FILM COEF .H = 4.749787E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.818897E+01 F
RIGHT FILM COEF .H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.275087D+01 8.862110D+01 8.792704D+01 8.782908D+01 8.773952D+01 8.766279D+01 8.760126D+01 8.755155D+01 8.751022D+01
8.747384D+01 8.773799D+01 8.816107D+01 8.861656D+01 8.907719D+01 8.953849D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.301278D+03 -2.583691D-01 -2.189460D+04 3 VAPOR -2.610511D+04 -7.251409D-01 -4.068817D+04
LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 4.937844E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.818897D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.563574D+01 8.535557D+01 8.550833D+01 8.631932D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.643626D+03 -2.123228D-01 -1.351650D+04 OLIQUID -2.426727D+03 -6.740908D-02 -5.281579D+03
LEFT FILM COEF .H = 5.399152E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.818897E+01 F
RIGHT FILM COEF .H = 4.649422E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.268624D+01 8.138042D+01 8.109626D+01 8.136610D+01 8.186828D+01 8.244915D+01 8.305234D+01 8.366306D+01 8.428448D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.631824D+03 -7.310623D-02 -6.727957D+03 3 VAPOR -8.289635D+03 -2.302675D-01 -1.465886D+04
LEFT FILM COEF .H = 4.649422E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 5.399152E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.818897D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.428448D+01 8.366306D+01 8.305234D+01 8.244915D+01 8.186828D+01 8.136610D+01 8.109626D+01 8.138042D+01 8.268624D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.320455D+03 -6.445723D-02 -6.634272D+03 OLIQUID -7.497737D+02 -2.082705D-02 -1.636104D+03
LEFT FILM COEF.,H = 4.156412E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.818897E+01 F
RIGHT FILM COEF.,H = 4.013409E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.110145D+01 8.929353D+01 8.735372D+01 8.541708D+01 8.348274D+01 8.154983D+01 8.136832D+01 8.143536D+01 8.162659D+01
8.181264D+01 8.202831D+01 8.224615D+01 8.246433D+01 8.268305D+01 8.373694D+01 8.479084D+01 8.584480D+01 8.689882D+01
8.762832D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP. STEP-LIQUID STEP-VAPOR NET-LIQUID NET-VAPOR
0 0. -5.728163D-01 0. -4.661190D+04
1 0. 0. 0. 0.
2 0. 0. 0. 0.
3 0. -1.518087D+00 0. -1.021178D+05
4 0. 0. 0. 0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630430-01	9.819060+01	9.819060+01	3.905620+05	0.	3.905620+05	2.763860-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	0.	0.	0.	0.
3	3.804850+03	2.652290+01 0.	0.	2.652290+01	1.811370-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.1087D+01 LBM/HR ENERGY BTU/HR = 1.5549D+03 (NORMAL= 1.5549D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.1319D-06 STEP AIR= 3.0584D-04 NET VAPOR= 1.2336D+00 NET AIR= 1.7697D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.769703D+02 WATER VAPOR(LBM)= 1.233625D+00

* * * * * * * * * * * * * * * * TIME = 2.333333E+00 HR = 1.400000E+02 MIN = 8.400000E+03 SEC * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.216194D+03 -3.378316D-02 -2.531052D+03 3 VAPOR -1.910423D+03 -5.306741D-02 -5.812862D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.380000E+01 F
RIGHT FILM COEF.,H = 4.039661E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.832104D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.542747D+01 8.506569D+01 8.474746D+01 8.448882D+01 8.415965D+01 8.388339D+01 8.364541D+01 8.351663D+01 8.364007D+01
8.528308D+01 8.692747D+01 8.857405D+01 9.022365D+01 9.180973D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -8.219404D+03 -2.283174D-01 -2.245800D+04 OLIQUID -4.298503D+03 -1.194029D-01 -1.003004D+04
LEFT FILM COEF.,H = 4.749220E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.832104E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.297117D+01 8.890013D+01 8.819954D+01 8.806605D+01 8.794070D+01 8.782776D+01 8.772955D+01 8.764280D+01 8.756421D+01
8.749046D+01 8.774283D+01 8.816208D+01 8.861673D+01 8.907722D+01 8.953850D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.245091D+03 -2.568083D-01 -2.266738D+04 3 VAPOR -2.628813D+04 -7.302249D-01 -4.287129D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.945829E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.832104D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.566211D+01 8.539056D+01 8.556090D+01 8.638747D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.672607D+03	-2.131278D-01	-1.415469D+04	OLIQUID	-2.428096D+03	-6.744710D-02	-5.483863D+03

LEFT FILM COEF.,H = 5.403549E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.832104E+01 F
RIGHT FILM COEF.,H = 4.653187E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.277220D+01 8.144475D+01 8.113156D+01 8.138112D+01 8.187345D+01 8.245064D+01 8.305285D+01 8.366375D+01 8.428588D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.633309D+03	-7.314746D-02	-5.947337D+03	3 VAPOR	-8.321065D+03	-2.311406D-01	-1.535099D+04

LEFT FILM COEF.,H = 4.653187E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.403549E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.832104D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.428588D+01 8.366375D+01 8.305285D+01 8.245064D+01 8.187345D+01 8.138112D+01 8.113156D+01 8.144475D+01 8.277220D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.292366D+03	-6.367696D-02	-6.826456D+03	OLIQUID	-7.492320D+02	-2.081200D-02	-1.698562D+03

LEFT FILM COEF.,H = 4.143201E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.832104E+01 F
RIGHT FILM COEF.,H = 4.017824E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.129700D+01 8.948945D+01 8.750784D+01 8.552922D+01 8.355278D+01 8.157770D+01 8.138413D+01 8.144209D+01 8.160888D+01
8.181329D+01 8.202846D+01 8.224618D+01 8.246437D+01 8.268323D+01 8.373813D+01 8.479305D+01 8.584802D+01 8.690305D+01
8.763264D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.714009D-01	0.	-4.835824D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.519555D+00	0.	-1.074743D+05
4	0.	0.	0.	0.

COMP	PRESSURE (PSIA)		TEMPERATURE (F)		ENERGY (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470018D+01	1.630430-01	9.832260+01	9.832260+01	3.90556D+05	0.	3.90556D+05	2.763900-06

	AIR MASS	WATER MASS (LBM)					HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR	ATMOS	LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.803950+03	2.65[illegible]+01	0.	0.	0.	2.651660+01	1.804120-01	0.	0.	0

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.0691D+01 LBM/HR ENERGY BTU/HR = 1.4997D+03 (NORMAL= 1.4997D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 2.0557D-06 STEP AIR= 2.9491D-04 NET VAPOR= 1.2399D+00 NET AIR= 1.7787D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.778712D+02 WATER VAPOR(LBM)= 1.239905D+00

* * * * * * * * * * * * * * * * * TIME = 2.416667E+00 HR = 1.450000E+02 MIN = 8.700000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.219156D+03	-3.386543D-02	-2.632525D+03	3 VAPOR	-1.887083D+03	-5.241907D-02	-4.071074D+0[illegible]

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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.382500E+01 F
RIGHT FILM COEF  .,H = 4.026727E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.844854D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.543208D+01  8.506846D+01  8.474872D+01  8.444944D+01  8.416051D+01  8.388390D+01  8.365245D+01  8.353266D+01  8.366763D+01
  8.535042D+01  8.703452D+01  8.872070D+01  9.040973D+01  9.199612D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -8.087449D+03 -2.246520D-01 -2.313742D+04        OLIQUID      -4.298476D+03 -1.194021D-01 -1.038825D+04
LEFT FILM COEF.,H = 4.748671E-01BTU/HR.FT2.F   FIRST MESH  K = 3.500000E-02 BTU/HR.FT.  BULK TEMP = 9.844854E+01 F
RIGHT FILM COEF  .,H = 1.000000E+04 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  9.318394D+01  8.916994D+01  8.846305D+01  8.829532D+01  8.813545D+01  8.798760D+01  8.785401D+01  8.773155D+01  8.761703D+01
  8.750724D+01  8.774791D+01  8.816218D+01  8.861691D+01  8.907724D+01  8.953850D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -9.186929D+03 -2.551927D-01 -2.343540D+04        3 VAPOR      -2.646124D+04 -7.350337D-01 -4.506925D+04
LEFT FILM COEF.,H = 4.745000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.953325E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.844854D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.568940D+01  8.542624D+01  8.561331D+01  8.645456D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.699776D+03 -2.138825D-01 -1.479522D+04        OLIQUID      -2.429480D+03 -6.748556D-02 -5.686262D+03
LEFT FILM COEF.,H = 5.407636E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.844854E+01 F
RIGHT FILM COEF  .,H = 4.656952E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.285643D+01  8.150861D+01  8.116738D+01  8.139678D+01  8.187901D+01  8.245231D+01  8.305344D+01  8.366448D+01  8.428724D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.634810D+03 -7.318917D-02 -6.166842D+03        3 VAPOR      -8.350530D+03 -2.319590D-01 -1.604565D+04
LEFT FILM COEF.,H = 4.656952E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.407636E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.844854D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  8.428724D+01  8.366448D+01  8.305344D+01  8.245231D+01  8.187901D+01  8.139678D+01  8.116738D+01  8.150861D+01  8.285643D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.267144D+03 -6.297635D-02 -7.016417D+03        OLIQUID      -7.487721D+02 -2.079923D-02 -1.760979D+03
LEFT FILM COEF.,H = 4.131205E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.844854E+01 F
RIGHT FILM COEF  .,H = 4.022282E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
  9.148161D+01  8.967386D+01  8.765321D+01  8.563539D+01  8.361962D+01  8.160516D+01  8.140011D+01  8.144911D+01  8.161135D+01
  8.181400D+01  8.201863D+01  8.224621D+01  8.246442D+01  8.268343D+01  8.373928D+01  8.479515D+01  8.585106D+01  8.690703D+01
  8.763671D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0  0.           -5.699342D-01  0.           -5.007025D+04
   1  0.            0.            0.            0.
   2  0.            0.            0.            0.
   3  0.           -1.520923D+00  0.           -1.120350D+05
   4  0.            0.            0.            0.
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COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.84501D+01	9.84501D+01	3.90551D+05	0.	3.905;1D+05	2.76390D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.80308D+03	2.65105D+01 0.	0.	2.65105D+01	1.79715D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 1.0322D+01 LBM/HR ENERGY BTU/HR = 1.4482D+03 (NORMAL= 1.4482D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.9848D-06 STEP AIR= 2.8472D-04 NET VAPOR= 1.2460D+00 NET AIR= 1.7874D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.7874050+02 WATER VAPOR(LBM)= 1.245964D+00

* * * * * * * * * * * * * * * * * TIME = 2.500000E+00 HR = 1.500690E+02 MIN = 9.000000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
0 VAPOR	-1.222133D+03	-3.394812D-02	-2.734245D+03	3 VAPOR	-1.866107D+03	-5.183639D-02 -6.127441D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR FT2 F FIRST MESH K = 1.050000E+00 BTU/HR FT. BULK TEMP = 9.385000E+01 F
RIGHT FILM COEF .,H = 4.014972E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.857176D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.543658D+01 8.507124D+01 8.475004D+01 8.445013D+01 8.416146D+01 8.388859D+01 8.365977D+01 8.354883D+01 8.369479D+01
8.541479D+01 8.713605D+01 8.885928D+01 9.058521D+01 9.217239D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-7.960027D+03	-2.211124D-01	-2.380603D+04	OLIQUID	-4.298442D+03	-1.194012D-01 -1.074645D+04

LEFT FILM COEF.,H = 4.748141E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.857176E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.338954D+01 8.943074D+01 8.871787D+01 8.851711D+01 8.832397D+01 8.814246D+01 8.797477D+01 8.781787D+01 8.766869D+01
8.752415D+01 8.775321D+01 8.816437D+01 8.861712D+01 8.907727D+01 8.953850D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
OLIQUID	-9.126902D+03	-2.535253D-01	-2.419849D+04	3 VAPOR	-2.662511D+04	-7.395856D-01 -4.728124D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.960370E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.857176D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.571756D+01 8.546257D+01 8.566555D+01 8.652065D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-7.725268D+03	-2.145907D-01	-1.543794D+04	OLIQUID	-2.430876D+03	-6.752434D-02 -5.888777D+03

LEFT FILM COEF.,H = 5.411439E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.857176E+01 F
RIGHT FILM COEF .,H = 4.660716E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.293903D+01 8.157198D+01 8.120367D+01 8.141307D+01 8.188496D+01 8.245416D+01 8.305411D+01 8.366523D+01 8.428858D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
OLIQUID	-2.636324D+03	-7.323122D-02	-6.386472D+03	3 VAPOR	-8.378176D+03	-2.327270D-01 -1.674270D+04

LEFT FILM COEF.,H = 4.660716E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.411439E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.857176D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.428858D+01 8.366523D+01 8.305411D+01 8.245416D+01 8.188496D+01 8.141707D+01 8.120367D+01 8.157196D+01 8.293903D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.244509D+03	-6.234757D-02	-7.204386D+03	OLIQUID	-7.483837D+02	-2.078844D-02	-1.823360D+03

LEFT FILM COEF.,H = 4.120324E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.857176E+01 F
RIGHT FILM COEF .,H = 4.026776E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.165618D+01 8.984774D+01 8.779057D+01 8.573606D+01 8.368351D+01 8.163222D+01 8.141623D+01 8.145640D+01 8.161399D+01
8.181480D+01 8.202883D+01 8.224626D+01 8.246447D+01 8.268362D+01 8.374037D+01 8.479713D+01 8.585394D+01 8.691380D+01
8.764058D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.684186D-01	0.	-5.177779D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.522200D+00	0.	-1.165997D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.85734D+01	9.85734D+01	3.90546D+05	0.	3.90546D+05	2.76386D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.80224D+03	2.65047D+01 0.	0.	2.65047D+01	1.79044D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 9.9771D+00 LBM/HR ENERGY BTU/HR = 1.4002D+03 (NORMAL= 1.4002D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.9185D-06 STEP AIR= 2.7522D-04 NET VAPOR= 1.2518D+00 NET AIR= 1.7958D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.795802D+02 WATER VAPOR(LBM)= 1.251818D+00

* * * * * * * * * * * * * * * * * * TIME = 2.583333E+00 HR = 1.550000E+02 MIN = 9.300000E+03 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.225122D+03	-3.403116D-02	-2.836214D+03	3 VAPOR	-1.847264D+03	-5.131298D-02	-6.282151D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.387500E+01 F
RIGHT FILM COEF .,H = 4.004300E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.869100D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.544100D+01 8.507403D+01 8.475141D+01 8.445087D+01 8.416251D+01 8.389147D+01 8.366735D+01 8.356512D+01 8.372154D+01
8.547642D+01 8.723250D+01 8.899046D+01 9.075097D+01 9.233935D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.837071D+03	-2.176970D-01	-2.446421D+04	OLIQUID	-4.298403D+03	-1.194001D-01	-1.110466D+04

LEFT FILM COEF.,H = 4.747629E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.869100E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.358827D+01 8.968287D+01 8.896428D+01 8.873169D+01 8.850647D+01 8.829250D+01 8.809193D+01 8.790182D+01 8.771923D+01
8.754116D+01 8.775873D+01 8.816565D+01 8.861735D+01 8.907731D+01 8.953651D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-9.065119D+03	-2.518091D-01	-2.495650D+04	3 VAPOR	-2.678033D+04	-7.438972D-01	-4.950653D+04

DCC

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.966996E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.869100D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.574655D+01 8.549949D+01 8.571763D+01 8.658580D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.749204D+03 -2.152556D-01 -1.608272D+04 OLIQUID -2.432280D+03 -6.756332D-02 -6.091408D+03
LEFT FILM COEF.,H = 5.414979E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.869100E+01 F
RIGHT FILM COEF.,H = 4.664477E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.302008D+01 8.163485D+01 8.124038D+01 8.142995D+01 8.189131D+01 8.245620D+01 8.305486D+01 8.366602D+01 8.428989D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.637846D+03 -7.327351D-02 -6.606229D+03 3 VAPOR -8.404136D+03 -2.334481D-01 -1.744197D+04
LEFT FILM COEF.,H = 4.664477E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.414979E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.869100D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.428989D+01 8.366602D+01 8.305486D+01 8.245620D+01 8.189131D+01 8.142995D+01 8.124038D+01 8.163485D+01 8.302008D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.224206D+03 -6.178358D-02 -7.390567D+03 OLIQUID -7.480586D+02 -2.077941D-02 -1.885711D+03
LEFT FILM COEF.,H = 4.110462E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.869100E+01 F
RIGHT FILM COEF.,H = 4.031302E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.182152D+01 9.001196D+01 8.792056D+01 8.583169D+01 8.374468D+01 8.165886D+01 8.143248D+01 8.146395D+01 8.161681D+01
8.181568D+01 8.202906D+01 8.224631D+01 8.246454D+01 8.268382D+01 8.374141D+01 8.479902D+01 8.585666D+01 8.691436D+01
8.764425D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.668566D-01	0.	-5.348072D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.523394D+00	0.	-1.211682D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.86926D+01	9.86926D+01	3.90541D+05	0.	3.90541D+05	2.76379D-06

	WATER MASS (LBM) AIR MASS	VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.80143D+03	2.64990D+01	0.	0.	2.64990D+01	1.78398D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 9.6550D+00 LBM/HR ENERGY BTU/HR = 1.3553D+03 (NORMAL= 1.3553D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.8566D-06 STEP AIR= 2.6634D-04 NET VAPOR= 1.2575D+00 NET AIR= 1.8039D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.803924D+02 WATER VAPOR(LBM)= 1.2574800+00

* * * * * * * * * * * * * * * * * TIME = 2.666667E+00 HR = 1.600000E+02 MIN = 9.600000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.228123D+03 -3.411451D-02 -2.938433D+03 3 VAPOR -1.830350D+03 -5.084312D-02 -6.435372D+03

PCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.390000E+01 F
RIGHT FILM COEF.,H = 3.994621E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.880649D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.544535D+01 8.507684D+01 8.475283D+01 8.445167D+01 8.416365D+01 8.389452D+01 8.367517D+01 8.358151D+01 8.374790D+01
8.353551D+01 8.732427D+01 8.911482D+01 9.090780D+01 9.249775D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.718507D+03 -2.144035D-01 -2.511233D+04 OLIQUID -4.298355D+03 -1.193988D-01 -1.146285D+04
LEFT FILM COEF.,H = 4.747132E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.860649E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.378043D+01 8.992663D+01 8.920256D+01 8.893929D+01 8.868314D+01 8.843788D+01 8.820560D+01 8.798348D+01 8.776866D+01
8.755827D+01 8.776446D+01 8.816703D+01 8.861761D+01 8.907735D+01 8.953851D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -9.001682D+03 -2.500470L-01 -2.570929D+04 3 VAPOR -2.652742D+04 -7.479834D-01 -5.174441D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.973233E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.880649D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.577632D+01 8.553697D+01 8.576954D+01 8.665007D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.771695D+03 -2.158803D-01 -1.672944D+04 OLIQUID -2.433688D+03 -6.760243D-02 -6.294157D+03
LEFT FILM COEF.,H = 5.418278E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.880649E+01 F
RIGHT FILM COEF.,H = 4.668235E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.309966D+01 8.169721D+01 8.127748D+01 8.144741D+01 8.189805D+01 8.245843D+01 8.305569D+01 8.366684D+01 8.429118D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.639373D+03 -7.331592D-02 -6.826114D+03 3 VAPOR -8.428528D+03 -2.341257D-01 -1.814334D+04
LEFT FILM COEF.,H = 4.668235E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.418278E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.880649D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429118D+01 8.366684D+01 8.305569D+01 8.245843D+01 8.189805D+01 8.144741D+01 8.127748D+01 8.169721D+01 8.309966D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.206007D+03 -6.127805D-02 -7.575145D+03 OLIQUID -7.477899D+02 -2.077194D-02 -1.948038D+03
LEFT FILM COEF.,H = 4.101535E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.880649E+01 F
RIGHT FILM COEF.,H = 4.035854E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.197839D+01 9.016732D+01 8.804379D+01 8.592267D+01 8.380331D+01 8.168511D+01 8.144882D+01 8.147174D+01 8.161981D+01
8.181664D+01 8.202932D+01 8.224638D+01 8.246461D+01 8.268403D+01 8.374241D+01 8.480082D+01 8.585920D+01 8.691774D+01
8.764775D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.652506D-01	0.	-5.517889D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.524514D+00	0.	-1.257400D+05
4	0.	0.	0.	0

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DT/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.88081D+01	9.88081D+01	3.90537D+05	0.	3.90537D+05	2.76370D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.80064D+03	2.64935D+01 0.	0.	2.64935D+01	1.77774D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 9.3532D+00 LBM/HR ENERGY BTU/HR = 1.3132D+03 (NORMAL= 1.3132D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.7986D-06 STEP AIR= 2.5801D-04 NET VAPOR= 1.2630D+00 NET AIR= 1.8118D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.811788D+02 WATER VAPOR(LBM)= 1.262961D+00

* * * * * * * * * * * * * * * * * TIME = 2.750000E+00 HR = 1.650000E+02 MIN = 9.900000E+03 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.231133D+03	-3.419812D-02	-3.040902D+03	3 VAPOR	-1.815177D+03	-5.042166D-02	-6.587258D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.392500E+01 F
RIGHT FILM COEF.,H = 3.985852E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.891848D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.544963D+01 8.507966D+01 8.475430D+01 8.445253D+01 8.416489D+01 8.389775D+01 8.368323D+01 8.359798D+01 8.377386D+01
8.559224D+01 8.741173D+01 8.923292D+01 9.105641D+01 9.264827D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.604249D+03	-2.112297D-01	-2.575375D+04	OLIQUID	-4.298298D+03	-1.193972D-01	-1.182105D+04

LEFT FILM COEF.,H = 4.746651E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.891848E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.396632D+01 9.016234D+01 8.943301D+01 8.914014D+01 8.885417D+01 8.857874D+01 8.831589D+01 8.806290D+01 8.781700D+01
8.757544D+01 8.777040D+01 8.816850D+01 8.861790D+01 8.907739D+01 8.953852D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.936691D+03	-2.482417D-01	-2.645674D+04	3 VAPOR	-2.706691D+04	-7.518579D-01	-5.399422D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 4.979167E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.891848D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.580681D+01 8.557497D+01 8.582129D+01 8.671350D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.792842D+03	-2.164677D-01	-1.737797D+04	OLIQUID	-2.435097D+03	-6.764158D-02	-6.497023D+03

LEFT FILM COEF.,H = 5.421351E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.891848E+01 F
RIGHT FILM COEF.,H = 4.671988E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.317784D+01 8.175906D+01 8.131490D+01 8.146542D+01 8.190518D+01 8.246086D+01 8.305661D+01 8.366769D+01 8.429246D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.640902D+03	-7.335837D-02	-7.046125D+03	3 VAPOR	-8.451462D+03	-2.347627D-01	-1.884668D+04

LEFT FILM COEF.,H = 4.671988E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF.,H = 5.421351E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.891848D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429246D+01 8.366769D+01 8.305661D+01 8.246086D+01 8.190518D+01 8.146542D+01 8.131490D+01 8.175906D+01 8.317784D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.189708D+03 -6.082530D-02 -7.758287D+03 OLIQUID -7.475716D+02 -2.076588D-02 -2.010344D+03
LEFT FILM COEF.,H = 4.093461E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.891848E+01 F
RIGHT FILM COEF.,H = 4.040428E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.212746D+01 9.031453D+01 8.816081D+01 8.600936D+01 8.385961D+01 8.171096D+01 8.146523D+01 8.147976D+01 8.162297D+01
8.181768D+01 8.202962D+01 8.224646D+01 8.246469D+01 8.268424D+01 8.374338D+01 8.480253D+01 8.586172D+01 8.692096D+01
8.765110D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.636028D-01	0.	-5.687218D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.525565D+00	0.	-1.303152D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.89201D+01	9.89201D+01	3.90532D+05	0.	3.90532D+05	2.76358D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.79988D+03	2.64882D+01	0.	0.	0.	2.64882D+01	1.77172D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 9.0699D+00 LBM/HR ENERGY BTU/HR = 1.2736D+03 (NORMAL= 1.2736D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.7441D-06 STEP AIR= 2.5020D-04 NET VAPOR= 1.2683D+00 NET AIR= 1.8194D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.8194100+02 WATER VAPOR(LBM)= 1.268275D+00

* * * * * * * * * * * * * * * * * TIME = 2.833333E+00 HR = 1.700000E+02 MIN = 1.020000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.234151D+03 -3.428195D-02 -3.143622D+03 3 VAPOR -1.801580D+03 -5.004396D-02 -6.737945D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.395000E+01 F
RIGHT FILM COEF.,H = 3.977918E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.902717D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.545385D+01 8.508248D+01 8.475581D+01 8.445345D+01 8.416624D+01 8.390117D+01 8.369151D+01 8.361451D+01 8.379944D+01
8.564679D+01 8.749520D+01 8.934525D+01 9.119748D+01 9.279152D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.494207D+03 -2.081729D-01 -2.637983D+04 OLIQUID -4.298232D+03 -1.193953D-01 -1.217924D+04
LEFT FILM COEF.,H = 4.746183E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.902717E+01 F
RIGHT FILM COEF.,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.414619D+01 9.039027D+01 8.965588D+01 8.933449D+01 8.901976D+01 8.871525D+01 8.842291D+01 8.814015D+01 8.786429D+01
8.759267D+01 8.777653D+01 8.817008D+01 8.861821D+01 8.907744D+01 8.953853D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.870241D+03 -2.463959D-01 -2.719870D+04 3 VAPOR -2.719923D+04 -7.555335D-01 -5.625536D+04

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LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 4.984643E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.902717D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.583799D+01  8.561345D+01  8.587287D+01  8.677614D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.812737D+03 -2.170204D-01 -1.802821D+04          OLIQUID      -2.436505D+03 -6.768063D-02 -6.700006D+03
LEFT FILM COEF .H = 5.424217E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.902717E+01 F
RIGHT FILM COEF  .,H = 4.675735E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.325468D+01  8.182040D+01  8.135263D+01  8.148396D+01  8.191270D+01  8.246350D+01  8.305763D+01  8.366857D+01  8.429374D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.642429D+03 -7.340079D-02 -7.266264D+03          3 VAPOR      -8.473039D+03 -2.353621D-01 -1.955188D+04
LEFT FILM COEF .H = 4.675735E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.424217E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.902717D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.429374D+01  8.366857D+01  8.305763D+01  8.246350D+01  8.191270D+01  8.148396D+01  8.135263D+01  8.182040D+01  8.325468D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.  ENL  TEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.175126D+03 -6.042023D-02 -7.940144D+03          OLIQUID      -7.473986D+02 -2.076107D-02 -2.072634D+03
LEFT FILM COEF .,H = 4.086168E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.902717E+01 F
RIGHT FILM COEF  .,H = 4.045021E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.226934D+01  9.045426D+01  8.827210D+01  8.609211D+01  8.391374D+01  8.173643D+01  8.148171D+01  8.148800D+01  8.162631D+01
 8.181881D+01  8.202995D+01  8.224656D+01  8.246478D+01  8.268446D+01  8.374431D+01  8.480417D+01  8.586408D+01  8.692402D+01
 8.765431D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
   0  0.             -5.619157D-01  0.             -5.856046D+04
   1  0.              0.            0.              0.
   2  0.              0.            0.              0.
   3  0.             -1.526553D+00  0.             -1.348934D+05
   4  0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)    T E M P E R A T U R E  (F)        E N E R G Y  (BTU)                          CONVERGENCE
 NO.       TOTAL          STEAM        ATMOS          POOL          ATMOS          POOL          TOTAL              DE/E
   1    1.47000D+01   0.            7.34000D+01   7.34000D+01   0.             0.            0.                 0.
   3    1.47001D+01   1.63044D-01   9.90288D+01   9.90288D+01   3.90528D+05    0.            3.90528D+05        2.76345D-06

                                                                                                    TRANSFER COEFFICIENTS
        AIR MASS                W A T E R    M A S S    ( LBM)                HUMIDITY   CONDENSATION     MASS          HEAT
         ( LBM)          VAPOR--ATMOS--LIQUID          POOL          TOTAL                (LB/S)    (LB MOL/S FT2)(BTU/S FT2 R)
   1   0.              0.            0.             0.             0.             6.000000D-01  0.          0.            0.
   3   3.79914D+03     2.64831D+01   0.             0.             2.64831D+01    1.76589D-01   0.          0.            0.
COMP.  3 LEAKAGE OUTFLOW-  MASS=  8.803?D+00 LBM/HR   ENERGY BTU/HR  =  1.2365D+03 (NORMAL=  1.2365D+03 PENETRATION=  0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR=  1.6929D-06 STEP AIR=  2.4285D-04 NET VAPOR=  1.2734D+00 NET AIR=  1.8268D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)=  1.826804D+02 WATER VAPOR(LBM)=  1.273429D+00

 * * * * * * * * * * * * * * * * * TIME =  2.916667E+00  HR =  1.750000E+02 MIN =  1.050000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU     10 RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -1.237176D+03 -3.436598D-02 -3.246594D+03          3 VAPOR      -1.789409D+03 -4.970586D-02 -6.887561D+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.397500E+01 F
RIGHT FILM COEF .,H = 3.970747E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.913276D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.545802D+01 8.508531D+01 8.475737D+01 8.445444D+01 8.416769D+01 8.390476D+01 8.370000D+01 8.363109D+01 8.382465D+01
8.569931D+01 8.757500D+01 8.945225D+01 9.133158D+01 9.292805D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.388283D+03 -2.052306D-01 -2.699990D+04 OLIQUID -4.298156D+03 -1.193932D-01 -1.253742D+04
LEFT FILM COEF.,H = 4.745729E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.913276E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.41 0+01 9.061071D+01 8.987145D+01 8.952255D+01 8.918010D+01 8.884753D+01 8.852677D+01 8.821529D+01 8.791053D+01
8.7 3D+01 8.778285D+01 8.817175D+01 8.861856D+01 8.907750D+01 8.953853D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.802423D+03 -2.445121D-01 -2.793507D+04 3 VAPOR -2.732480D+04 -7.590217D-01 -5.852724D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.989862E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.913276D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.586981D+01 8.565238D+01 8.592429D+01 8.683805D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.831466D+03 -2.175406D-01 -1.868006D+04 OLIQUID -2.437909D+03 -6.771970D-02 -6.903107D+03
LEFT FILM COEF.,H = 5.426891E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.913276E+01 F
RIGHT FILM COEF .,H = 4.679476E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.333025D+01 8.188123D+01 8.139062D+01 8.150301D+01 8.192061D+01 8.246634D+01 8.305874D+01 8.366949D+01 8.429502D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.643952D+03 -7.344310D-02 -7.486530D+03 3 VAPOR -8.493350D+03 -2.359263D-01 -2.025882D+04
LEFT FILM COEF.,H = 4.679476E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.426891E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.913276D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429502D+01 8.366949D+01 8.305874D+01 8.246634D+01 8.192061D+01 8.150301D+01 8.139062D+01 8.188123D+01 8.333025D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.162095D+03 -6.005824D-02 -8.120851D+03 OLIQUID -7.472661D+02 -2.075739D-02 -2.134912D+03
LEFT FILM COEF.,H = 4.079587E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.913276E+01 F
RIGHT FILM COEF .,H = 4.049631E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.240458D+01 9.058710D+01 8.837812D+01 8.617122D+01 8.396586D+01 8.176152D+01 8.149822D+01 8.149645D+01 8.162982D+01
8.182004D+01 8.203031D+01 8.224667D+01 8.246487D+01 8.268467D+01 8.374520D+01 8.480575D+01 8.586633D+01 8.692695D+01
8.765740D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.601915D-01	0.	-6.024363D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.527483D+00	0.	-1.394741D+05
4	0.	0.	0.	0.

COMP NO	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63044D-01	9.91344D+01	9.91344D+01	3.90523D+05	0.	3.90523D+05	2.76329D-06

	AIR MASS	WATER MASS (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR	ATMOS	LIQUID POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.79842D+03	2.64781D+01	0.	0.	2.64781D+01	1.76025D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 8.5531D+00 LBM/HR ENERGY BTU/HR = 1.2015D+03 (NORMAL= 1.2015D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.6447D-06 STEP AIR= 2.3594D-04 NET VAPOR= 1.2784D+00 NET AIR= 1.8340D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.833985D+02 WATER VAPOR(LBM)= 1.278435D+00

* * * * * * * * * * * * * * * * * * TIME = 3.000000E+00 HR = 1.800000E+02 MIN = 1.080000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.240207D+03	-3.445018D-02	-3.349818D+03	3 VAPOR	-1.778528D+03	-4.940361D-02	-7.036216D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 3.964276E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.923542D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.546216D+01 8.508814D+01 8.475897D+01 8.445550D+01 8.416925D+01 8.390852D+01 8.370868D+01 8.364769D+01 8.384949D+01
8.574994D+01 8.765139D+01 8.955433D+01 9.145926D+01 9.305838D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.286375D+03	-2.023998D-01	-2.761132D+04	OLIQUID	-4.298066D+03	-1.193907D-01	-1.289560D+04

LEFT FILM COEF.,H = 4.745288E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.923542E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.448891D+01 9.082394D+01 9.007998D+01 8.970455D+01 8.933536D+01 8.897574D+01 8.862757D+01 8.828840D+01 8.795577D+01
8.762720D+01 8.778936D+01 8.817352D+01 8.861893D+01 8.907757D+01 8.953854D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.733323D+03	-2.425926D-01	-2.866574D+04	3 VAPOR	-2.744401D+04	-7.623332D-01	-6.080932D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 4.994786E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.923542D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.590223D+01 8.569172D+01 8.597555D+01 8.689925D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.849105D+03	-2.180306D-01	-1.933342D+04	OLIQUID	-2.439308D+03	-6.775855D-02	-7.106324D+03

LEFT FILM COEF.,H = 5.429385E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.923542E+01 F
RIGHT FILM COEF .,H = 4.683211E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.340459D+01 8.194154D+01 8.142884D+01 8.152253D+01 8.192890D+01 8.246940D+01 8.305995D+01 8.367044D+01 8.429629D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.645469D+03	-7.348523D-02	-7.706922D+03	3 VAPOR	-8.512480D+03	-2.364577D-01	-2.096741D+04

LEFT FILM COEF.,H = 4.683211E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.429385E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.923542D+01 F

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MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429629D+01 8.367044D+01 8.305995D+01 8.246940D+01 8.192890D+01 8.152253D+01 8.142884D+01 8.194134D+01 8.340459D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.150466D+03 -5.973522D-02 -8.300532D+03 OLIQUID -7.471699D+02 -2.075472D-02 -2.197180D+03
LEFT FILM COEF.,H = 4.073658E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.923542E+01 F
RIGHT FILM COEF .,H = 4.054254E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.253369D+01 9.071358D+01 8.847928D+01 8.624696D+01 8.401611D+01 8.178625D+01 8.151476D+01 8.150508D+01 8.163350D+01
8.182135D+01 8.203071D+01 8.224579D+01 8.246498D+01 8.268489D+01 8.374607D+01 8.480727D+01 8.586849D+01 8.692976D+01
8.766037D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.584320D-01	0.	-6.192158D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.528360D+00	0.	-1.440582D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470001D+01	1.630440-01	9.923700D+01	9.923700D+01	3.905190+05	0.	3.905190+05	2.763130-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.000000-01	0.	0.	0.
3	3.797720+03	2.647320+01 0.	0.	2.647320+01	1.754790-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 8.3169D+00 LBM/HR ENERGY BTU/HR = 1.1685D+03 (NORMAL= 1.1685D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.5993D-06 STEP AIR= 2.2942D-04 NET VAPOR= 1.2833D+00 NET AIR= 1.8410D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.840965D+02 WATER VAPOR(LBM)= 1.283300D+00

* * * * * * * * * * * * * * * * TIME = 3.083333E+00 HR = 1.850000E+02 MIN = 1.110000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.236001D+03 -3.433339D-02 -3.452993D+03 3 VAPOR -1.763816D+03 -4.913383D-02 -7.184014D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.397500E+01 F
RIGHT FILM COEF .,H = 3.958444E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.933533D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.546611D+01 8.509097D+01 8.476062D+01 8.445662D+01 8.417092D+01 8.391246D+01 8.371754D+01 8.366430D+01 8.387398D+01
8.579882D+01 8.772463D+01 8.965187D+01 9.158102D+01 9.318296D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.188380D+03 -1.996777D-01 -2.821441D+04 OLIQUID -4.297963D+03 -1.193879D-01 -1.325376D+04
LEFT FILM COEF.,H = 4.744858E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.933533E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.465223D+01 9.103021D+01 9.028171D+01 8.988070D+01 8.948572D+01 8.910001D+01 8.872540D+01 8.835953D+01 8.800002D+01
8.764448D+01 8.779605D+01 8.817539D+01 8.861934D+01 8.907764D+01 8.953855D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.663023D+03 -2.406399D-01 -2.939059D+04 3 VAPOR -2.755722D+04 -7.654779D-01 -6.310107D+04

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LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF   ,H = 4.999432E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.933533D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.593522D+01  8.573145D+01  8.602665D+01  8.695978D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.   END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.   END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.865729D+03 -2.184924D-01 -1.998821D+04          OLIQUID      -2.436628D+03 -6.768411D-02 -7.309488D+03
LEFT FILM COEF.,H = 5.431713E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.933533E+01 F
RIGHT FILM COEF   ,H = 4.679065E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.347778D+01  8.200135D+01  8.146726D+01  8.154252D+01  8.193756D+01  8.247267D+01  8.306126D+01  8.367143D+01  8.429752D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.   END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.   END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.642562D+03 -7.340450D-02 -7.927256D+03          3 VAPOR      -8.530509D+03 -2.369585D-01 -2.167754D+04
LEFT FILM COEF.,H = 4.679065E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF   ,H = 5.431713E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F    BULK TEMP = 9.933533D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.429752D+01  8.367143D+01  8.306126D+01  8.247267D+01  8.193756D+01  8.154252D+01  8.146726D+01  8.200135D+01  8.347778D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.   END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.   END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.140106D+03 -5.944745D-02 -8.479298D+03          OLIQUID      -7.452907D+02 -2.070253D-02 -2.259364D+03
LEFT FILM COEF.,H = 4.068323E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.933533E+01 F
RIGHT FILM COEF   ,H = 4.048439E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F    BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.265714D+01  9.083421D+01  8.857595D+01  8.631957D+01  8.406462D+01  8.181062D+01  8.153131D+01  8.151390D+01  8.163733D+01
 8.182276D+01  8.203116D+01  8.224693D+01  8.246509D+01  8.268511D+01  8.374690D+01  8.480871D+01  8.587055D+01  8.693242D+01
 8.766290D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID     STEP-VAPOR     NET-LIQUID     NET-VAPOR
    0  0.             -5.561522D-01  0.             -6.359346D+04
    1  0.              0.            0.              0.
    2  0.              0.            0.              0.
    3  0.             -1.529188D+00  0.             -1.486445D+05
    4  0.              0.            0.              0.

COMP      P R E S S U R E  (PSIA)   T E M P E R A T U R E  (F)        E N E R G Y  (BTU)                          CONVERGENCE
 NO.       TOTAL        STEAM        ATMOS          POOL          ATMOS          POOL          TOTAL              DE/E
   1    1.47000D+01   0.           7.34000D+01    7.34000D+01   0.             0.            0.                 0.
   3    1.47001D+01   1.63044D-01  9.93369D+01    9.93369D+01   3.90515D+05    0.            3.90515D+05        2.76294D-06

                                                                                                  TRANSFER COEFFICIENTS
          AIR MASS              W A T E R   M A S S  ( LBM)                    HUMIDITY    CONDENSATION     MASS          HEAT
           ( LBM)        VAPOR--ATMOS--LIQUID          POOL          TOTAL                    (LB/S)     (LB MOL/S FT2)(BTU/S FT2 R)
   1    0.             0.           0.               0.            0.             6.000000D-01  0.           0.            0.
   3    3.79704D+03    2.64685D+01  0.               0.            2.64685D+01    1.74949D-01   0.           0.            0.
COMP.   3 LEAKAGE OUTFLOW- MASS= 8.0940D+00 LBM/HR   ENERGY BTU/HR = 1.1374D+03 (NORMAL= 1.1374D+03 PENETRATION= 0.          )
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.5564D-06 STEP AIR= 2.2328D-04 NET VAPOR= 1.2880D+00 NET AIR= 1.8478D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.847754D+02 WATER VAPOR(LBM)= 1.288033D+00


* * * * * * * * * * * * * * * * TIME = 3.166667E+00 HR = 1.900000E+02 MIN = 1.140000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE  1 BETWEEN COMPARTMENTS  0 AND  3 NORTH WALL
TO LEFT COMP.   END STEP BTU/HR     STEP BTU  TOTAL NET BTU     TO RIGHT COMP.   END STEP BTU/HR     STEP BTU TOTAL NET BTU
    0 VAPOR      -1.231839D+03 -3.421776D-02 -3.555819D+03          3 VAPOR      -1.760164D+03 -4.889349D-02 -7.331048D+03
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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.395000E+01 F
RIGHT FILM COEF .,H = 3.953197E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.943264D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.546977D+01 8.509380D+01 8.476230D+01 8.445781D+01 8.417270D+01 8.391656D+01 8.372658D+01 8.368091D+01 8.385412D+01
8.584607D+01 8.779496D+01 8.974522D+01 9.169730D+01 9.330224D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.094190D+03 -1.970613D-01 -2.880949D+04 OLIQUID -4.297846D+03 -1.193846D-01 -1.361192D+04
LEFT FILM COEF.,H = 4.744440E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.943264E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.481049D+01 9.122973D+01 9.047690D+01 9.005120D+01 8.963136D+01 8.922049D+01 8.882037D+01 8.842875D+01 8.804331D+01
8.766176D+01 8.780290D+01 8.817736D+01 8.861979D+01 8.907772D+01 8.953857D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.591602D+03 -2.386559D-01 -3.010954D+04 3 VAPOR -2.766476D+04 -7.684650D-01 -6.540203D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.003818E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.943264D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.596873D+01 8.577154D+01 8.607760D+01 8.701968D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.881402D+03 -2.189278D-01 -2.064435D+04 OLIQUID -2.433999D+03 -6.761110D-02 -7.512430D+03
LEFT FILM COEF.,H = 5.433886E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.943264E+01 F
RIGHT FILM COEF .,H = 4.674930E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.354984D+01 8.206066D+01 8.150585D+01 8.156295D+01 8.194660D+01 8.247616D+01 8.306268D+01 8.367245D+01 8.429863D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.639711D+03 -7.332531D-02 -8.147351D+03 3 VAPOR -8.547507D+03 -2.374307D-01 -2.238913D+04
LEFT FILM COEF.,H = 4.674930E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.433886E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.943264D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429863D+01 8.367245D+01 8.306268D+01 8.247616D+01 8.194660D+01 8.156295D+01 8.150585D+01 8.206066D+01 8.354984D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.130895D+03 -5.919158D-02 -8.657248D+03 OLIQUID -7.436254D+02 -2.065627D-02 -2.321401D+03
LEFT FILM COEF.,H = 4.063531E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.943264E+01 F
RIGHT FILM COEF .,H = 4.042737E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.277534D+01 9.094943D+01 8.866846D+01 8.638930D+01 8.411151D+01 8.183464D+01 8.154786D+01 8.152288D+01 8.164133D+01
8.182426D+01 8.203165D+01 8.224709D+01 8.246521D+01 8.268534D+01 8.374767D+01 8.481001D+01 8.587238D+01 8.693479D+01
8.766483D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.538510D-01	0.	-6.525847D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.529970D+00	0.	-1.532333D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0
3	1.47001D+01	1.63044D-01	9.94342D+01	9.94342D+01	3.90511D+05	0.	3.90511D+05	2.76275D-06

	WATER MASS (LBM) AIR MASS	VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.75638D+03	2.64639D+01	0.	0.	2.64639D+01	1.74435D-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 7.8834D+00 LBM/HR ENERGY BTU/HR = 1.1080D+03 (NORMAL= 1.1080D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.5159D-06 STEP AIR= 2.1747D-04 NET VAPOR= 1.2926D+00 NET AIR= 1.8544D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS O AIR(LBM)= 1.854365D+02 WATER VAPOR(LBM)= 1.292641D+00

* * * * * * * * * * * * * * * * * * TIME = 3.250000E+00 HR = 1.950000E+02 MIN = 1.170000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS O AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
O VAPOR	-1.227714D+03	-3.410319D-02	-3.658301D+03	3 VAPOR	-1.752473D+03	-4.867983D-02	-7.477402D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.392500E+01 F
RIGHT FILM COEF .,H = 3.948485E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.952748D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.547316D+01 8.509659D+01 8.476403D+01 8.445907D+01 8.417458D+01 8.392082D+01 8.373578D+01 8.369752D+01 8.392192D+01
8.589179D+01 8.786257D+01 8.983467D+01 9.180852D+01 9.341659D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND O ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.003697D+03	-1.945476D-01	-2.939687D+04	OLIQUID	-4.297711D+03	-1.193809D-01	-1.397007D+04

LEFT FILM COEF.,H = 4.744032E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.952748E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.496390D+01 9.142290D+01 9.066578D+01 9.021628D+01 8.977244D+01 8.933730D+01 8.891258D+01 8.849611D+01 8.808566D+01
8.767902D+01 8.780991D+01 8.817943D+01 8.862026D+01 8.907781D+01 8.953858D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS O AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.519133D+03	-2.306429D-01	-3.082250D+04	3 VAPOR	-2.776692D+04	-7.713030D-01	-6.771172D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.007958E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.952748D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.600273D+01 8.581195D+01 8.612840D+01 8.707899D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND O SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.896188D+03	-2.193385D-01	-2.130176D+04	OLIQUID	-2.431413D+03	-6.753927D-02	-7.715756D+03

LEFT FILM COEF.,H = 5.435916E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.952748E+01 F
RIGHT FILM COEF .,H = 4.670802E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.362083D+01 8.211946D+01 8.154459D+01 8.158379D+01 8.195600D+01 8.247987D+01 8.306420D+01 8.367350D+01 8.429965D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS O AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.636907D+03	-7.324742D-02	-8.367209D+03	3 VAPOR	-8.563542D+03	-2.378761D-01	-2.310210D+04

LEFT FILM COEF.,H = 4.670802E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.435916E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.952748D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.429965D+01 8.367350D+01 8.306420D+01 8.247987D+01 8.195600D+01 8.158379D+01 8.154459D+01 8.211946D+01 8.362083D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.122725D+03 -5.896461D-02 -8.834476D+03 OLIQUID -7.421183D+02 -2.061440D-02 -2.383306D+03
LEFT FILM COEF.,H = 4.059233E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.952748E+01 F
RIGHT FILM COEF .,H = 4.037115E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.288869D+01 9.105964D+01 8.875713D+01 8.645636D+01 8.415690D+01 8.185833D+01 8.156440D+01 8.153202D+01 8.164548D+01
8.182585D+01 8.203218D+01 8.224727D+01 8.246534D+01 8.268556D+01 8.374835D+01 8.481114D+01 8.587396D+01 8.693681D+01
8.766632D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.515280D-01	0.	-6.691654D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.530710D+00	0.	-1.578243D+05
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000+01	0.	7.340000+01	7.340000+01	0.	0.	0.	0.
3	1.470010+01	1.63044D-01	9.952910+01	9.952910+01	3.905070+05	0	3.905070+05	2.762550-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3	3.795740+03	2.645940+01	0.	0.	0.	2.645940+01	1.739350-01	0.	0.	0.

COMP 3 LEAKAGE OUTFLOW- MASS= 7.6842D+00 LBM/HR ENERGY BTU/HR = 1.0802D+03 (NORMAL= 1.0802D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.4776D-06 STEP AIR= 2.1197D-04 NET VAPOR= 1.2971D+00 NET AIR= 1.8608D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.860805D+02 WATER VAPOR(LBM)= 1.297131D+00

* * * * * * * * * * * * * * * * * TIME = 3.333333E+00 HR = 2.000000E+02 MIN = 1.200000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.223623D+03 -3.398956D-02 -3.760439D+03 3 VAPOR -1.745653D+03 -4.849038D-02 -7.623151D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.390000E+01 F
RIGHT FILM COEF .,H = 3.944263E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.961999D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.547632D+01 8.509936D+01 8.476579D+01 8.446040D+01 8.417658D+01 8.392524D+01 8.374513D+01 8.371411D+01 8.394540D+01
8.593610D+01 8.792767D+01 8.992051D+01 9.191504D+01 9.352637D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.916794D+03 -1.921336D-01 -2.997687D+04 OLIQUID -4.297559D+03 -1.193766D-01 -1.432821D+04
LEFT FILM COEF.,H = 4.743634E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.961999E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.511266D+01 9.160981D+01 9.084857D+01 9.037611D+01 8.990913D+01 8.945057D+01 8.900212D+01 8.856168D+01 8.812710D+01
8.769625D+01 8.781708D+01 8.918160D+01 8.862078D+01 8.907791D+01 8.953860D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.445686D+03 -2.346027D-01 -3.152937D+04 3 VAPOR -2.786401D+04 -7.739998D-01 -7.002971D+04

LEFT FILM COEF .H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 5.011868E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.961999D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.603719D+01 8.585267D+01 8.617905D+01 8.713772D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.910142D+03 -2.197261D-01 -2.196036D+04 OLIQUID -2.428862D+03 -6.746841D-02 -7.917667D+03
LEFT FILM COEF .H = 5.437810E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.961999E+01 F
RIGHT FILM COEF .H = 4.666679E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.369078D+01 8.217777D+01 8.158346D+01 8.160503D+01 8.196577D+01 8.248380D+01 8.306583D+01 8.367458D+01 8.430060D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.634140D+03 -7.317057D-02 -8.586836D+03 3 VAPOR -8.578675D+03 -2.382965D-01 -2.381636D+04
LEFT FILM COEF .H = 4.666679E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .H = 5.437810E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.961999D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430060D+01 8.367458D+01 8.306583D+01 8.248380D+01 8.196577D+01 8.160503D+01 8.158346D+01 8.217777D+01 8.369078D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.115497D+03 -5.876383D-02 -9.011062D+03 OLIQUID -7.407397D+02 -2.057611D-02 -2.445090D+03
LEFT FILM COEF .H = 4.055387E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.961999E+01 F
RIGHT FILM COEF .H = 4.031557E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.299754D+01 9.116522D+01 8.884224D+01 8.652093D+01 8.420088D+01 8.188169D+01 8.158092D+01 8.154131D+01 8.164979D+01
8.182754D+01 8.203275D+01 8.224747D+01 8.246548D+01 8.268578D+01 8.374894D+01 8.481210D+01 8.587529D+01 8.693849D+01
8.766744D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.491840D-01	0.	-6.856761D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.531410D+00	0.	-1.624175D+05
4	0.	0.	0.	0.

COMP	P R E S S U R E (PSIA)		T E M P E R A T U R E (F)		E N E R G Y (BTU)			CONVERGENCE
NO	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470011D+01	1.630450-01	9.962160+01	9.962160+01	3.905030+05	0.	3.905030+05	2.762340-06

	AIR MASS	W A T E R M A S S (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS--LIQUID		POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000-01	0.	0.	0.
3	3.795110+03	2.645500+01	0.	0.	2.645500+01	1.734500-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 7.4956D+00 LBM/HR ENERGY BTU/HR = 1.0538D+03 (NORMAL= 1.0538D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.4413D-06 STEP AIR= 2.0677D-04 NET VAPOR= 1.3015D+00 NET AIR= 1.8671D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.867086D+02 WATER VAPOR(LBM)= 1.301509D+00

* * * * * * * * * * * * * * * * TIME = 3.416667E+00 HR = 2.050000E+02 MIN = 1.230000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.219563D+03 -3.387677D-02 -3.862239D+03 3 VAPOR -1.739624D+03 -4.832291D-02 -7.683660+03

FCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.387500E+01 F
RIGHT FILM COEF .,H = 3.940487E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.971030D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.547928D+01 8.510208D+01 8.476759D+01 8.446180D+01 8.417869D+01 8.392982D+01 8.375462D+01 8.373067D+01 8.396856D+01
8.597907D+01 8.799042D+01 9.000301D+01 9.201721D+01 9.363190D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.833372D+03 -1.898163D-01 -3.054977D+04 OLIQUID -4.297386D+03 -1.193718D-01 -1.468633D+04
LEFT FILM COEF.,H = 4.743246E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.971030E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.525697D+01 9.179075D+01 9.102552D+01 9.053089D+01 9.004159D+01 8.956043D+01 8.908909D+01 8.862551D+01 8.816766D+01
8.771344D+01 8.782439D+01 8.818387D+01 8.862133D+01 8.907802D+01 8.953862D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -8.371328D+03 -2.325372D-01 -3.223009D+04 3 VAPOR -2.795627D+04 -7.765627D-01 -7.235559D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.015561E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.971030D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.607208D+01 8.589367D+01 8.622955D+01 8.719591D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.923317D+03 -2.200921D-01 -2.262009D+04 OLIQUID -2.426340D+03 -6.739834D-02 -8.119967D+03
LEFT FILM COEF.,H = 5.439580E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.971030E+01 F
RIGHT FILM COEF .,H = 4.662558E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.375974D+01 8.223559D+01 8.162243D+01 8.162665D+01 8.197588D+01 8.248796D+01 8.306758D+01 8.367568D+01 8.430149D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.631404D+03 -7.309458D-02 -8.806234D+03 3 VAPOR -8.592964D+03 -2.386934D-01 -2.453185D+04
LEFT FILM COEF.,H = 4.662558E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.439580E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.971030D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430149D+01 8.367568D+01 8.306758D+01 8.248796D+01 8.197588D+01 8.162665D+01 8.162243D+01 8.223559D+01 8.375974D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.109124D+03 -5.858679D-02 -9.187082D+03 OLIQUID -7.394711D+02 -2.054087D-02 -2.506765D+03
LEFT FILM COEF.,H = 4.051954E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.971030E+01 F
RIGHT FILM COEF .,H = 4.026051E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.310220D+01 9.126652D+01 8.892405D+01 8.658319D+01 8.424354D+01 8.190474D+01 8.159741D+01 8.155074D+01 8.165424D+01
8.182932D+01 8.203338D+01 8.224769D+01 8.246563D+01 8.268601D+01 8.374945D+01 8.481290D+01 8.587637D+01 8.693985D+01
8.766825D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.468196D-01	0.	-7.021162D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.532074D+00	0.	-1.670127D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63045D-01	9.97119D+01	9.97119D+01	3.90500D+05	0.	3.90500D+05	2.76213D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.79450D+03	2.64507D+01 0.	0.	2.64507D+01	1.72977D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 7.3168D+00 LBM/HR ENERGY BTU/HR = 1.0289D+03 (NORMAL= 1.0289D+03 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.4070D-06 STEP AIR= 2.0184D-04 NET VAPOR= 1.3058D+00 NET AIR= 1.8732D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.873214D+02 WATER VAPOR(LBM)= 1.305781D+00

* * * * * * * * * * * * * * * * * * TIME = 3.500000E+00 HR = 2.100000E+02 MIN = 1.260000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.215530D+03	-3.376473D-02	-3.963701D+03	3 VAPOR	-1.734313D+03	-4.817539D-02	-7.913108D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.385000E+01 F
RIGHT FILM COEF .,H = 3.937120E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.979851D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.548204D+01 8.510475D+01 8.476942D+01 8.446327D+01 8.418091D+01 8.393455D+01 8.376425D+01 8.374720D+01 8.399141D+01
8.602080D+01 8.805101D+01 9.008240D+01 9.211535D+01 9.373348D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.753322D+03	-1.875926D-01	-3.111586D+04	OLIQUID	-4.297193D+03	-1.193665D-01	-1.504444D+04

LEFT FILM COEF.,H = 4.742866E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.979851E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.539699D+01 9.196594D+01 9.119682D+01 9.068082D+01 9.016996D+01 8.966700D+01 8.917356D+01 8.868767D+01 8.820735D+01
8.773058D+01 8.783185D+01 8.818623D+01 8.862192D+01 8.907815D+01 8.953864D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.296121D+03	-2.304481D-01	-3.292457D+04	3 VAPOR	-2.804397D+04	-7.789988D-01	-7.468896D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.019046E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.979851D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.610737D+01 8.593494D+01 8.627991D+01 8.725359D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.935764D+03	-2.204378D-01	-2.328089D+04	OLIQUID	-2.423839D+03	-6.732889D-02	-8.322057D+03

LEFT FILM COEF.,H = 5.441233E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.979851E+01 F
RIGHT FILM COEF .,H = 4.658437E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.382775D+01 8.229292D+01 8.166149D+01 8.164864D+01 8.198635D+01 8.249234D+01 8.306943D+01 8.367682D+01 8.430232D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.628693D+03	-7.301925D-02	-9.025404D+03	3 VAPOR	-8.606463D+03	-2.390683D-01	-2.524850D+04

LEFT FILM COEF.,H = 4.658437E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.441233E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.979851D+01 F

PCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430232D+01 8.367682D+01 8.306943D+01 8.249234D+01 8.198635D+01 8.164864D+01 8.166149D+01 8.229292D+01 8.382775D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.103526D+03	-5.8 129D-02	-9.362604D+03	OLIQUID	-7.382990D+02	-2.050831D-02	-2.568338D+03

LEFT FILM COEF.,H = 4.048896E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.979851E+01 F
RIGHT FILM COEF .,H = 4.020590E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.320297D+01 9.136383D+01 8.900279D+01 8.664330D+01 8.428498D+01 8.192748D+01 8.161386D+01 8.156029D+01 8.165883D+01
8.183120D+01 8.203405D+01 8.224793D+01 8.246579D+01 8.268623D+01 8.374988D+01 8.481355D+01 8.587723D+01 8.694092D+01
8.766879D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.444358D-01	0.	-7.184851D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.532704D+00	0.	-1.716099D+05
4	0.	0.	0.	0.

COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63045D-01	9.98001D+01	9.98001D+01	3.90496D+05	0.	3.90496D+05	2.76191D-06

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL /S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.79390D+03	2.64465D+01 0.	0.	2.64465D+01	1.72517D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 7.1472D+00 LBM/HR ENERGY BTU/HR = 1.0052D+03 (NORMAL= 1.0052D+03 PENETRATION= 0)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.3744D-06 STEP AIR= 1.9716D-04 NET VAPOR= 1.3100D+00 NET AIR= 1.8792D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.879198D+02 WATER VAPOR(LBM)= 1.309952D+00

* * * * * * * * * * * * * * * * * TIME = 3.583333E+00 HR = 2.150000E+02 MIN = 1.290000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.211521D+03	-3.365336D-02	-4.064828D+03	3 VAPOR	-1.729656D+03	-4.804602D-02	-8.057436D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.382500E+01 F
RIGHT FILM COEF .,H = 3.934126E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.988473D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.548464D+01 8.510738D+01 8.477128D+01 8.446481D+01 8.418324D+01 8.393943D+01 8.377399D+01 8.376369D+01 8.401397D+01
8.606137D+01 8.810956D+01 9.015890D+01 9.220974D+01 9.383138D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.676537D+03	-1.854597D-01	-3.167541D+04	OLIQUID	-4.296978D+03	-1.193605D-01	-1.540253D+04

LEFT FILM COEF.,H = 4.742496E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 9.988473E+01 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.553292D+01 9.213559D+01 9.136269D+01 9.082605D+01 9.029440D+01 8.977039D+01 8.925563D+01 8.874820D+01 8.824619D+01
8.774767D+01 8.783943D+01 8.818870D+01 8.862255D+01 8.907828D+01 8.953866D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.220124D+03	-2.283371D-01	-3.36.275D+04	3 VAPOR	-2.812723D+04	-7.813143D-01	-7.702946D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.022342E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.988473D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.614303D+01 8.597644D+01 8.633013D+01 8.731077D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-7.947527D+03	-2.207646D-01 -2.394270D+04	OLIQUID	-2.421356D+03	-6.725991D-02 -8.523940D+03

LEFT FILM COEF.,H = 5.442777E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.988473E+01 F
RIGHT FILM COEF .,H = 4.654316E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.389484D+01 8.234978D+01 8.170062D+01 8.167096D+01 8.199715D+01 8.249695D+01 8.307141D+01 8.367798D+01 8.430312D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
OLIQUID	-2.626000D+03	-7.294445D-02 -9.244350D+03	3 VAPOR	-8.619220D+03	-2.394227D-01 -2.596624D+04

LEFT FILM COEF.,H = 4.654316E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.442777E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.988473D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430312D+01 8.367798D+01 8.307141D+01 8.249695D+01 8.199715D+01 8.167096D+01 8.170062D+01 8.234978D+01 8.389484D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
3 VAPOR	-2.098631D+03	-5.829534D-02 -9.537689D+03	OLIQUID	-7.372126D+02	-2.047813D-02 -2.629817D+03

LEFT FILM COEF.,H = 4.046181E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 9.988473E+01 F
RIGHT FILM COEF .,H = 4.015168E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.330012D+01 9.145745D+01 8.907868D+01 8.670141D+01 8.432527D+01 8.194993D+01 8.163028D+01 8.156996D+01 8.166357D+01
8.183317D+01 8.203477D+01 8.224819D+01 8.246596D+01 8.268645D+01 8.375025D+01 8.481406D+01 8.587789D+01 8.694172D+01
8.766908D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.420335D-01	0.	-7.347821D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.533303D+00	0.	-1.762089D+05
4	0.	0.	0.	0.

COMP	P R E S S U R E (PSIA)		T E M P E R A T U R E (F)		E N E R G Y (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63045D-01	9.98863D+01	9.98863D+01	3.90493D+05	0.	3.90493D+05	2.76168D-06

	AIR MASS	W A T E R M A S S (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS	--LIQUID	POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.79331D+03	2.64425D+01	0.	0.	2.64425D+01	1.72068D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.9862D+00 LBM/HR ENERGY BTU/HR = 9.8267D+02 (NORMAL= 9.8267D+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.3434D-06 STEP AIR= 1.9272D-04 NET VAPOR= 1.3140D+00 NET AIR= 1.8850D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.885046D+02 WATER VAPOR(LBM)= 1.314028D+00

* * * * * * * * * * * * * * * * * TIME = 3.666667E+00 HR = 2.200000E+02 MIN = 1.320000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU TOTAL NET BTU
0 VAPOR	-1.207535D+03	-3.354266D-02 -4.165621D+03	3 VAPOR	-1.725592D+03	-4.793313D-02 -8.201401D+03

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LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.380000E+01 F
RIGHT FILM COEF  .,H = 3.931473E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.996906D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.548708D+01  8.510995D+01  8.477316D+01  8.446641D+01  8.418568D+01  8.394446D+01  8.378385D+01  8.378014D+01  8.403625D+01
 8.610084D+01  8.816622D+01  9.023271D+01  9.230064D+01  9.392586D+01

HEAT STRUCTURE  2 BETWEEN COMPARTMENTS  3 AND  0 ROOF & CEILING
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -6.602912D+03 -1.834146D-01 -3.222870D+04          OLIQUID      -4.296736D+03 -1.193538D-01 -1.576060D+04
LEFT FILM COEF.,H = 4.742133E-01BTU/HR.FT2.F   FIRST MESH  K = 3.500000E-02 BTU/HR.FT.  BULK TEMP = 9.996906E+01 F
RIGHT FILM COEF  .,H = 1.000000E+04 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.566491D+01  9.229991D+01  9.152334D+01  9.096678D+01  9.041505D+01  8.987073D+01  8.933538D+01  8.880717D+01  8.828423D+01
 8.776470D+01  8.784715D+01  8.819126D+01  8.862322D+01  8.907842D+01  8.953869D+01  8.999987D+01

HEAT STRUCTURE  3 BETWEEN COMPARTMENTS  0 AND  3 FLOOR
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -8.143393D+03 -2.262057D-01 -3.429457D+04          3 VAPOR      -2.820657D+04 -7.835154D-01 -7.937673D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.025453E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.996906D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.617903D+01  8.601816D+01  8.638021D+01  8.736749D+01

HEAT STRUCTURE  4 BETWEEN COMPARTMENTS  3 AND  0 SOUTH WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -7.958648D+03 -2.210735D-01 -2.460546D+04          OLIQUID      -2.418886D+03 -6.719130D-02 -8.725617D+03
LEFT FILM COEF.,H = 5.444218E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.996906E+01 F
RIGHT FILM COEF  .,H = 4.650192E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.396103D+01  8.240616D+01  8.173979D+01  8.169361D+01  8.200829D+01  8.250178D+01  8.307349D+01  8.367916D+01  8.430389D+01

HEAT STRUCTURE  5 BETWEEN COMPARTMENTS  0 AND  3 WEST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    OLIQUID      -2.623321D+03 -7.287004D-02 -9.463071D+03          3 VAPOR      -8.631281D+03 -2.397578D-01 -2.668502D+04
LEFT FILM COEF.,H = 4.650192E-01BTU/HR.FT2.F   FIRST MESH  K = 1.050000E+00 BTU/HR.FT.  BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF  .,H = 5.444218E-01 BTU/HR.FT2.F   LAST MESH K = 1.050000E+00 BTU/HR.FT.F     BULK TEMP = 9.996906D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 8.430389D+01  8.367916D+01  8.307349D+01  8.250178D+01  8.200829D+01  8.169361D+01  8.173979D+01  8.240616D+01  8.396103D+01

HEAT STRUCTURE  6 BETWEEN COMPARTMENTS  3 AND  0 EAST WALL
TO LEFT COMP.  END STEP BTU/HR     STEP BTU  TOTAL NET BTU      TO RIGHT COMP.  END STEP BTU/HR     STEP BTU TOTAL NET BTU
    3 VAPOR      -2.094376D+03 -5.817713D-02 -9.712394D+03          OLIQUID      -7.362026D+02 -2.045008D-02 -2.691209D+03
LEFT FILM COEF.,H = 4.043779E-01BTU/HR.FT2.F   FIRST MESH  K = 6.700000E-02 BTU/HR.FT.  BULK TEMP = 9.996906E+01 F
RIGHT FILM COEF  .,H = 4.009780E-01 BTU/HR.FT2.F   LAST MESH K = 6.700000E-02 BTU/HR.FT.F     BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
 9.339390D+01  9.154763D+01  8.915192D+01  8.675765D+01  8.436448D+01  8.197209D+01  8.164664D+01  8.157974D+01  8.166844D+01
 8.183524D+01  8.203555D+01  8.224848D+01  8.246614D+01  8.268666D+01  8.375056D+01  8.481446D+01  8.587836D+01  8.694228D+01
 8.766914D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU
COMP.  STEP-LIQUID      STEP-VAPOR      NET-LIQUID      NET-VAPOR
  0  0.              -5.396136D-01  0.              -7.510069D+04
  1  0.               0.            0.               0.
  2  0.               0.            0.               0.
  3  0.              -1.533871D+00  0.              -1.808097D+05
  4  0.               0.            0.               0.
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COMP NO.	P R E S S U R E (PSIA) TOTAL	STEAM	T E M P E R A T U R E (F) ATMOS	POOL	E N E R G Y (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0
3	1.470010D+01	1.630450-01	9.997070+01	9.997070+01	3.904890+05	0	3.904890+05	2.761460-05

	AIR MASS (LBM)	W A T E R M A S S (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.792740+03	2.643850+01 0.	0.	2.643850+01	1.716300-01	0.	0	0

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.8332D+00 LBM/HR ENERGY BTU/HR = 9.6128D+02 (NORMAL= 9.6128D+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.3140D-06 STEP AIR= 1.8850D-04 NET VAPOR= 1.3180D+00 NET AIR= 1.8908D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.890764D+02 WATER VAPOR(LBM)= 1.318014D+00

* * * * * * * * * * * * * * * * * * TIME = 3.750000E+00 HR = 2.250000E+02 MIN = 1.350000E+04 SEC * * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.203570D+03	-3.343251D-02	-4.266084D+03	3 VAPOR	-1.721993D+03	-4.783317D-02	-6.345048D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.377500E+01 F
RIGHT FILM COEF .,H = 3.929091E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 1.000514D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.548938D+01 8.511248D+01 8.477507D+01 8.446809D+01 8.418823D+01 8.394962D+01 8.379382D+01 8.379653D+01 8.405824D+01
8.613930D+01 8.822111D+01 9.030400D+01 9.238830D+01 9.401714D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.539791D+03	-1.816611D-01	-3.277619D+04	OLIQUID	-4.296470D+03	-1.193464D-01	-1.611865D+04

LEFT FILM COEF.,H = 4.748054E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 1.000514E+02 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.579370D+01 9.245913D+01 9.167896D+01 9.110316D+01 9.053205D+01 8.996812D+01 8.941290D+01 8.886461D+01 8.832147D+01
8.778167D+01 8.723498D+01 8.819392D+01 8.862393D+01 8.907858D+01 8.953871D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-8.065982D+03	-2.240554D-01	-3.496996D+04	3 VAPOR	-2.828129D+04	-7.855309D-01	-8.173043D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.028364E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.000514D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.621536D+01 8.606005D+01 8.643015D+01 8.742375D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.969035D+03	-2.213620D-01	-2.526912D+04	OLIQUID	-2.416425D+03	-6.712293D-02	-8.927088D+03

LEFT FILM COEF.,H = 5.445543E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 1.000514E+02 F
RIGHT FILM COEF .,H = 4.646064E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.402637D+01 8.246208D+01 8.177900D+01 8.171657D+01 8.201975D+01 8.250683D+01 8.307570D+01 8.368038D+01 8.430463D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.620652D+03	-7.279589D-02	-9.681570D+03	3 VAPOR	-8.642546D+03	-2.400707D-01	-2.740477D+04

LEFT FILM COEF.,H = 4.646064E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.445543E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.000514D+02 F

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430463D+01 8.368038D+01 8.307570D+01 8.250683D+01 8.201975D+01 8.171657D+01 8.177900D+01 8.246208D+01 8.402537D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.090618D+03 -5.807273D-02 -9.886767D+03 OLIQUID -7.352610D+02 -2.042392D-02 -2.752520D+03
LEFT FILM COEF.,H = 4.041623E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 1.000514E+02 F
RIGHT FILM COEF .,H = 4.004421E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.348453D+01 9.163462D+01 8.922269D+01 8.681215D+01 8.440268D+01 8.199397D+01 8.166295D+01 8.158963D+01 8.167344D+01
8.183741D+01 8.203637D+01 8.224879D+01 8.246632D+01 8.268688D+01 8.375080D+01 8.481474D+01 8.587868D+01 8.694262D+01
8.766901D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.371770D-01	0.	-7.671588D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0
3	0.	-1.534591D+00	0.	-1.854123D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63045D-01	1.00053D+02	1.00053D+02	3.90486D+05	0.	3.90486D+05	2.76114D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.79218D+03	2.64346D+01	0.	0.	2.64346D+01	1.71204D-01	0.	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.6404D+00 LBM/HR ENERGY BTU/HR = 9.3429D+02 (NORMAL= 9.3429D+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2769D-06 STEP AIR= 1.8318D-04 NET VAPOR= 1.3219D+00 NET AIR= 1.8963D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.896344D+02 WATER VAPOR(LBM)= 1.321904D+00

* * * * * * * * * * * * * * * * TIME = 3.833333E+00 HR = 2.300000E+02 MIN = 1.380000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
0 VAPOR -1.199623D+03 -3.332289D-02 -4.366217D+03 3 VAPOR -1.718682D+03 -4.774118D-02 -P.488407D+03
LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.375000E+01 F
RIGHT FILM COEF .,H = 3.926879E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 1.001314D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.549154D+01 8.511495D+01 8.477701D+01 8.446984D+01 8.419089D+01 8.395492D+01 8.380389D+01 8.381287D+01 8.407997D+01
8.617679D+01 8.827435D+01 9.037295D+01 9.247291D+01 9.410536D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.480574D+03 -1.800162D-01 -3.331870D+04 OLIQUID -4.296174D+03 -1.193382D-01 -1.647668D+04
LEFT FILM COEF.,H = 4.757479E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 1.001314E+02 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.592062D+01 9.261357D+01 9.182976D+01 9.123538D+01 9.064554D+01 9.006268D+01 8.948827D+01 8.892060D+01 8.835794D+01
8.779856D+01 8.786293D+01 8.819667D+01 8.862469D+01 8.907875D+01 8.953875D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -7.987938D+03 -2.218875D-01 -3.563888D+04 3 VAPOR -2.835050D+04 -7.875137D-01 -8.409013D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.031036E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.001314D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.625197D+01 8.610220D+01 8.647996D+01 8.747957D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.978465D+03	-2.216240D-01	-2.597361D+04	OLIQUID	-2.413969D+03	-6.705471D-02	-9.128355D+03

LEFT FILM COEF.,H = 5.446715E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 1.001314E+02 F
RIGHT FILM COEF .,H = 4.641932E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.409086D+01 8.251755D+01 8.181824D+01 8.173982D+01 8.203153D+01 8.251211D+01 8.307802D+01 8.368164D+01 8.430535D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.617988D+03	-7.272190D-02	-9.899847D+03	3 VAPOR	-8.652773D+03	-2.403548D-01	-2.812541D+04

LEFT FILM COEF.,H = 4.641932E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.446715E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.001314D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430535D+01 8.368164D+01 8.307802D+01 8.251211D+01 8.203153D+01 8.173982D+01 8.181824D+01 8.251755D+01 8.409086D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-2.087160D+03	-5.797669D-02	-1.006084D+04	OLIQUID	-7.343805D+02	-2.039946D-02	-2.813754D+03

LEFT FILM COEF.,H = 4.039621E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 1.001314E+02 F
RIGHT FILM COEF .,H = 3.999087E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.357215D+01 9.171861D+01 8.929114D+01 8.686502D+01 8.443993D+01 8.201558D+01 8.167921D+01 8.159960D+01 8.167857D+01
8.183967D+01 8.203725D+01 8.224913D+01 8.246652D+01 8.268709D+01 8.375100D+01 8.481492D+01 8.587884D+01 8.694276D+01
8.766869D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.347247D-01	0.	-7.832373D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.535227D+00	0.	-1.900171D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	STEAM	TEMPERATURE (F) ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0.
3	1.47001D+01	1.63045D-01	1.00133D+02	1.00133D+02	3.90483D+05	0.	3.90483D+05	2.76084D-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR	ATMOS	LIQUID POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.000000D-01	0.	0.	0.
3	3.79164D+03	2.64308D+01	0.	0.	2.64308D+01	1.70791D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.4693D+00 LBM/HR ENERGY BTU/HR = 9.1035D+02 (NORMAL= 9.1035D+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2440D-06 STEP AIR= 1.7846D-04 NET VAPOR= 1.3257D+00 NET AIR= 1.9018D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.901766D+02 WATER VAPOR(LBM)= 1.325684D+00

* * * * * * * * * * * * * * * * * TIME = 3.916667E+00 HR = 2.350000E+02 MIN = 1.410000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS 0 AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
0 VAPOR	-1.195694D+03	-3.321375D-02	-4.466022D+03	3 VAPOR	-1.715768D+03	-4.766024D-02	-8.631507D+03

FCC

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.372500E+01 F
RIGHT FILM COEF .,H = 3.924900E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 1.002095D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.549359D+01 8.511736D+01 8.477896D+01 8.447166D+01 8.419366D+01 8.396035D+01 8.381404D+01 8.382916D+01 8.410143D+01
8.621336D+01 8.832602D+01 9.043969D+01 9.255467D+01 9.419069D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND 0 ROOF & CEILING
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -6.422163D+03 -1.783937D-01 -3.385631D+04 OLIQUID -4.295847D+03 -1.193291D-01 -1.683468D+04
LEFT FILM COEF.,H = 4.766684E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 1.002095E+02 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.604478D+01 9.276350D+01 9.197600D+01 9.136365D+01 9.075571D+01 9.015454D+01 8.956158D+01 8.897518D+01 8.839367D+01
8.781537D+01 8.787099D+01 8.819952D+01 8.862548D+01 8.907893D+01 8.953878D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS 0 AND 3 FLOOR
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -7.909310D+03 -2.197034D-01 -3.630127D+04 3 VAPOR -2.841554D+04 -7.893204D-01 -8.645540D+04
LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.033526E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.002095D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.628887D+01 8.614447D+01 8.652963D+01 8.753497D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND 0 SOUTH WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -7.987226D+03 -2.218673D-01 -2.659885D+04 OLIQUID -2.411515D+03 -6.698655D-02 -9.329417D+03
LEFT FILM COEF.,H = 5.447781E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 1.002095E+02 F
RIGHT FILM COEF .,H = 4.637794E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.415454D+01 8.257256D+01 8.185748D+01 8.176335D+01 8.204362D+01 8.251762D+01 8.308046D+01 8.368293D+01 8.430606D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS 0 AND 3 WEST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
OLIQUID -2.615327D+03 -7.264798D-02 -1.011790D+04 3 VAPOR -8.662274D+03 -2.406187D-01 -2.884688D+04
LEFT FILM COEF.,H = 4.637794E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.447781E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.002095D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430606D+01 8.368293D+01 8.308046D+01 8.251762D+01 8.204362D+01 8.176335D+01 8.185748D+01 8.257256D+01 8.415454D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.084128D+03 -5.789247D-02 -1.023464D+04 OLIQUID -7.335547D+02 -2.037652D-02 -2.874918D+03
LEFT FILM COEF.,H = 4.037830E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 1.002095E+02 F
RIGHT FILM COEF .,H = 3.993774E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.365692D+01 9.179978D+01 8.935741D+01 8.691634D+01 8.447628D+01 8.203693D+01 8.169541D+01 8.160967D+01 8.168382D+01
8.184202D+01 8.203818D+01 8.224949D+01 8.246672D+01 8.268729D+01 8.375115D+01 8.481501D+01 8.587887D+01 8.694273D+01
8.766822D+01

SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.322573D-01	0.	-7.992421D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.535753D+00	0.	-1.946236D+05
4	0.	0.	0.	0.

COMP	P R E S S U R E (PSIA)		T E M P E R A T U R E (F)		E N E R G Y (BTU)			CONVERGENCE
NO.	TOTAL	STEAM	ATMOS	POOL	ATMOS	POOL	TOTAL	DE/E
1	1.47000D+01	0.	7.34000D+01	7.34000D+01	0.	0.	0.	0
3	1.47001D+01	1.63045D-01	1.00211D+02	1.00211D+02	3.90479D+05	0.	3.90479D+05	2.76058D-06

	AIR MASS	W A T E R M A S S (LBM)				HUMIDITY	CONDENSATION	TRANSFER COEFFICIENTS MASS	HEAT
	(LBM)	VAPOR--ATMOS--LIQUID		POOL	TOTAL		(LB/S)	(LB MOL/S FT2)	(BTU/S FT2 R)
1	0.	0.	0.	0.	0.	6.00000D-01	0.	0.	0.
3	3.79111D+03	2.64271D+01	0.	0.	2.64271D+01	1.70389D-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.3278D+00 LBM/HR ENE Y BTU/HR = 8.9054D+02 (NORMAL= 8.9054D+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.2168D-06 STEP 'R= 1.7455D-04 NET VAPOR= 1.3294D+00 NET AIR= 1.9071D+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS O A.R(LBM)= 1.907060D+02 WATER VAPOR(LBM)= 1.329374D+00

* * * * * * * * * * * * * * * * * TIME = 4.000000E+00 HR = 2.400000E+02 MIN = 1.440000E+04 SEC * * * * * * * * * * * * * * * * *

HEAT STRUCTURE 1 BETWEEN COMPARTMENTS O AND 3 NORTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
O VAPOR	-1.191782D+03	-3.310507D-02	-4.565500D+03	3 VAPOR	-1.713274D+03	-4.759095D-02	-8.774380D+03

LEFT FILM COEF.,H = 2.000000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.370000E+01 F
RIGHT FILM COEF .,H = 3.923166E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 1.002861D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.549553D+01 8.511973D+01 8.478094D+01 8.447355D+01 8.419654D+01 8.396592D+01 8.382429D+01 8.384538D+01 8.412265D+01
8.624908D+01 8.837621D+01 9.050434D+01 9.263373D+01 9.427332D+01

HEAT STRUCTURE 2 BETWEEN COMPARTMENTS 3 AND O ROOF & CEILING

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-6.365509D+03	-1.768200D-01	-3.438911D+04	OLIQUID	-4.295489D+03	-1.193191D-01	-1.719265D+04

LEFT FILM COEF.,H = 4.775701E-01BTU/HR.FT2.F FIRST MESH K = 3.500000E-02 BTU/HR.FT. BULK TEMP = 1.002861E+02 F
RIGHT FILM COEF .,H = 1.000000E+04 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.616585D+01 9.290909D+01 9.211788D+01 9.148815D+01 9.086270D+01 9.024382D+01 8.963293D+01 8.902843D+01 8.842869D+01
8.783210D+01 8.787915D+01 8.820246D+01 8.862632D+01 8.907913D+01 8.953882D+01 8.999987D+01

HEAT STRUCTURE 3 BETWEEN COMPARTMENTS O AND 3 FLOOR

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-7.830142D+03	-2.175043D-01	-3.695708D+04	3 VAPOR	-2.847709D+04	-7.910301D-01	-8.882595D+04

LEFT FILM COEF.,H = 4.785000E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.035864E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.002861D+02 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.632601D+01 8.618691D+01 8.657917D+01 8.758995D+01

HEAT STRUCTURE 4 BETWEEN COMPARTMENTS 3 AND O SOUTH WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
3 VAPOR	-7.995463D+03	-2.220962D-01	-2.726480D+04	OLIQUID	-2.409061D+03	-6.691836D-02	-9.530274D+03

LEFT FILM COEF.,H = 5.448765E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 1.002861E+02 F
RIGHT FILM COEF .,H = 4.633648E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.421742D+01 8.262713D+01 8.189672D+01 8.178714D+01 8.205601D+01 8.252334D+01 8.308303D+01 8.368425D+01 8.430677D+01

HEAT STRUCTURE 5 BETWEEN COMPARTMENTS O AND 3 WEST WALL

TO LEFT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU	TO RIGHT COMP.	END STEP BTU/HR	STEP BTU	TOTAL NET BTU
OLIQUID	-2.612665D+03	-7.257403D-02	-1.033573D+04	3 VAPOR	-8.671207D+03	-2.408668D-01	-2.956911D+04

LEFT FILM COEF.,H = 4.633648E-01BTU/HR.FT2.F FIRST MESH K = 1.050000E+00 BTU/HR.FT. BULK TEMP = 9.000000E+01 F
RIGHT FILM COEF .,H = 5.448765E-01 BTU/HR.FT2.F LAST MESH K = 1.050000E+00 BTU/HR.FT.F BULK TEMP = 1.002861D+02 F

RCC

MESH POINT TEMPERATURES (F), LEFT TO RIGHT
8.430677D+01 8.368425D+01 8.308303D+01 8.252334D+01 8.205601D+01 8.178714D+01 8.189672D+01 8.262713D+01 8.421742D+01

HEAT STRUCTURE 6 BETWEEN COMPARTMENTS 3 AND 0 EAST WALL
TO LEFT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU TO RIGHT COMP. END STEP BTU/HR STEP BTU TOTAL NET BTU
3 VAPOR -2.081547D+03 -5.782076D-02 -1.040821D+04 OLIQUID -7.327779D+02 -2.035494D-02 -2.936015D+03
LEFT FILM COEF.,H = 4.036264E-01BTU/HR.FT2.F FIRST MESH K = 6.700000E-02 BTU/HR.FT. BULK TEMP = 1.002861E+02 F
RIGHT FILM COEF .,H = 3.988480E-01 BTU/HR.FT2.F LAST MESH K = 6.700000E-02 BTU/HR.FT.F BULK TEMP = 9.000000D+01 F
MESH POINT TEMPERATURES (F), LEFT TO RIGHT
9.373903D+01 9.181831D+01 8.942163D+01 8.696621D+01 8.451177D+01 8.205803D+01 8.171154D+01 8.161981D+01 8.168919D+01
8.184446D+01 8.203916D+01 8.224987D+01 8.246694D+01 8.268750D+01 8.375126D+01 8.481502D+01 8.587879D+01 8.694254D+01
8.766759D+01
SUMMARY OF HEAT TRANSFER TO COMPARTMENTS BY HEAT STRUCTURES - UNITS ARE BTU

COMP.	STEP-LIQUID	STEP-VAPOR	NET-LIQUID	NET-VAPOR
0	0.	-5.297758D-01	0.	-8.151726D+04
1	0.	0.	0.	0.
2	0.	0.	0.	0.
3	0.	-1.536225D+00	0.	-1.992316D+05
4	0.	0.	0.	0.

COMP NO.	PRESSURE (PSIA) TOTAL	TEMPERATURE (F) STEAM	ATMOS	POOL	ENERGY (BTU) ATMOS	POOL	TOTAL	CONVERGENCE DE/E
1	1.470000D+01	0.	7.340000D+01	7.340000D+01	0.	0.	0.	0.
3	1.470010D+01	1.630450-01	1.002880+02	1.002880+02	3.904760+05	0.	3.904760+05	2.760330-06

	AIR MASS (LBM)	WATER MASS (LBM) VAPOR--ATMOS--LIQUID	POOL	TOTAL	HUMIDITY	CONDENSATION (LB/S)	TRANSFER COEFFICIENTS MASS (LB MOL/S FT2)	HEAT (BTU/S FT2 R)
1	0.	0. 0.	0.	0	6.000000D-01	0.	0.	0.
3	3.790590+03	2.642350+01 0.	0.	2.642350+01	1.699960-01	0.	0.	0.

COMP. 3 LEAKAGE OUTFLOW- MASS= 6.200800+00 LBM/HR ENERGY BTU/HR = 8.727900+02 (NORMAL= 8.727900+02 PENETRATION= 0.)
STEP AND NET MASS LOSSES LBM STEP VAPOR= 1.192400-06 STEP AIR= 1.710500-04 NET VAPOR= 1.333000+00 NET AIR= 1.912200+02
TOTAL NET CONTAINMENT LOSS TO ATMOSPHERE IS 0 AIR(LBM)= 1.912243D+02 WATER VAPOR(LBM)= 1.332987D+00

******** COMPUTER TIME FOR THIS CASE WAS 15.7214 MIN.

******** COMPUTER TIME FOR ALL JOBS WAS 15.7217 MIN.

LOCAL FILE INFORMATION.

FILENAME	LENGTH/PRUS	TYPE	STATUS	FS	LEVEL
INPUT	10	IN.*	EOR	NAD	
PROC1	1	LO.	EOR		
OUTPUT	1039	LO.	EOR WRITE		
ZZZINFO	1	LO.	BOI		
CNTMPT	15	LO.	EOR		
DOUNQUZ	1	LO.	BOI		
OFXTGJM	1	LO.	BOI		
UBQF26Z	1	LO.	BOI		
LT28ABS	1171	PM.*	EOR		
MU39BCT	1	LO.	BOI		

TOTAL = 10

A20

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MDFK    POWER COMPUTING/990 - NOS 2.7.1.10.     NOS 2.7.1 ST=MAC.    89/12/14. 18.32.50.

18.14.43.NP110,T1777,SCIK,STMAC. LT28NEW
18.14.43.USER,HNKOO1,,NC.
18.14.43.ABSC.  K.
18.14.43.CHARGE,N942903,ADMIN.
18.14.46.  CHARGE = N942903, PROJECT = ADMIN.
18.14.48.ZZZZZG1.
18.14.48.PROC1.  SYSTEM PROLOGUE
18.14.48.COMMENT.  SYSTEM PROLOG
18.14.48.NEWS(A).
18.14.51.  UITAB BUSY, AT 000211.
18.14.51.CHEKEXP.
18.14.52.  INQUIRY COMPLETE.
18.14.53.REVERT.                                    BHNKOOO1  ZC2025
18.14.53.INFO.
18.14.53.ATTACHP,CNTMPTLT28,,,QALIB.
18.14.58.      STOP
18.14.58.      035200 MAXIMUM EXECUTION FL.
18.14.58.       0.085 CP SECONDS EXECUTION TIME.
18.14.58.BEGIN,,CNTMPT,VER=JUL82.
18.14.58.*.*
18.14.58.*.*  COPYRIGHT, 1989, POWER COMPUTING
18.14.58.*.*  COMPANY.  REPRODUCTION PROHIBITED
18.14.58.*.*  UNLESS SPECIFICALLY AUTHORIZED BY
18.14.58.*.*  SEPARATE WRITING.
18.14.58.*.*
18.14.58.*.*****************************************
18.14.58.*.                                         *
18.14.58.*.*                                        *
18.14.58.*.*          P C C    Q A L I B            *
18.14.58.*.*                                        *
18.14.58.*.*             CNTEMPT-LT28               *
18.14.58.*.*                                        *
18.14.58.*.*                                        *
18.14.58.*.*****************************************
18.14.58.DF,OFF.
18.14.58.********************
18.14.58.* JOB DAYFILE OFF *
18.14.58.********************
18.14.58.DF,ON.
18.14.58.********************
18.14.58.* JOB DAYFILE ON  *
18.14.58.********************
18.14.58.*.*****************************************
18.14.58.*.                                         *
18.14.58.*.*                                        *
18.14.58.*.*    NOS2 VERSION JUL82                  *
18.14.58.*.*                                        *
18.14.58.*.*****************************************
18.14.58.*.*
18.14.58.DF,OFF.
18.14.58.********************
18.14.58.* JOB DAYFILE OFF *
18.14.58.********************
18.15.03.DF,ON.
18.15.03.********************
18.15.03.* JOB DAYFILE ON  *
18.15.03.********************
18.15.03.  ENDIF,HELPME.
18.15.03.ENDIF,BADVER.
18.15.03.IFE,$YES$.EQ.$NO$.OR.$YES$.EQ.$N$.OR.$YES$.EQ.$O$,NOTELL
18.15.03.ELSE,NOTELL.
18.15.03.  COPYBR,NEWSFIL,OUTPUT.
18.15.03.  FILE   0 FILES          0 RECS          0 WORDS
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18.15.03.  GET THE APPLICATION INPUT FILE.
18.15.03.*. GET THE NONE TABLE
18.15.03.IFE,$NONE$.EQ.$NONE$,GETUSERS.
18.15.03.RETURN,TAPE15.
18.15.03.ATTACHP,CTMPTBLT28,JUL82,O,QALIB.
18.15.07.      STOP
18.15.07.      035200 MAXIMUM EXECUTION FL.
18.15.07.       0.114 CP SECONDS EXECUTION TIME.
18.15.07.ELSE,GETUSERS.
18.15.07.ENDIF,GETUSERS.
18.15.07.*.****************************************
18.15.07.*. GET THE APPLICATION PROGRAM
18.15.07.*.  ATTACHP,CNTMPTLT28,JUL82,O,QALIB.
18.15.07.*.****************************************
18.15.07.ATTACHP,CNTMPTLT28,JUL82,O,QALIB.
18.15.09.      STOP
18.15.09.      035200 MAXIMUM EXECUTION FL.
18.15.09.       0.085 CP SECONDS EXECUTION TIME.
18.15.09.REWIND,TAPE15.
18.15.09.REDUCE,-.
18.15.09.RFL,CM=360000,EC=1.
18.15.09.DF,ON.
18.15.09.*******************
18.15.09.* JOB DAYFILE ON  *
18.15.09.*******************
18.15.09.LT28ABS(INPUT,OUTPUT,PL=9999999)
18.15.10.****************************************
18.15.10.* CONTEMPT LT-28  FROM NESC (ARGONNE). *
18.15.10.* INCLUDES ENERGY INC. MODIFICATIONS   *
18.15.10.*  TO FIX THE MK I & MK II MODELS.      *
18.15.10.*  AND THE PRESSURE-FLASH MODEL         *
18.15.10.*  (E.I. IDENTS 'PSFIX'+'PFLFIX', AS    *
18.15.10.*  IDENT 'PSPFL-FIX' IN THIS SOURCE).   *
18.15.10.* INCLUDES PLOTTING CAPABILITY VIA      *
18.15.10.*  CALCOMP-PCCPOST (IDENT 'UCC/PLOT').  *
18.15.10.* UCC INSTALLATION DATE- 14 JULY 82.    *
18.15.10.* PCC RE-INSTALLATION ON NOS2- 18AUG89* *
18.15.10.****************************************
18.32.49.      STOP
18.32.49.      360000   FINAL EXECUTION FL.
18.32.49.    943.318 CP SECONDS EXECUTION TIME.
18.32.49.DF,OFF.
18.32.49.*******************
18.32.49.* JOB DAYFILE OFF *
18.32.49.*******************
18.32.50.DF,ON.
18.32.50.******************
18.32.50.* JOB DAYFILE ON  *
18.32.50.******************
18.32.50.*.*
18.32.50.*.****************************************
18.32.50.*.*                                       *
18.32.50.*.*     CONTEMPT-LT28 NORMAL TERMINATION  *
18.32.50.*.*                                       *
18.32.50.*.****************************************
18.32.50.*.*
18.32.50.REVERT.
18.32.50.RFL(EC=277)
18.32.50.ENQUIRE,F.
18.32.50.  ENQUIRY COMPLETE.
18.32.50.UEPF,       0.155KUNS.
18.32.50.UEMS,       6.607KUNS.
18.32.50.UECP,     944.044SECS.
18.32.50.  SRU,    2004.747UNTS.
18.32.50.$OUT(*/OP=E)
```

```
18.32.50. NO FILES PROCESSED.
18.32.50.$DAYFILE(OUTPUT,JT=D)
18.32.50.IABG,    10108 SDBS FN=OUTPUT.
18.32.50.POWER COMPUTING/990 - NOS 2.7.1.10
18.32.50.DATE:              89/12/14.
18.32.50.JSN:               MDFK
```

RCC

INFO NP1104F 0021004713