These data are made available to purchasers of the Kodak Q-60

Color Input Targets. These files contain the batch average data

for each separately identified batch of targets made by Kodak.

The target batch number is contained in the lower border of the

target and is in the form of YYYY:MM.

At this point in time Kodak is not offering calibrated targets.

The within-batch variability data is included in the data file

for each batch. Currently the within-batch variability, for the

great majority of targets, is equal to or less than the

measurement variability allowed for calibrated targets.

Therefore, the Kodak batch targets can be considered effectively

equal to calibrated targets.

It should be noted that all transmittance data is based on an

opal reference as defined in ISO 5-2 and identified in ISO 13655.

Standards Requirements

The following data is extracted from ANSI/IT8.7/1, "Graphic

technology Color transmission target for input scanner

calibration", and IT8.7/2 "Graphic technology Color reflection

target for input scanner calibration". These sections define the

allowable tolerances, measurement requirements and data reporting

requirements of the standards. The Kodak Q60 targets are

manufactured in accordance with these standards.

4.7 Allowable tolerances on patch values

4.7.1 Uncalibrated targets

4.7.1.1 For all targets manufactured

For the patches contained within A1 through L3, A5 through L7,

and A9 through L11, 99% shall be within 10 E units of the aim

values specified in this standard.

4.7.1.2 For each manufacturing batch

99 % of the patches within the manufacturing batch shall be

within 5 E units of the reference as follows:

the reference for patches A1 through L19, D-min and D-

max shall be the reported batch mean;

for the 22-step neutral scale the reference shall be the

values specified in this standard.

NOTE Although the user is most concerned with the

statistics of the patches on a particular target, the

manufacturer of targets must apply statistics to the

individual patches within a manufacturing run. The above

statistics apply to individual patches within the run and not

to patches on a particular target. The above requirements,

therefore, should not be interpreted that 99% of the patches

on each target are within the tolerances specified in this

standard. Details of quality control statistical procedures

used may be requested from the manufacturer of targets.

4.7.2 Calibrated targets

Calibrated targets are uncalibrated targets which have been

measured. The measured values for each patch shall be provided

together with a certificate as to the degree of conformance of

the measuring laboratory to an accredited transmission

measurement assurance program (MAP) sponsored by a recognized

national standardizing laboratory.

NOTE The goal is that all measurements will be accurate

within 2 E.

4.8 Spectral measurement and colorimetric calculation

Measurement of the targets shall be carried out using a

spectrophotometer with normal/diffuse or diffuse/normal geometry

as defined for total transmittance measurements as specified in

Reference 1. In either geometry, the emulsion side of the film

shall face the sphere. Spectral transmittance measurements shall

be absolute, made relative to air. Tristimulus values shall be

calculated, in accordance with the procedures of Reference 7,

based upon a two degree standard observer, and D50 illuminant,

with no greater than a 10 nm data interval and a bandpass equal

to the measurement interval.

NOTE The color of the normally white object-color stimulus

shall correspond to the tristimulus values of D50 where Yn is

equal to 100.

4.9 Data reporting

For all targets the batch-specific mean value and standard

deviation for each patch shall be available from the originator

of targets manufactured in accordance with this standard. Mean

and standard deviation values shall be provided as X,Y,Z

tristimulus values. Mean values shall also be provided as CIELAB

and standard deviation as CIE E. All values shall be provided

to two decimal places.

When calibrated targets are offered, the measured values for all

target patches shall be provided. These data shall be reported as

X,Y,Z tristimulus values, to two decimal places. Measurements

shall be in accordance with Section 4.8.

The data shall be available on a 3.5 inch MS-DOS formatted 720

kbyte magnetic disk in the data format specified in Section 4.10.

Other data may be provided as optional information (eg, CIELAB,

other illuminants, etc.)

4.10 Data file format

File format

A common file format is used for the IT8.7 series of standards as

well as several CGATS standards. Therefore, all legal keywords

and format identifiers are defined, even though some may not

apply to the data associated with this standard.

The file format shall be an ASCII format keyword value file.

The first 7 characters in the file shall be: IT8.7/1.

Fields within the file shall be separated by white space. Valid

white space characters are space (position 2/0 of ISO/IEC 646),

carriage return (position 0/13 of ISO/IEC 646), newline (position

0/10 of ISO/IEC 646), and tab (position 0/9 of ISO/IEC 646 ) .

Keywords may be separated from values using any valid white

space character. Only the space or tab shall precede a keyword

on a line. Comments shall be preceded by a single comment

character (a single character keyword). The comment character is

the "#" (position 2/3 of ISO/IEC 646) symbol. Comments may begin

any place on a line, and are terminated by a newline, or carriage

return.

Keywords and data format identifiers are case sensitive and shall

be upper case.

The specific syntax and usage information for each keyword shall

be as described below.

The required keywords for all IT8.7/1 files are:

IT8.7/1 - Used to identify data related to this

standard.

ORIGINATOR - Identifies the specific organization or

system that created the data file.

DESCRIPTOR - Describes the purpose or contents of the

data file.

CREATED - Date of creation of data file.

MANUFACTURER - Identifies the manufacturer of the scanner

calibration target.

PROD\_DATE - Identifies year and month of production of

the target in the form yyyy:mm.

SERIAL - Serial number of individual target.

MATERIAL - Identifies material used in creating

scanner calibration target.

NUMBER\_OF\_FIELDS - Number of fields (data format identifiers)

that are included in the data format

definition that follows.

BEGIN\_DATA\_FORMAT - Begins definition of field

position/interpretation of a data set.

END\_DATA\_FORMAT - Ends data format definition.

NUMBER\_OF\_SETS - Number of repeats or sets of data

corresponding to the data format fields

that are included in the data to follow.

BEGIN\_DATA - Marks the beginning of the stream of data

sets.

END\_DATA - Marks the end of the stream of data sets.

Additionally defined, but not required, keywords are:

# - Single character indicating comment

follows.

KEYWORD - Used to define vendor specific keywords.

INSTRUMENTATION - Used to report the specific instrumentation

used (manufacturer and model number) to

generate the data reported

MEASUREMENT\_SOURCE - Illumination used for spectral measurements

PRINT\_CONDITIONS - Used to define the characteristics of the

printed sheet being reported.

ILLUMINANT - Defines the illuminant used when

calculating tristimulus values.

OBSERVER - Defines whether 2ø or 10ø observer has been

used in the calculation of tristimulus

values.

FILTER\_STATUS - Defines spectral response of the instrument

used for densitometry.

Values

Unless otherwise noted each keyword has a character string value

associated with it. All character string values shall be enclosed

in quotes (position 2/2 of ISO/IEC 646) regardless of whether

there is white space contained within the string. Enclosed in

quotes means beginning and ending the character string with the "

symbol. The " symbol itself shall be represented within a string

as "".

Comments shall be preceded by the comment character (#), and end

with a newline, or carriage return. Comments need not be

enclosed in " symbols.

The value associated with keywords NUMBER\_OF\_FIELDS and

NUMBER\_OF\_SETS shall be an integer.

The BEGIN\_ , END\_ keywords do not have explicit values associated

with them but enclose either the data format definition or

associated data streams.

Data format identifiers

Data format (enclosed by BEGIN\_DATA\_FORMAT and END\_DATA\_FORMAT)

describes the meaning of each field of data within a set. Data

formats shall be composed of identifiers listed below, or

defined keywords. Unknown entries in the data format definition

shall be read, but may be ignored by automated readers. Data

format identifiers shall be uppercase. The data type associated

with each data format shall be assumed to be a real (may contain

a decimal point) unless separately defined as integer (I) or

character string (CS). Character string data shall be enclosed in

quotes except in the case of SAMPLE\_ID where the quotes are not

required if the sample identifier does not contain white space.

Each data repeat shall be divided by a line terminator character

(new line or carriage return).

The following are the default data format identifiers:

SAMPLE\_ID (CS) - Identifies sample which data represents

STRING (CS) - Identifies label, or other non-machine

readable value. Value must begin and end

with a " symbol.

CMYK\_C - Cyan component of CMYK data expressed as a

percentage

CMYK\_M - Magenta component of CMYK data expressed as

a percentage

CMYK\_Y - Yellow component of CMYK data expressed as

a percentage

CMYK\_K - Black component of CMYK data expressed as a

percentage

D\_RED - Red filter density

D\_GREEN - Green filter density

D\_BLUE - Blue filter density

D\_VIS - Visual filter density

RGB\_R - Red component of RGB data

RGB\_G - Green component of RGB data

RGB\_B - Blue component of RGB data

SPECTRAL\_NM - Wavelength of measurement expressed in

nanometers

SPECTRAL\_PCT - Percentage reflectance/transmittance

XYZ\_X - X component of tristimulus data

XYZ\_Y - Y component of tristimulus data

XYZ\_Z - Z component of tristimulus data

XYY\_X - x component of chromaticity data

XYY\_Y - y component of chromaticity data

XYY\_CAPY - Y component of tristimulus data

LAB\_L - L\* component of CIELAB data

LAB\_A - a\* component of CIELAB data

LAB\_B - b\* component of CIELAB data

LAB\_C - C\*ab component of CIELAB data

LAB\_H - hab component of CIELAB data

LAB\_DE - CIE Eab

STDEV\_X - Standard deviation of X (tristimulus data)

STDEV\_Y - Standard deviation of Y (tristimulus data)

STDEV\_Z - Standard deviation of Z (tristimulus data)

STDEV\_L - Standard deviation of L\*

STDEV\_A - Standard deviation of a\*

STDEV\_B - Standard deviation of b\*

STDEV\_DE - Standard deviation of CIE E

Although not required, it is strongly recommended that data

format identifiers be placed on a single line. However, the

maximum line length shall not exceed 240 characters. In addition

the data associated with a data format should use the same

location(s) for carriage return and/or line feeds to enhance

human readability.

IT8.7/1

ORIGINATOR "Eastman Kodak Company"

DESCRIPTOR "Q60E3, IT8.7/1 DATA FILES, 35MM EKTACHROME"

CREATED "December 3, 2009"

MANUFACTURER " Eastman Kodak Company"

PROD\_DATE "2009:11"

SERIAL "2009:11 BATCH AVERAGE DATA"

MATERIAL "Ektachrome Product Family"

KEYWORD "MEAN\_DE" # Mean Delta E of samples compared to batch average

# STDEV\_DE in this data set is the average of the standard deviations of

# L\*, a\* and b\*. It is used to derive an estimate of the chi-squared

# parameter which is recommended as the predictor of the variability of

# deltaE. See file on this disk called chi-sq.\*

#

# It should be noted that all transmittance data is based on an

# opal reference as defined in ISO 5-2 and identified in ISO 13655.

#

NUMBER\_OF\_FIELDS 12

BEGIN\_DATA\_FORMAT

SAMPLE\_ID XYZ\_X XYZ\_Y XYZ\_Z LAB\_L LAB\_A LAB\_B STDEV\_X STDEV\_Y STDEV\_Z

MEAN\_DE STDEV\_DE

END\_DATA\_FORMAT

NUMBER\_OF\_SETS 264

BEGIN\_DATA

#ID X Y Z L A B S\_X S\_Y S\_Z M\_DE S\_DE

A01 2.53 2.09 1.56 15.96 10.83 1.88 0.12 0.11 0.14 0.70 0.46

A02 3.01 2.00 1.26 15.48 21.81 4.66 0.09 0.07 0.07 0.57 0.36

A03 3.67 2.03 1.08 15.66 31.72 7.50 0.09 0.06 0.03 0.34 0.20

A04 4.04 2.08 0.96 15.90 36.10 9.70 0.10 0.05 0.03 0.40 0.29

A05 10.25 8.65 6.32 35.30 15.71 3.52 0.26 0.23 0.17 0.58 0.38

A06 12.10 8.49 5.30 34.97 30.60 7.82 0.35 0.26 0.25 0.69 0.45

A07 14.43 8.38 4.42 34.76 46.63 12.16 0.29 0.19 0.12 0.87 0.50

A08 15.84 8.36 4.18 34.72 55.20 13.47 0.30 0.19 0.11 0.36 0.21

A09 29.47 28.46 22.12 60.30 7.91 2.60 0.50 0.49 0.25 0.54 0.35

A10 31.19 28.08 20.60 59.96 15.82 5.02 0.37 0.38 0.16 0.72 0.43

A11 33.35 28.05 20.10 59.93 23.69 6.00 0.48 0.47 0.18 0.60 0.41

A12 35.23 28.47 19.75 60.31 28.53 7.39 0.49 0.49 0.19 0.58 0.39

A13 59.63 62.58 54.47 83.22 -1.70 -3.06 0.50 0.58 0.38 0.52 0.34

A14 60.78 62.08 52.98 82.96 2.16 -1.92 0.44 0.46 0.39 0.28 0.17

A15 60.95 63.46 50.99 83.68 -0.56 1.52 0.31 0.35 0.10 0.28 0.20

A16 57.89 60.25 49.08 81.97 -0.49 0.72 0.66 0.69 0.38 0.40 0.23

A17 60.05 61.79 49.64 82.80 1.13 1.52 0.36 0.37 0.47 0.39 0.24

A18 59.78 62.65 50.50 83.26 -1.48 1.34 0.23 0.22 0.37 0.32 0.19

A19 58.70 60.70 52.76 82.22 0.41 -2.96 0.55 0.56 0.25 0.34 0.23

B01 3.60 3.14 1.88 20.59 9.34 6.44 0.13 0.12 0.09 0.52 0.33

B02 4.35 3.21 1.23 20.85 19.17 14.37 0.13 0.10 0.06 0.49 0.33

B03 5.07 3.23 0.77 20.92 28.11 21.65 0.17 0.12 0.07 0.73 0.47

B04 5.90 3.26 0.39 21.04 37.43 28.95 0.14 0.08 0.01 0.41 0.30

B05 13.03 11.43 6.54 40.29 13.95 11.15 0.36 0.31 0.23 0.63 0.42

B06 15.06 11.31 4.09 40.10 27.44 23.29 0.36 0.31 0.16 0.54 0.34

B07 18.48 11.99 2.59 41.20 41.71 35.58 0.33 0.24 0.16 0.71 0.42

B08 19.67 11.30 1.36 40.08 52.60 45.82 0.20 0.14 0.03 0.28 0.18

B09 34.57 34.24 25.27 65.15 5.43 5.10 0.51 0.52 0.36 0.45 0.30

B10 35.64 33.56 21.98 64.61 11.39 10.30 0.55 0.52 0.43 0.43 0.25

B11 38.82 35.23 20.79 65.93 16.06 14.94 0.42 0.43 0.52 0.74 0.46

B12 38.95 34.68 19.09 65.49 18.33 17.73 0.53 0.49 0.34 0.63 0.39

B13 54.01 58.91 53.45 81.24 -6.99 -5.38 0.40 0.39 0.27 0.33 0.23

B14 55.31 53.91 50.02 78.41 8.52 -6.49 0.38 0.41 0.19 0.50 0.31

B15 60.31 63.17 42.56 83.53 -1.41 11.22 0.35 0.35 0.50 0.39 0.24

B16 46.18 48.10 39.24 74.89 -0.58 0.60 0.53 0.49 0.24 0.46 0.31

B17 53.14 52.76 39.46 77.73 5.94 5.21 0.46 0.51 0.49 0.40 0.26

B18 51.68 57.03 40.92 80.19 -8.47 7.55 0.44 0.45 0.20 0.47 0.31

B19 46.98 48.32 48.57 75.03 1.09 -10.67 0.57 0.60 0.18 0.53 0.34

C01 6.67 6.38 3.55 30.35 5.45 9.84 0.15 0.16 0.13 0.52 0.33

C02 7.37 6.65 2.29 30.99 9.67 20.46 0.16 0.14 0.12 0.69 0.41

C03 7.89 6.74 1.33 31.20 13.61 30.86 0.18 0.15 0.07 0.50 0.33

C04 8.84 7.09 0.63 32.02 18.49 43.27 0.19 0.18 0.01 0.57 0.36

C05 24.62 23.72 11.44 55.80 7.71 20.29 0.48 0.51 0.47 0.91 0.59

C06 27.06 24.15 6.43 56.24 15.98 39.11 0.49 0.46 0.15 0.52 0.35

C07 28.80 24.44 3.08 56.52 21.65 58.19 0.69 0.68 0.13 0.75 0.47

C08 30.85 24.93 1.37 57.00 27.28 74.83 0.53 0.50 0.08 0.79 0.49

C09 39.99 40.51 28.00 69.83 2.89 8.50 0.52 0.57 0.39 0.62 0.40

C10 41.60 41.22 23.73 70.33 5.70 16.83 0.54 0.58 0.35 0.46 0.29

C11 47.18 45.38 21.75 73.14 9.77 25.47 0.26 0.29 0.26 0.54 0.33

C12 45.84 42.43 12.43 71.17 14.53 43.89 0.28 0.33 0.25 0.44 0.30

C13 49.33 55.54 53.06 79.35 -11.11 -8.22 0.51 0.53 0.30 0.38 0.25

C14 51.47 47.81 49.00 74.70 14.63 -11.72 0.44 0.48 0.30 0.49 0.33

C15 59.16 62.42 36.85 83.14 -2.44 18.06 0.38 0.40 0.15 0.38 0.23

C16 37.12 38.36 31.91 68.28 0.43 -0.39 0.52 0.49 0.46 0.45 0.30

C17 48.22 45.75 32.38 73.38 11.61 7.69 0.50 0.48 0.37 0.48 0.33

C18 46.27 53.13 35.27 77.95 -13.51 11.33 0.54 0.51 0.34 0.46 0.31

C19 39.16 39.30 47.03 68.97 4.03 -19.32 0.57 0.50 0.45 0.54 0.36

D01 4.54 4.72 2.72 25.93 -0.20 8.19 0.15 0.16 0.15 0.69 0.42

D02 4.44 4.66 1.67 25.75 -0.76 17.48 0.17 0.17 0.06 0.68 0.43

D03 4.59 4.91 1.03 26.46 -1.82 26.86 0.12 0.14 0.03 0.49 0.33

D04 4.72 5.13 0.63 27.11 -2.94 34.78 0.14 0.14 0.01 0.65 0.43

D05 18.35 19.17 9.66 50.88 -0.66 17.46 0.44 0.44 0.20 0.54 0.35

D06 18.13 19.21 5.04 50.93 -2.04 36.64 0.45 0.45 0.11 0.65 0.40

D07 18.39 19.74 2.43 51.54 -3.36 54.71 0.41 0.40 0.08 0.66 0.42

D08 18.78 20.32 1.36 52.19 -4.12 66.73 0.35 0.37 0.03 0.64 0.42

D09 45.25 47.80 23.86 74.70 -2.40 24.13 0.69 0.77 0.22 0.57 0.39

D10 45.36 48.76 13.67 75.30 -4.69 47.58 0.45 0.49 0.40 0.51 0.34

D11 45.90 49.30 6.81 75.64 -4.60 70.93 0.51 0.50 0.16 0.81 0.46

D12 45.63 48.44 4.76 75.10 -3.04 79.78 0.38 0.39 0.11 0.49 0.29

D13 43.67 51.22 52.17 76.81 -16.05 -11.63 0.54 0.60 0.49 0.53 0.33

D14 45.88 39.96 46.20 69.44 22.08 -17.52 0.46 0.49 0.19 0.50 0.35

D15 58.48 61.76 30.19 82.79 -2.58 27.29 0.71 0.71 0.45 0.43 0.27

D16 28.65 29.77 24.80 61.46 -0.25 -0.41 0.41 0.45 0.25 0.45 0.31

D17 42.74 38.09 25.18 68.09 18.79 10.33 0.44 0.43 0.59 0.63 0.41

D18 39.64 48.14 28.42 74.91 -20.07 16.56 0.49 0.52 0.20 0.54 0.33

D19 31.60 31.28 44.65 62.74 5.32 -27.20 0.42 0.41 0.20 0.47 0.32

E01 5.79 6.44 3.76 30.50 -4.67 8.74 0.10 0.11 0.08 0.50 0.32

E02 5.48 6.74 2.43 31.22 -11.23 19.63 0.14 0.17 0.11 0.42 0.26

E03 5.12 6.95 1.60 31.68 -17.65 28.49 0.13 0.16 0.04 0.59 0.38

E04 4.77 7.15 0.86 32.13 -23.89 39.34 0.16 0.23 0.04 0.66 0.44

E05 25.46 29.22 15.03 60.97 -11.02 19.34 0.46 0.53 0.31 0.65 0.39

E06 23.50 29.52 9.25 61.24 -20.63 36.76 0.51 0.56 0.29 0.65 0.42

E07 21.89 29.47 5.08 61.19 -27.70 54.10 0.38 0.48 0.15 0.54 0.33

E08 21.99 29.75 5.06 61.43 -28.27 54.62 0.31 0.37 0.13 0.39 0.26

E09 44.24 48.33 32.33 75.03 -6.73 10.61 0.72 0.80 0.73 0.69 0.43

E10 42.66 48.71 25.19 75.27 -12.41 22.70 0.60 0.60 0.32 0.64 0.41

E11 40.68 48.14 20.08 74.91 -16.88 31.89 0.52 0.54 0.39 0.57 0.37

E12 39.91 47.99 16.51 74.82 -18.81 39.60 0.53 0.51 0.17 0.60 0.41

E13 40.43 49.11 53.60 75.52 -20.27 -15.41 0.57 0.60 0.47 0.37 0.24

E14 42.35 34.33 44.50 65.22 29.96 -22.76 0.55 0.55 0.37 0.50 0.34

E15 56.86 60.43 24.20 82.07 -3.44 36.22 0.67 0.70 0.49 0.42 0.26

E16 20.80 21.54 17.34 53.53 0.18 0.98 0.39 0.36 0.38 0.65 0.42

E17 37.41 31.51 18.33 62.93 24.45 14.97 0.53 0.52 0.35 0.45 0.27

E18 34.47 44.07 23.11 72.27 -25.65 21.35 0.55 0.60 0.59 0.63 0.40

E19 24.73 23.76 41.20 55.85 7.99 -34.79 0.42 0.42 0.40 0.55 0.36

F01 4.00 4.82 3.55 26.23 -8.92 2.72 0.08 0.08 0.07 0.67 0.41

F02 3.37 4.96 3.02 26.62 -20.20 7.11 0.05 0.07 0.09 0.54 0.30

F03 2.93 5.12 2.84 27.07 -29.68 9.22 0.08 0.12 0.08 0.56 0.36

F04 2.44 4.98 2.23 26.68 -37.16 13.60 0.07 0.14 0.11 0.78 0.50

F05 11.54 14.53 10.24 44.99 -16.49 5.39 0.22 0.26 0.11 0.53 0.35

F06 9.42 14.93 8.91 45.53 -34.99 10.85 0.29 0.43 0.25 0.71 0.45

F07 7.88 14.60 7.04 45.07 -46.27 17.26 0.16 0.26 0.22 0.44 0.28

F08 8.45 15.29 7.69 46.02 -45.24 16.27 0.18 0.31 0.15 0.51 0.33

F09 29.42 33.79 25.00 64.79 -11.65 4.97 0.55 0.62 0.39 0.61 0.39

F10 26.17 33.88 22.58 64.87 -24.82 9.57 0.44 0.48 0.28 0.39 0.26

F11 23.55 33.52 21.19 64.58 -34.79 11.80 0.34 0.43 0.37 0.48 0.30

F12 24.00 33.95 21.31 64.92 -34.28 12.17 0.41 0.51 0.42 0.40 0.24

F13 34.98 44.60 51.55 72.62 -25.40 -18.17 0.52 0.64 0.38 0.45 0.28

F14 37.48 27.99 41.07 59.88 37.85 -27.67 0.47 0.45 0.25 0.58 0.38

F15 55.93 59.43 18.67 81.53 -3.40 46.29 0.40 0.41 0.25 0.43 0.23

F16 15.17 15.61 12.80 46.46 0.68 0.25 0.25 0.27 0.30 0.58 0.38

F17 33.31 26.38 13.47 58.39 30.16 18.96 0.46 0.41 0.14 0.47 0.30

F18 29.33 39.66 17.80 69.23 -31.10 27.01 0.42 0.54 0.46 0.43 0.31

F19 19.30 17.82 38.22 49.27 11.10 -42.20 0.21 0.25 0.17 0.52 0.34

G01 2.73 3.21 2.96 20.85 -6.52 -2.40 0.11 0.12 0.14 0.79 0.49

G02 2.41 3.25 3.16 21.02 -13.45 -3.58 0.06 0.08 0.12 0.71 0.43

G03 2.15 3.35 3.31 21.38 -20.45 -4.00 0.07 0.08 0.11 0.44 0.29

G04 1.90 3.48 3.71 21.88 -28.26 -5.77 0.08 0.12 0.19 0.68 0.45

G05 12.07 14.65 13.34 45.15 -13.50 -3.52 0.41 0.46 0.33 0.62 0.38

G06 9.75 14.51 14.34 44.96 -29.80 -6.50 0.24 0.34 0.15 0.72 0.46

G07 8.56 14.77 15.48 45.31 -41.22 -8.79 0.14 0.20 0.24 0.40 0.26

G08 8.72 14.84 15.28 45.41 -40.27 -8.11 0.17 0.25 0.32 0.56 0.37

G09 29.61 34.10 29.14 65.04 -11.99 -1.63 0.50 0.65 0.15 0.86 0.54

G10 26.37 33.81 30.73 64.81 -23.79 -4.56 0.41 0.48 0.27 0.44 0.29

G11 24.03 33.86 32.62 64.85 -33.85 -7.38 0.44 0.57 0.52 0.47 0.31

G12 24.11 34.13 33.33 65.07 -34.45 -8.06 0.34 0.45 0.37 0.51 0.31

G13 30.39 40.57 49.68 69.87 -29.87 -20.81 0.43 0.52 0.42 0.41 0.24

G14 33.71 23.31 38.56 55.39 44.52 -32.11 0.27 0.25 0.19 0.47 0.30

G15 55.28 58.54 14.81 81.04 -2.90 54.49 0.43 0.44 0.21 0.46 0.27

G16 10.52 10.76 8.75 39.17 1.07 0.45 0.26 0.28 0.15 0.57 0.37

G17 28.89 21.27 9.85 53.25 36.08 20.93 0.45 0.36 0.16 0.64 0.41

G18 24.66 35.20 13.49 65.90 -35.64 31.86 0.43 0.55 0.39 0.48 0.27

G19 14.89 13.03 35.31 42.81 14.76 -49.31 0.30 0.31 0.26 0.69 0.46

H01 2.79 3.11 3.54 20.48 -3.69 -7.11 0.12 0.12 0.16 0.58 0.39

H02 2.48 3.10 4.45 20.45 -9.63 -12.69 0.07 0.07 0.07 0.50 0.36

H03 2.31 3.17 5.60 20.72 -14.13 -18.23 0.07 0.10 0.20 0.54 0.35

H04 2.17 3.19 6.95 20.78 -17.39 -24.23 0.06 0.10 0.16 0.41 0.29

H05 9.92 11.41 12.81 40.25 -8.22 -10.51 0.27 0.32 0.22 0.56 0.38

H06 8.65 11.21 16.34 39.93 -17.27 -20.12 0.18 0.21 0.22 0.42 0.28

H07 7.74 11.21 21.04 39.93 -25.41 -30.39 0.11 0.20 0.13 0.67 0.49

H08 7.61 11.03 21.48 39.64 -25.36 -31.78 0.15 0.22 0.31 0.67 0.46

H09 30.58 32.98 31.61 64.14 -4.48 -7.08 0.67 0.76 0.62 0.67 0.42

H10 29.30 33.35 34.50 64.44 -10.57 -10.86 0.48 0.55 0.14 0.76 0.48

H11 28.14 33.75 38.80 64.76 -16.45 -16.28 0.51 0.61 0.33 0.61 0.36

H12 27.25 34.67 44.99 65.49 -23.15 -22.88 0.40 0.54 0.54 0.48 0.33

H13 26.48 36.84 48.36 67.15 -33.42 -24.00 0.34 0.45 0.37 0.31 0.20

H14 29.59 18.76 34.93 50.40 51.03 -35.68 0.32 0.23 0.35 0.28 0.18

H15 54.55 57.17 10.47 80.27 -1.45 65.48 0.55 0.54 0.20 0.40 0.26

H16 6.57 6.76 5.53 31.25 0.59 0.25 0.15 0.16 0.24 0.73 0.43

H17 25.01 16.79 6.09 47.99 43.05 26.46 0.33 0.25 0.13 0.46 0.28

H18 20.69 31.07 10.45 62.57 -39.31 35.05 0.41 0.49 0.23 0.50 0.32

H19 11.09 8.94 31.81 35.87 19.55 -56.12 0.22 0.22 0.25 0.59 0.43

I01 4.48 4.57 6.58 25.48 0.95 -14.56 0.15 0.15 0.23 0.59 0.38

I02 4.40 4.39 10.18 24.90 2.36 -29.04 0.16 0.16 0.30 0.70 0.43

I03 4.51 4.41 15.36 24.98 3.49 -43.52 0.16 0.18 0.31 0.69 0.45

I04 4.70 4.49 21.43 25.22 4.91 -56.52 0.08 0.10 0.25 0.48 0.33

I05 13.93 14.23 15.94 44.55 1.37 -11.20 0.23 0.25 0.23 0.35 0.21

I06 14.52 14.72 21.77 45.24 2.03 -22.68 0.35 0.36 0.29 0.53 0.32

I07 13.87 14.00 26.56 44.23 2.37 -33.22 0.21 0.24 0.33 0.70 0.45

I08 13.78 14.03 35.94 44.27 1.62 -47.69 0.24 0.29 0.22 0.58 0.42

I09 31.40 32.46 30.90 63.72 0.37 -6.69 0.48 0.46 0.24 0.62 0.39

I10 31.36 32.27 34.71 63.56 0.91 -12.68 0.46 0.44 0.53 0.53 0.34

I11 31.86 32.96 38.78 64.12 0.32 -17.35 0.54 0.59 0.52 0.53 0.34

I12 32.97 34.27 47.65 65.18 -0.26 -26.59 0.44 0.49 0.31 0.55 0.37

I13 23.24 33.38 46.92 64.47 -35.67 -26.95 0.28 0.40 0.42 0.37 0.24

I14 25.49 14.72 30.82 45.25 56.89 -38.44 0.40 0.29 0.40 0.59 0.38

I15 53.89 55.89 7.62 79.55 0.01 74.34 0.59 0.65 0.34 0.63 0.42

I16 4.11 4.20 3.41 24.32 0.87 0.37 0.12 0.13 0.05 0.67 0.43

I17 21.81 13.48 3.87 43.48 48.26 30.42 0.36 0.27 0.17 0.63 0.36

I18 17.05 26.73 7.63 58.72 -41.41 38.41 0.28 0.40 0.30 0.77 0.41

I19 7.98 5.76 27.65 28.81 24.73 -61.66 0.16 0.16 0.34 0.56 0.39

I20 0.69 0.51 0.34 4.57 7.97 1.47 0.03 0.02 0.02 0.31 0.22

I21 3.34 2.45 1.40 17.68 17.82 6.70 0.13 0.10 0.05 0.57 0.37

I22 3.73 2.86 1.25 19.46 16.20 11.68 0.10 0.08 0.03 0.49 0.32

J01 1.38 1.12 2.41 9.94 9.47 -16.84 0.04 0.03 0.05 0.53 0.35

J02 1.67 1.11 4.85 9.85 17.89 -33.21 0.04 0.03 0.10 0.53 0.36

J03 2.08 1.12 8.70 9.91 27.51 -49.81 0.05 0.03 0.17 0.40 0.26

J04 2.55 1.14 13.44 10.12 36.29 -64.17 0.07 0.04 0.33 0.49 0.34

J05 8.83 8.23 10.03 34.45 7.93 -12.10 0.23 0.21 0.15 0.45 0.31

J06 9.39 8.03 14.10 34.05 14.32 -24.69 0.28 0.25 0.29 0.53 0.30

J07 10.02 7.82 19.24 33.60 21.31 -37.58 0.27 0.24 0.33 0.68 0.45

J08 11.13 7.96 26.09 33.90 28.37 -50.21 0.24 0.20 0.33 0.47 0.32

J09 26.46 26.80 25.75 58.78 2.56 -6.72 0.36 0.36 0.36 0.40 0.26

J10 27.19 26.46 29.45 58.47 6.86 -13.47 0.52 0.50 0.30 0.56 0.36

J11 28.32 26.60 33.46 58.60 10.83 -19.42 0.53 0.51 0.47 0.52 0.33

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J13 20.75 30.47 45.41 62.05 -36.79 -29.32 0.25 0.34 0.27 0.35 0.23

J14 22.30 11.90 27.50 41.05 61.01 -40.30 0.38 0.25 0.37 0.47 0.29

J15 53.49 54.76 5.59 78.90 1.78 82.10 0.49 0.54 0.18 0.48 0.31

J16 2.23 2.27 1.88 16.87 0.86 -0.06 0.05 0.05 0.04 0.66 0.40

J17 18.15 10.10 2.10 38.02 53.70 34.31 0.23 0.15 0.05 0.45 0.28

J18 13.84 22.75 5.70 54.81 -43.43 40.01 0.22 0.31 0.12 0.49 0.28

J19 5.72 3.64 23.48 22.45 29.20 -65.24 0.20 0.15 0.62 0.65 0.42

J20 7.09 4.94 1.58 26.57 26.02 19.94 0.22 0.17 0.10 0.58 0.38

J21 9.67 7.20 2.16 32.26 24.32 23.86 0.19 0.16 0.10 0.67 0.43

J22 11.82 9.37 3.01 36.68 21.33 24.49 0.27 0.21 0.11 0.79 0.51

K01 2.62 2.13 2.87 16.17 11.70 -9.81 0.08 0.07 0.11 0.46 0.29

K02 2.91 1.89 3.67 14.89 22.42 -17.57 0.08 0.05 0.11 0.55 0.36

K03 3.61 1.93 5.10 15.12 33.21 -25.44 0.04 0.03 0.09 0.28 0.18

K04 3.72 1.90 5.47 14.93 35.60 -27.61 0.06 0.03 0.07 0.32 0.21

K05 7.37 6.12 7.76 29.72 15.13 -12.11 0.19 0.17 0.10 0.64 0.40

K06 9.04 6.06 10.67 29.57 30.71 -22.56 0.17 0.13 0.13 0.49 0.31

K07 10.26 5.74 13.45 28.74 44.05 -32.12 0.18 0.12 0.18 0.53 0.36

K08 11.60 5.73 15.88 28.71 54.14 -38.38 0.23 0.13 0.21 0.33 0.21

K09 23.02 21.55 21.21 53.55 10.39 -7.25 0.44 0.41 0.31 0.57 0.33

K10 25.50 21.63 24.80 53.63 20.80 -13.92 0.43 0.39 0.38 0.55 0.34

K11 28.27 21.98 29.37 54.01 30.39 -21.03 0.33 0.30 0.35 0.55 0.32

K12 30.90 21.68 34.18 53.69 41.79 -28.93 0.50 0.41 0.39 0.49 0.29

K13 17.44 26.15 40.90 58.17 -36.97 -30.39 0.27 0.37 0.55 0.36 0.23

K14 18.51 9.38 22.99 36.71 61.23 -39.74 0.35 0.23 0.27 0.58 0.33

K15 52.80 52.93 3.83 77.83 4.59 89.91 0.39 0.37 0.05 0.28 0.19

K16 1.03 1.05 0.98 9.42 0.54 -1.82 0.04 0.04 0.03 0.58 0.35

K17 15.44 7.86 1.06 33.70 57.30 38.89 0.19 0.11 0.01 0.36 0.24

K18 11.03 18.86 4.19 50.52 -44.00 40.63 0.25 0.38 0.19 0.55 0.37

K19 4.24 2.37 18.86 17.31 32.96 -64.86 0.06 0.06 0.15 0.44 0.32

K20 22.50 19.68 9.11 51.47 17.00 20.39 0.39 0.35 0.11 0.52 0.35

K21 25.77 22.57 9.67 54.63 17.64 23.91 0.39 0.34 0.17 0.37 0.23

K22 28.99 26.08 13.59 58.11 15.52 18.16 0.35 0.30 0.26 0.50 0.33

L01 2.39 1.97 2.03 15.30 10.90 -4.21 0.07 0.06 0.02 0.51 0.33

L02 2.90 1.90 2.15 14.96 21.93 -5.92 0.11 0.08 0.09 0.45 0.28

L03 3.46 1.90 2.33 14.96 31.46 -7.52 0.07 0.04 0.08 0.44 0.27

L04 3.85 1.97 2.41 15.33 35.85 -7.58 0.05 0.03 0.08 0.64 0.36

L05 7.59 6.14 5.99 29.76 17.08 -4.51 0.15 0.13 0.24 0.71 0.44

L06 9.46 6.07 6.66 29.59 34.06 -7.83 0.21 0.15 0.14 0.70 0.43

L07 12.19 6.38 7.67 30.36 51.13 -10.67 0.20 0.12 0.11 0.36 0.24

L08 12.03 5.99 7.50 29.39 54.17 -11.68 0.21 0.12 0.13 0.43 0.29

L09 24.00 22.46 19.29 54.51 10.58 -1.63 0.41 0.39 0.24 0.52 0.34

L10 26.97 22.56 20.44 54.61 22.61 -3.85 0.40 0.32 0.20 0.64 0.42

L11 29.00 22.24 21.02 54.28 32.06 -5.61 0.60 0.52 0.35 0.56 0.35

L12 30.83 22.17 22.50 54.20 39.29 -8.65 0.31 0.26 0.16 0.47 0.30

L13 13.97 21.34 36.04 53.32 -36.17 -32.22 0.19 0.27 0.37 0.29 0.19

L14 12.60 6.09 15.59 29.63 57.01 -36.09 0.31 0.17 0.34 0.48 0.31

L15 50.74 49.34 2.11 75.66 8.56 99.15 0.43 0.39 0.06 0.63 0.40

L16 0.28 0.26 0.30 2.38 1.03 -1.65 0.01 0.01 0.01 0.16 0.10

L17 11.52 5.24 0.37 27.42 59.10 40.36 0.10 0.05 0.01 0.23 0.15

L18 7.14 13.06 2.39 42.85 -43.69 40.07 0.10 0.20 0.10 0.49 0.34

L19 3.24 1.77 16.92 14.21 31.09 -65.84 0.09 0.07 0.44 0.50 0.35

L20 28.54 25.70 15.78 57.75 15.33 11.95 0.52 0.45 0.32 0.52 0.33

L21 29.33 26.95 16.05 58.93 13.29 13.31 0.48 0.46 0.37 0.72 0.44

L22 30.62 28.68 16.99 60.49 11.40 13.79 0.44 0.43 0.18 0.54 0.37

Dmin 70.77 72.72 62.59 88.31 1.39 -2.55 0.36 0.41 0.31 0.25 0.17

GS1 58.07 59.95 49.30 81.81 0.63 0.20 0.70 0.71 0.75 0.49 0.31

GS2 51.67 53.83 43.22 78.36 -0.60 1.48 0.46 0.53 0.12 0.53 0.34

GS3 44.92 47.09 37.74 74.25 -1.38 1.51 0.47 0.46 0.31 0.70 0.42

GS4 38.96 40.40 33.03 69.76 -0.01 0.46 0.36 0.35 0.30 0.41 0.27

GS5 34.09 35.31 29.45 65.99 0.15 -0.50 0.60 0.63 0.36 0.68 0.46

GS6 29.20 30.25 25.31 61.87 0.11 -0.61 0.37 0.39 0.25 0.55 0.35

GS7 24.42 25.38 20.86 57.44 -0.19 0.17 0.32 0.35 0.31 0.62 0.40

GS8 20.90 21.69 17.94 53.70 -0.08 -0.08 0.44 0.47 0.32 0.74 0.50

GS9 17.42 17.94 14.47 49.42 0.66 0.85 0.27 0.26 0.26 0.38 0.27

GS10 14.50 15.03 12.43 45.67 0.06 -0.09 0.28 0.28 0.18 0.77 0.47

GS11 11.62 12.01 9.99 41.24 0.28 -0.26 0.20 0.20 0.19 0.56 0.36

GS12 9.65 9.96 8.13 37.76 0.43 0.32 0.28 0.30 0.33 0.63 0.40

GS13 7.74 7.94 6.47 33.85 0.77 0.36 0.24 0.25 0.28 0.76 0.49

GS14 6.07 6.26 5.09 30.05 0.39 0.38 0.14 0.13 0.11 0.65 0.38

GS15 4.57 4.74 3.83 25.96 -0.01 0.48 0.17 0.18 0.20 0.58 0.35

GS16 3.59 3.70 3.15 22.66 0.31 -0.64 0.10 0.09 0.10 0.40 0.27

GS17 2.44 2.53 2.12 18.04 0.06 -0.34 0.08 0.07 0.10 0.49 0.32

GS18 1.63 1.66 1.50 13.56 0.95 -1.65 0.05 0.05 0.06 0.32 0.21

GS19 1.11 1.13 1.00 10.02 0.74 -1.01 0.04 0.04 0.06 0.47 0.31

GS20 0.67 0.66 0.65 5.99 1.11 -1.96 0.03 0.03 0.03 0.45 0.30

GS21 0.51 0.50 0.49 4.50 1.04 -1.51 0.02 0.02 0.02 0.28 0.19

GS22 0.27 0.25 0.28 2.26 1.08 -1.40 0.01 0.01 0.01 0.16 0.11

Dmax 0.14 0.13 0.18 1.21 0.61 -1.39 0.00 0.00 0.00 0.04 0.02

END\_DATA