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17 July 2000

Federal Communications Commission,
Authorization & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: FCC Application Processing Branch
RE: FCC ID: GMLNSD-1AW
731 Confirmation number EA96445
Correspondence reference number: 15017

Reply to Correspondence Reference Number 15017 questions

Question 1. PCS band output data is missing from the revised output power results submitted on 6/26/00. The discrepancy in output for PCS band (245 mW vs 112 mW EIRP) needs to be addressed.

<Attach answer & M. Floms results here>

Question 2. The re-measured output for AMPS is higher than previously measured, but SAR tests were not done at the higher output level. The output indicated in the SAR report and those in the original EMC data for AMPS mode have about 0.9 dB variation across the band. The latest output results do not have such variations and what used to be the channel with the lowest output corresponds to the channel with the highest output in the latest data. Some performance changes appear to have occurred in the latest version of this device and it is not even clear if the original SAR results are still applicable. Furthermore, the applicant is scaling this SAR data to justify up to 1.8 dB increase in output, about 50% increase. The SAR data neither supports the latest output power measurements nor the increase in output. It is also not clear if any changes that might have occurred could also affect SAR for the PCS band. Please clarify these discrepancies and retest SAR as necessary.

The device allows power adjustment separately on 5 channels of the band. When decision about higher power level was made, it was also decided to adjust every point separately as indicated in originally attached tuning instructions. So the scaling to the 26.5dBm level on the three channels is correct and consistent with the current tuning procedure. Please find test data attached for additional evaluation.

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Analog mode AMPS, beside head

meas. nr:	Phone position	Frequency MHz / channel	Power dBm	SAR (1g)[mW/g]
1	90°, Whip in	849 / 799	26.5	0.76
2	90°, Whip up	849 / 799	26.5	1.06
FCC ID: GMLNSD-1AW MEASURED: 2000-7-17/NMP		FCC limit		1.60[mW/g] (ANSI/IEEE)

Analog mode AMPS, against flat phantom

meas. nr:	Phone position	Frequency MHz / channel	Power dBm	SAR (1g)[mW/g]
3	Body Worn, Belt Clip (BCH-12U) against Flat Phantom, Whip in	836 / 383	26.5	1.23
4	Body Worn, Belt Clip (BCH-12U) against Flat Phantom, Whip up	836 / 383	26.5	1.31
FCC ID: GMLNSD-1AW MEASURED: 2000-7-17/NMP		FCC limit		1.60[mW/g] (ANSI/IEEE)

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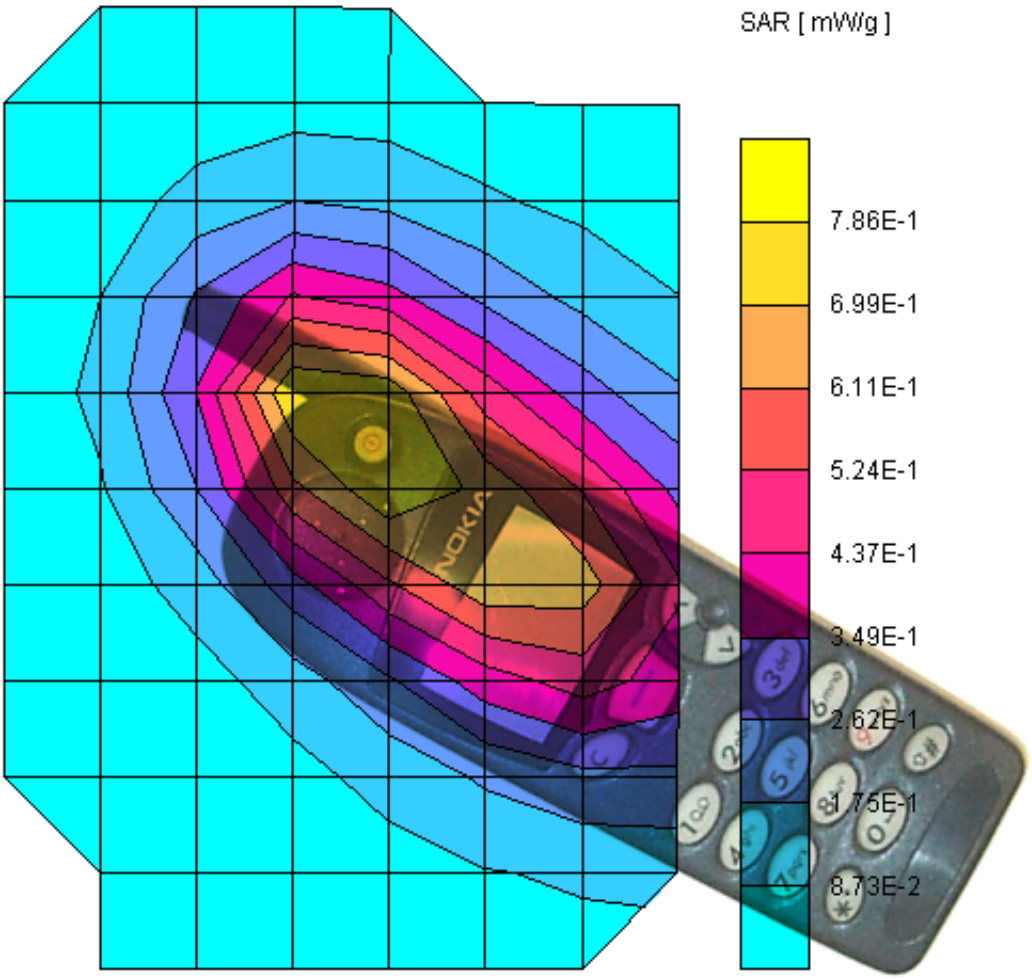
Meas 1

σ = 0.81 [mho/m] ε_r = 43.1 ρ = 1.00 [g/cm^3]

Coarse Grid Dx = 15.0 Dy = 15.0 Dz = 5.0 [mm]

SAR [mW/g] Max: 0.79

SAR (1g): 0.762 [mW/g] SAR (10g): 0.514 [mW/g]



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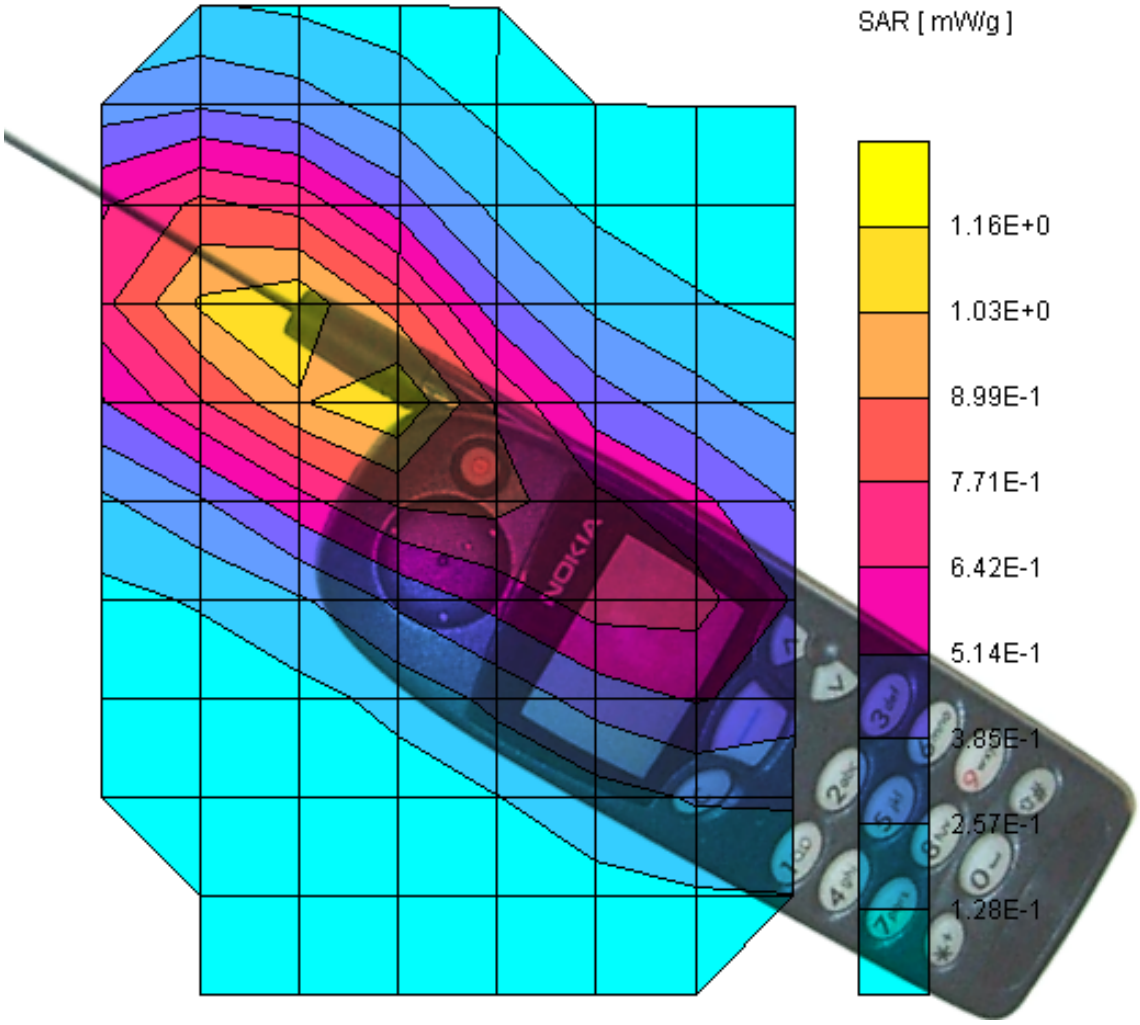
Meas 2

σ = 0.81 [mho/m] ε_r = 43.1 ρ = 1.00 [g/cm^3]

Coarse Grid Dx = 15.0 Dy = 15.0 Dz = 5.0 [mm]

SAR [mW/g] Max: 1.16

SAR (1g): 1.06 [mW/g] SAR (10g): 0.727 [mW/g]



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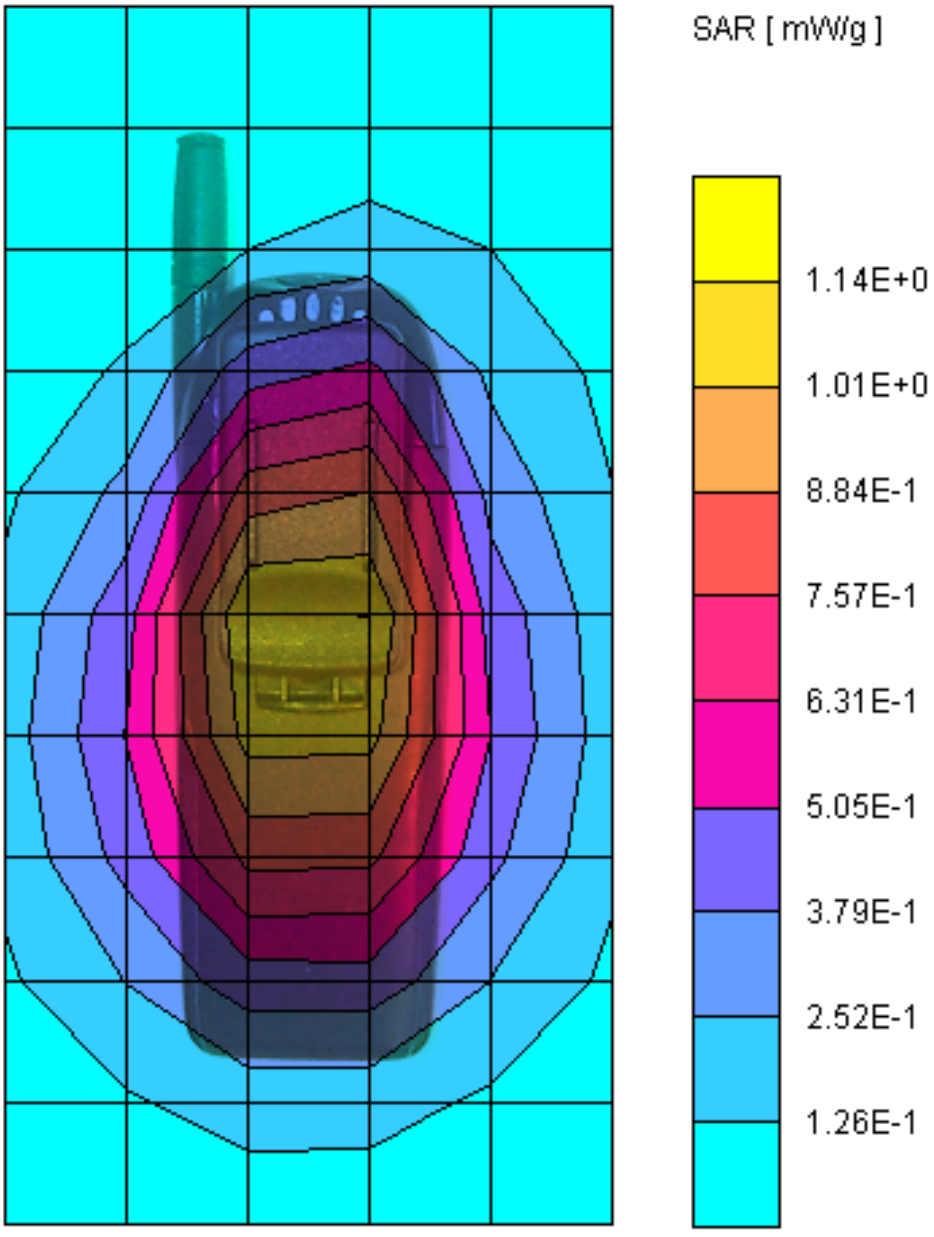
Meas 3

σ = 0.80 [mho/m] ε_r = 43.2 ρ = 1.00 [g/cm^3]

Coarse Grid Dx = 20.0 Dy = 20.0 Dz = 5.0 [mm]

SAR [mW/g] Max: 1.14

SAR (1g): 1.23 [mW/g] SAR (10g): 0.874 [mW/g]



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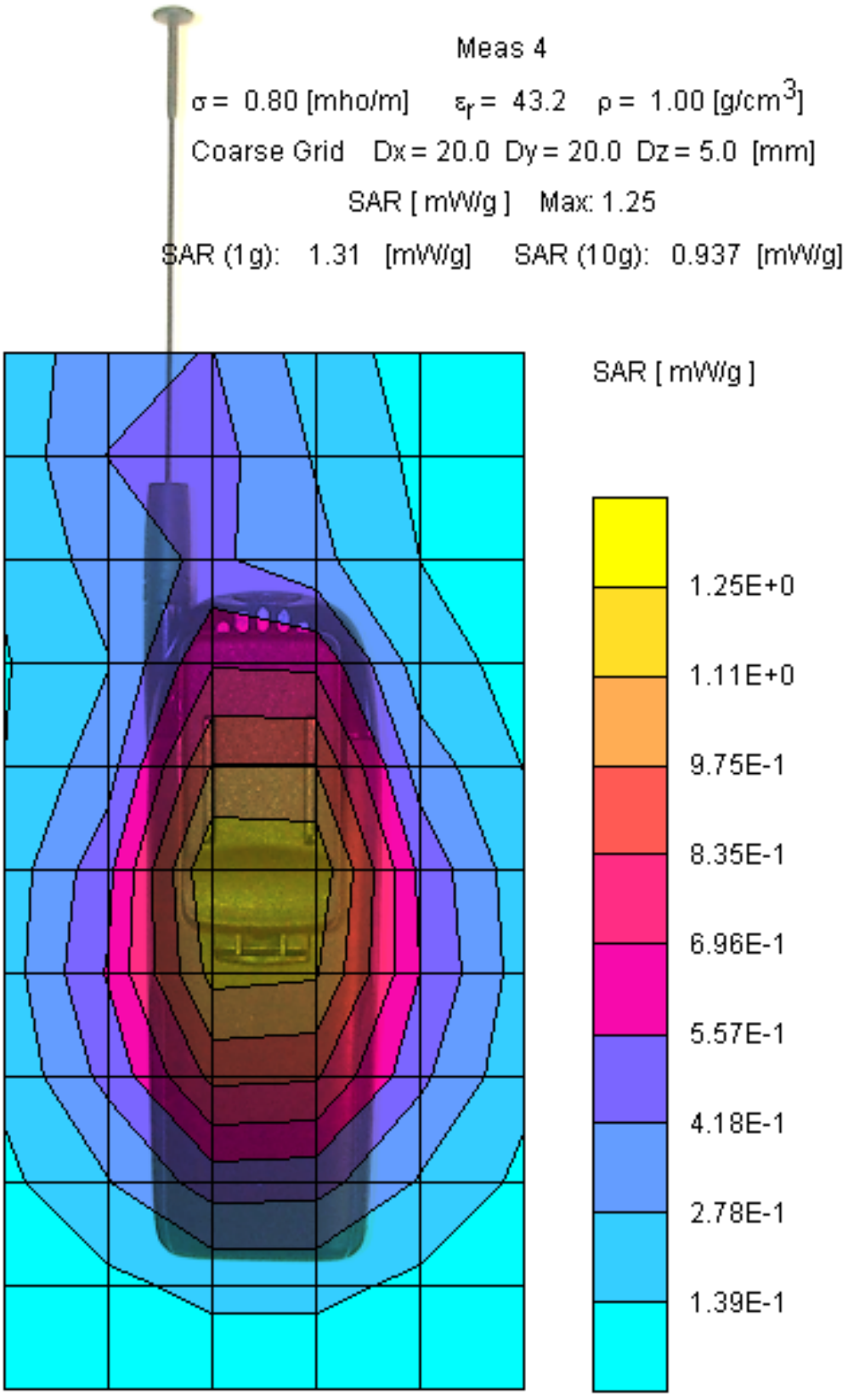
Meas 4
σ = 0.80 [mho/m] εr = 43.2 ρ = 1.00 [g/cm3]
Coarse Grid Dx = 20.0 Dy = 20.0 Dz = 5.0 [mm]
SAR [mW/g] Max: 1.25
SAR (1g): 1.31 [mW/g] SAR (10g): 0.937 [mW/g]
SAR [mW/g]
1.25E+0
1.11E+0
9.75E-1
8.35E-1
6.96E-1
5.57E-1
4.18E-1
2.78E-1
1.39E-1

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Question 3. Please delete any reference to body-worn use in a person's pocket for the latest proposed body-worn statement. Pocket use requires the device to be tested with both the front and the back against a muscle-equivalent phantom. Since there is no effective mechanism to ensure users will always put the phone in their pockets with the keypad facing the body, unless the device is tested for SAR with both the front and back, pocket use should not be suggested. The proposed statement needs to be revised accordingly.

We have modified our 5185 User Guide SAR statement to exclude pocket use.

Radio frequency (RF) signals

Your wireless handheld portable telephone is a low-power radio transmitter and receiver. When it is on, it receives and sends out radio frequency (RF) signals.

In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines that included safety levels for handheld wireless phones. Those guidelines are consistent with safety standards previously set by both U.S. and international standards bodies:
ANSI C95.1 (1992)*, NCRP Report 86 (1986)*, ICNIRP (1996)*.

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies and industry reviewed the available body of research to develop the ANSI Standard (C95.1).

The design of your phone complies with the FCC guidelines (and those standards).

For body worn operation, to maintain compliance with FCC RF exposure guidelines, use only Nokia approved accessories. When carrying the phone while it is on, use the specific Nokia belt-clip that has been tested for compliance.

Use of non-Nokia-approved accessories may violate FCC RF exposure guidelines and should be avoided.

*American National Standards Institute, National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection.