

Expert Reviewer: GRAY

#	Chapter	Start Page	Start Line	End Page	End Line	Comment
						** If you are cutting and pasting comments from another application into the review form, please DOUBLE-CLICK in the appropriate spreadsheet comment cell before pasting your comment. Only ONE comment per row, please. **
1	TS	4	41	4	42	It is good to hear that you sponsor 95% accuracy. But there should be NO exceptions.
2	TS	4	32	4	35	These spurious "statistical" categories are just self-assessed guesses
3	TS	5	33	5	34	Replace "The dominant " by "An important" Changes in the sun may also be important
4	TS	5	35	5	35	Insert after "can" "sometimes"
5	TS	5	41	5	41	Add at end "Water vapour, which is by far the most important greenhouse gas, varies so greatly that it is very difficult to obtain a plausible average, or a reliable figure of its contribution to greenhouse forcing, either now or in the past. We do not know whether it is increasing or decreasing, or whether humans have an influence. As a stop gap measure we currently treat it as a "feedback" to the effects of carbon dioxide in our models"
6	TS	5	48	5	48	Insert before "carbon" "water vapour"
7	TS	5	50	5	50	Insert after "concentrations" "apart from water vapour". Delete "accuratelyu"
8	TS	5	52	5	52	Replace "anthropogenic" with 'human-induced"
9	TS	6	17	6	18	Replace "unprecedented in at least' with "thought to be greater than that of"
10	TS	6	25	6	25	Add at end "which is not very impressive"
11	TS	6	29	6	29	Add at end "except water vapour"
12	TS	6	45	6	45	Add at end "Its concentration has now been constant for five years, and seems likely to fall"
13	TS	7	2	7	2	Insert after "but" "not at the same rate, as it"
14	TS	7	8	7	8	This Table makes it impossible to detect trends. We therefore do not know how the carbon cycle is likely to develop in the future
15	TS	7	19	7	19	Insert after "determined" , "approximately"
16	TS	6	12	6	12	Add at end. "However, all these measurements are based on unrepresentative samples. Modern measurements are mostly over oceans, with very few over land. Paleoclimate results are from a small number of ice cores. As the gas is not "well-mixed" (in contrast to previous claims) the increases claimed are subject to considerable uncertainty"
17	TS	8	16	8	16	Insert after "decreased" "but has been constant for the past four years, and is likely to decline"
18	TS	8	25	8	25	Insert after "declined" , "to zero"
19	TS	8	28	8	28	Insert after "agriculture", "forests"
20	TS	9	18	9	18	Delete "Direct emission of water vapour by human activities makes a negligible contribution to radiative forcing". There is no evidence for this statement.
21	TS	9	19	9	20	Replace "increase. This" with "may increase, but there is no evidence that it " in line19. Delete "in contrast" on line 20
22	TS	9	20	9	21	Replace "corresponds" with "may possibly correspond"
23	TS	9	24	9	24	"Simulations suggest". What about actual measurements?

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24	TS	9	29	9	29	Add at end "Changes in water vapour from urban water supply or use may also be important, and there may also be natural changes"
25	TS	12	19	12	19	Insert after "climate" "but not necessarily activities related to the emission of greenhouse gases"
26	TS	18	37	18	37	Insert after "record", "according to the upwardly biased compilation of weather station and ship observations"
27	TS	18	40	18	46	Delete from "The global" on 40 to "years" on 42,
28	TS	18	42	18	43	Replace from "Most" on line 42 to "decade to the minus 1)" on line 43 with "A small cooling took place from 1850 to 1910, followed by a temperature rise from 1910 to 1942 of 0.4°C (0.12°C per decade) . This period had only modest greenhouse gas emissions. The 1910=1942 rise was therefore attributed by the IPCC "Climate Change 1990" to a "recovery from the Little Ice Age", but a more plausible explanation is the growth of cities around the early weather stations. A fall in temperature of 0.05°C from 1943 to 1978 can be attributed to a move of weather stations to airports, This was followed by a rise of 0.45°C from 1978 to 1998 (0.15°C per decade) .Apart from the large El Niño peak in 1999, this could be explained by a combination of larger cities and energy usage, the shutting down of smaller stations, and the development of airports. A contribution from greenhouse gas increases is difficult to justify, as there was no apparent effect from 1943 to 1978". There has been a fall in temperature since 1998"
29	TS	18	43	18	46	Delete from "Three" on line 43 to end. This statement is untrue> The different records are NOT "consistent".
30	TS	16	46	18	46	Add at end " Globally averaged temperature in the lower troposphere from satellites showed no overall change from 1979 to 1997. Since this region is supposed to be influenced by greenhouse gas increases, the absence of a measurable effect over this period indicates that the influence of greenhouse gas increases must be small. There was a large temperature peak in 1998, attributed to the unusual El Niño ocean event of that year. From 2002 to 2005 the record shows a constant rise above the average which does not indicate a trend, and is difficult to attribute to greenhouse gases when these have been undetectable so far. The Weather balloon record showed no overall temperature rise from 1958 to 2002, with a cool period from 1964 to 1978. A rise has occurred since 2002, but again, could hardly be related to greenhouse gases."

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31	TS	18	50	18	51	<p>Replace "Recent studies have shown that aeffects of urbanisation and land-use change on the land-based temperature record (since 1950) are negligible as far as hmispheric and continental scale averages are concerned" with "McKitrick and Michaels 2004 "A test of corrections for extraneous signals in gridded surface temperature data" Climate Research Vol 26 pages 159-173, showed that there were significant effects of a number of socioeconomic factors on the data. When the record was corrected for the influence of fuel consumption, populatiuon increase,and defective data, the residual temperture rise was 0.011°C per decade , Comprehensivecorrection can be carried out by a procedure called "homogeneity adjustment" which requires a large number of weather stations. When this procedure is carried out over the continental United States, "global warming" all but disappears.(see Figure 3.2.3 since 1930). A similar study has recently been carried out in China, with the same result (see Zou, Ding, Luo and Wang 2005 Acta Meteorologiica Sinica Vol 19 pages 389 to 400. If "homogeneity adjustment" were applied to the whole set, "global warming" would disappear"</p>
32	TS	19	5	19	7	<p>Replace "New analysis of radiossonde and satellite measurements of lower tropospheric temperatures now show warming rates that are quantitatively consistent within error bars with the surface temperature record over the periods 1958-2005 and 1979-2005 respectively" with "The satellite and radiosonde records show no overall change between 1979 and 1997. The surface record shows an increase of 0.4°C over this period; .The radiosonde record shows no overall change between 1958 and 2002. The surface record shows a rise of 0.45°C over this period, Both the saterllite and radiosonde records show that there is no evidence of a greenhouse effect in the region where it is supposed to happen from 1979 to 1997 for the satellite record and between 1958 and 2002 for the radiosonde record. The surface record rise between 1978 and 2005 cannot possibly be caused by increases in greenhouse gases. The El Niño peak in 1999 can hardly be claimed to justify an overall "rise" since 1979"</p>
33	TS	19	7	19	7	<p>Insert after "(see Figure TS8)" the following." However, there are important differences between the three records The satellite and radiosonde records show no overall change between 1979 and 1997. The surface record shows an increase of 0.4°C over this period; hardly within the range of error bars! .The radiosonde record shows no overall change between 1958 and 2002. The surface record shows a rise of 0.45°C over this period, also, hardly within error bars. The absence of a temperature change in the lower troposphere over such long periods shows that the greenhouse effect, which is supposed to happen in this region, must be negligible. The rise in the surface temperature between 1978 and 2005 must therefore have some other cause "</p>
34	TS	19	15	19	15	<p>Insert after "temperatures", "but this is misleading because of the very large peak in the MSU record in 1998 from the El Niño event of that year. If this event is omitted from both records there is no rise in the satellite record until 2001, after which there is a period of constant higher temperature for four years. The surface record, however, shows a steady rise of 0.4°C between 1980 and 2005 which is unaffected by the presence of the El Niño peak in 1998."</p>

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35	TS	19	29	19	29	Insert after "Observations". "by the surface record"
36	TS	19	31	19	31	Add at end "These differences are not shown by the satellite temperature record in the lower troposphere, but this record does show greater variability over land than over the sea."
37	TS	19	38	19	38	Add at end "The satellite record in the lower troposphere shows a quite different pattern (Figure 3.4.4), with cooling at both poles and most warming above both northern and southern mid-latitudes;"
38	TS	20	17	20	17	. Figure TS 10 is for the UPPER troposphere only.
39	TS	25	47	25	48	Replace "The heat content of the world's oceans has increased since 1955" with "The heat content of the world's oceans has fluctuated since 1955. It was steady from 1955 to 1970. It increased from 1970 to a peak in 1980. It then fell from 1980 to 1987, and then increased from 1987 to 2005. ... The 2005 figure is only slightly above the 1978 figure and there is no evidence to suggest a steady upwards trend"
40						
41						
42	TS	25	47	25	48	Remove italics
43	TS	26	7	26	7	Insert after "widespread", "since 1990"
44	TS	26	7	26	7	Insert after "While the", "recent"
45	TS	26	38	26	38	Insert at beginning "Calculations suggest that"
46	TS	26	38	26	38	Replace "has" by "may have"
47	TS	26	38	26	38	Remove italics
48	TS	26	38	26	38	Insert after "1750". So far, this has not been confirmed by observations"
49	TS	27	22	27	22	Insert after "models" "although it is probably due to changes in ground level from urban development and removal of ground water"
50	TS	27	53	27	53	There is no mention in this Table of changes in ground level due to urban development, and removal of ground water, oil and minerals which is an important influence on tide-gauge measurements
51	TS	28	7	28	7	Insert after "owing to", "the weight of urban development, removal of groundwater, oil and minerals, and"
52	TS	29	19	29	19	Insert after "warming" "but, on land, this may be due to urban and land-use factors, and for both land and sea, by instrumental bias."
53	TS	29	20	29	20	Insert after "with" "urban development, and possibly even"
54	TS	29	23	29	23	"insert before "warming", "apparent"
55	TS	29	26	29	27	Replace "are consistent quantitatively within their respective error bars with" by " show distinctive differences from"
56	TS	29	28	29	28	Replace "provided" with "even after"
57	TS	29	32	29	32	Delete "and observed greenhouse gases" Satellite and radiosondes in the lower troposphere show no evidence of effects from increased greenhouse gases. See comments above (Page 19, lines 5-7)
58	TS	32	17	32	17	Insert after "temperatures", "as measured by the unreliable surface record"

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59	TS	32	19	32	19	Insert after "years" . "This likelihood disappears if contemporary proxy measurements are considered, or if satellite or radiosonde records are used.
60	TS	32	30	32	30	Add at end "To be perfectly honest, theNorthern Hemisphere sites are also pretty limited as well"
61	TS	32	41	32	41	Add at end "which means that they may have exceeded recent maximum observed temperatures".
62	TS	32	48	32	48	Add at end "However, both the proxy information and the ice core results are based on so few samples that they may not be suitable to represent global averages"
63	TS	32	50	32	50	Add at beginning "The limited"
64	TS	32	52	32	52	Add at end "so the "averages" may not be truly "global"
65	TS	33	32	33	32	Add at end "which .includes the possibility that the changes are not related to greenhouse gas increases, but to such factors as land-use change and urban development".
66	TS	33	41	33	41	Insert "many" after "although"
67	TS	33	43	33	43	Insert after "signal", "(which need not involve an influence of greenhouse gases)"
68	TS	33	50	33	50	Replace "anthropogenic" by "human-induced" and delete "is widespread and"
69	TS	33	50	33	50	Insert after "surface" "which is attributable to land-use changes and urban development"
70	TS	33	51	33	51	Insert after "atmosphere" "temperature records from satellites and radiosondes show no warming. human-induced or otherwise, over most of the record (1979 to 1997 for satellites and 1958 to 2002 for radiosondes)"
71	TS	33	51	33	51	Insert after "atmosphere" there was no warming between 1979 and 1997 (satellite measurements), or between 1958 and 2002 (radiosondes)."
72	TS	33	51	33	51	Delete "and", and capitalise "In the oceans", and add "a periodic heat behaviour has been observed which cannot be clearly related to human influence"
73	Ts	3	53	33	53	Replace "external" by "miscellaneous climate" and "anthropogenic" by "human-induced"
74	TS	33	55	33	57	Delete from "Model" to "well" I completely disagree.with the sentence.
75	TS	34	1	34	1	Delete "strongly"
76	TS	34	12	34	18	Delete whole paragraph, which is untrue. The only "warming" that needs to be explained is that of the surface record, which can be almost entirely attributed to socioeconomic factors such as population increase, energy use and urban development (see McKittrick and Michaels 2004 Climate Research Vol 26 pages 159-173)
77	TS	34	23	34	24	Delete from "It is very likely" to ".last 50 years" It is simply untrue. The only "observed warming" that needs to be explained is that of the surface record, and that is mainly due to socioeconomic factors (McKittrick and Michaels l.c.) Other temperature records either show no warming, or in the case ofthe satellite record, only very recently.
78	TS	34	23	34	23	Replace "greenhouse gas forcing has" by "socioeconomic factors have"
79	TS	34	26	34	27	Delete "counteracting greenhouse warming"
80	TS	34	31	34	31	"Replace "Widespread warming" with "A periodic change"

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81	TS	34	32	34	32	Replace "likely" by "possible"
82	TS	34	35	34	35	Insert "recent" after "observed"
83	TS	34	35	34	35	Replace "likely accounts" by "may account"
84	TS	34	36	34	36	Insert "possibly" before "consistent"
85	TS	34	39	34	39	Replace ".anthropogenic forcing has" by "Recent higher temperatures have"
86	TS	34	39	34	40	Delete from "Changes " to "warming". The evidence for "warming" is suspect, because it is mainly based on neighbouring land stations which may be greatly influenced by local heating. Satellite measurements indicate that the Arctic is cooling (see Figure 3.4.4)
87	TS	34	40	34	40	Insert "have been made" after "improvements"
88	TS	34	41	34	41	Delete from "strengthen" to "conclusion"
89	TS	34	46	34	46	Delete "the primary tool"
90	TS	34	49	34	49	Delete "substantial"
91	TS	34	49	34	50	Delete from "increasing" in line 49 to "models" in line 50
92	TS	34	55	34	55	Insert at end "But it does tend to universalise both biases and uncertainties"
93	TS	35	55	35	55	Insert "sometimes" after "been"
94	TS	36	14	36	15	Delete "tropospheric warming and" I have pointed out many times that "tropospheric warming" as measured by satellites and radiosondes cannot be explained by any of the various varieties of "anthropogenic forcing" There was no "warming", at least between 1979 and 1997 and the "warming in 1999 was due to El Niño.
95	TS	36	17	36	18	Delete from "some uncertainty remains" to "record". This statement is quite unfair. The "scrutiny" of the tropospheric records has been so intense, that they are both far more accurate than the surface and long-term proxy records which seem to escape from the same level of scrutiny.
96	TS	36	20	36	20	Insert after "signal" , "which is mainly socioeconomic",
97	TS	36	21	36	23	Delete from "The chance" in line 21 to "variability" in line 23. This statement makes no sense at all.
98	TS	36	23	36	24	Delete from "The ability" in line 23 to "TAR" in line 24 This statement is not supported by evidence
99	TS	36	25	36	25	Delete "However" and capitalise "Difficulties"
100	TS	36	25	36	25	Replace "some" by "most"
101	TS	36	25	36	25	Insert "and change" after "variability"
102	TS	36	32	36	32	Replace "likely" by "possibly"
103	TS	36	36	36	36	Replace "detectable" by "possible"
104	TS	36	38	36	38	Replace "likely" by "possibly"
105	TS	37	4	37	4	Insert after "forcings" , "including land-use changes and urban development"
106	TS	37	9	37	9	Replace "likely" by "possibly"
107	TS	37	9	37	9	Insert after "improvements , "have been made"

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108	TS	37	10	37	10	Delete from "strengthen" to "conclusion"
109	TS	37	16	37	16	Replace "vary likely" with "possibly"
110	TS	37	25	37	25	Replace "greenhouse gas forcing" by "human urban and agricultural development"
111	TS	37	26	37	26	Insert after "years" ,"as measured by the surface record"
112	TS	37		37		Footnote. Add at end. "The fact that CO2 is highly unlikely ever to increase at the rate of 1% a year renders these studies virtually useless"
113	TS	38	2	38	2	Insert after "estimated", "by sheer guesswork"
114	TS	38	5	38	5	Insert after "as well as," "some light on"
115	TS	38	15	38	15	Add at end "This is just as well, as several scenarios are hopelessly improbable"
116	TS	38	23	38	23	Add at end "Such long-term projections should not be considered too seriously"
117	TS	38		38		Footnote. When can I see "Glossary"? The last one contained several dubious definitions.
118	TS	39	7	38	7	Replace "confirm" by "indicate"
119	TS	39	9	39	9	Replace "would be expected to" by "might"
120	TS	39	12	39	18	Delete this whole paragraph which is contrary to facts. It fails to realise that the surface record was primarily influenced by socioeconomic factors, and that the stratospheric records, by showing no warming over most of their record, are inconsistent with a greenhouse gas explanation.
121	TS	39	30	39	30	Add at end "Since all of these projections do not agree with actual measured climate indicators, allowing for urban and other effects in the surface record, they can be disregarded".
122	TS	39	39	39	39	Add at end. "Since none of these projections corresponds to current changes in the climate they have little credence"
123	TS	39	43	41	26	Since no evidence has been presented that greenhouse gases have a measurable influence on the climate this whole section is irrelevant. Delete it
124	TS	41	30	42	21	This section is pure speculation, without any observational evidence. Delete
125	TS	42	23	42	23	Projections as far ahead as 100 years are irresponsible, particularly as no attempt is made to check whether they comply with emerging climate observations.
126	TS	42	27	42	27	Add at end "Scenarios A2 and A1F1 are so ridiculous that they should be rejected out of hand. We are then left with around 2°C rise for the next century. Most of us could live with that"
127	TS	42	39	42	39	Insert after "Atlantic" "Since this is in contrast to what is actually happening it shows that the projections are false"
128	TS	43	7	43	7	Add at end "There is no observational evidence to support any of these projections"
129	TS	43	26	43	26	Add at end "Again, there is no observational evidence to support these projections"
130	TS	43	51	43	51	Add at end "Once again, there is no observational evidence to support these projections"
131	TS	44	28	44	28	Add at end. "Again there is no observational evidence to support these projections, and the scenarios A2 and A1F1 are so ridiculous that they, at least can be disregarded"

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132	TS	44	32	44	32	Replace "As" by "If"
133	TS	44	35	44	35	Add at end "which is so ridiculous it can be ignored"
134	TS	44	43	44	43	Add at beginning "If the projections are to be believed"
135	TS	45	9	45	9	Insert afetr "scenario" (which is too absurd to be credible)"
136	TS	45	16	45	16	Insert after "concentrations" "is calculated to"
137	TS	45	16	45	16	Add at end "but this is yet to be confirmed by observations"
138	TS	45	19	45	19	Replace "will" by "might"
139	TS	45	27	45	27	Replace "variations" by "fall"
140	TS	46	26	46	26	Replace "robust" by "tentative"
141	TS	46	54	46	54	Replace "expected" by "projected"
142	TS	47	35	47	35	Replace "greater confidence in" by "better"
143	TS	47	50	47	50	Replace "Robust" with "Tentative"
144	TS	47	55	47	55	Replace "virtually certain" by "possible"
145	TS	48	2	48	2	Replave "virtually certain" by "probable"
146	TS	48	6	48	6	Replace "is" by "may be"
147	TS	49	8	49	8	Replace "very likely" by "possible"
148	TS	49	11	49	11	Insert at beginning, "Some". What about black carbon?
149	TS	49	14	49	14	Insert after "are", "thought to be"
150	TS	49	17	49	17	Replace "very likely" by "possibly"
151	TS	49	20	49	20	Delete "robust"
152	TS	49	37	49	37	Delete "Robust"
153	TS	49	38	49	38	Insert after "temperatures" "as measured solely by the surface record have risen since 1978"
154	TS	49	38	49	39	Delete from "rise" in line 38 to end, in line 39. These figures are different for the different records and one example is unfair.
155	TS	49	44	49	44	Delete whole sentence. "Warming " has not occurred before 1997 in two tropospheric records, so how could "warming" and "extremes" be related?
156	TS	49	52	49	52	Replace "much less complete" by "incomplete"
157	TS	49	52	49	52	Delete "spatially than surface records"
158	TS	49	52	49	53	Replace "a number of radiosondes" with "surface"
159	TS	49	53	49	53	Insert after "unreliable" "because of the influence of urban factors and poor calibration,"
160	TS	49	2	49	2	Insert after "disagree" : "surface measurements find no evidence of warming before 1997, suggesting that the surface record is influenced by urban factors. They also disagree"
161	TS	49	3	49	2	Delete "Robust"

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162	TS	49	7	49	7	Replace "is decreasing" by "fluctuates with fluctuating temperatures"
163	TS	49	9	49	9	Insert after "is" "thought by some to be"
164	TS	49	11	49	11	Add at end "possibly"
165	TS	49	12	49	12	After "decreased" insert "over"
166	TS	49	37	49	37	Delete "Robust"
167	TS	49	38	49	38	Delete "It is virtually certain that"
168	TS	49	38	49	38	Replace "increased" by "fluctuated"
169	TS	49	38	49	38	Add at end "with a peak in 1980 and a value in 2005 of comparable magnitude"
170	TS	49	40	49	40	Delete "It is very likely that"
171	TS	49	44	49	44	Delete "It is virtually certain that"
172	TS	49	44	49	44	Delete "It is very likely that"
173	TS	49	45	49	45	Insert after "century" "as judged by tide gauges"
174	TS	49	46	49	46	Insert after "2003" "after a change to satellite measurements"
175	TS	50	5	50	5	Add at end "so it is probably influenced by land subsidence near cities"
176	TS	50	9	50	9	Delete "Robust"
177	TS	50	23	50	23	Add at end "because of the warming effects associated with human habitation"
178	TS	50	50	50	50	Delete "Robust"
179	TS	50	51	50	51	Replave "It is highly likely (>95%) that" by "The"
180	TS	50	51	50	51	Insert after "warming", "of the surface as measured from weather stations and ships"
181	TS	50	51	50	52	Replace "cannot be explainedforcing" by "was significantly influenced by socioeconomic factors related to human habitation"
182	TS	50	52	50	53	Delete from "It is highly likely" to end on line 53
183	TS	50	55	50	56	Delete, as there is no supporting evidence
184	TS	51	2	51	2	Replace "likely" by "unlikely"
185	TS	51	5	51	5	Replace "variability" by "changes"
186	TS	51	9	51	9	Add at end "of urban bias"
187	TS	51	21	51	21	Delete "robust"
188	TS	51	22	51	22	Delete "there is considerable confidence that"
189	TS	51	22	51	22	Insert after "provide" "some"
190	TS	51	27	51	27	Replace "Confidence in models has increased due to" with "Models show"
191	TS	51	55	51	55	Delete "Robust"
192	TS	52	1	52	1	Replace "will continue to" with "may possibly"
193	TS	52	4	52	4	Replace "would" by "may"

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194	TS	52	6	52	6	Insert after "scenarios "is so extreme that itcould"
195	TS	52	6	52	6	Delete "is likely to"
196	TS	52	16	52	16	Delete "Robust"
197	TS	52	18	52	18	Add at end "but no proper statistical anlysis"
198	TS	52	20	52	20	Replace "a good" by "some:"
199	TS	52	23	52	23	Replace "strongly supports" by "suggests"
200	TS	52	35	52	35	Delete "Robust"
201	TS	52	42	52	42	Delete "robust"
202	TS	52	46	52	46	Replace "As" by "If"
203	TS	53	34	53	34	Del;ete "Robust"
204	TS	53	35	53	35	Replace "will very likkely" with "might"
205	TS	53	37	53	37	Replace "will very likkely" with "might"
206	TS	53	45	53	45	Replace "will very likkely" with "might"
207	TS	0		0		There is excessive repetition in this Chapter. It could easily be reduced by half by judicious pruning
208	TS	55	1	55	1	"Radiative Forcing" should be in Watts per meter squared in all figures
209	TS	55	4	55	4	"Radiative Forcing" of carbon dioxide should increase logarythmically. The diagram seems to show almost linear.
210	TS	57	5	57	5	This diagram is misleading as it does not show inaccuracies. There is no significant oincrease in the rate of change since 1988
211	TS	59	5	59	5	This diagram should include ALL greenhouse gases and forcing agents. The omissions of water vapour and clouds with the excuse that they are "feedbacks" is done only to conceal their very large uncertainties. Also the uncertainties should be TWO standard deviations, not ONE. They should all be doubled
212	TS	61	4	61	4	This is NOT a "linear" trend. No responsible statistician should draw a straight line through such irregular data. It is not evidence for a "trend" The separate parts of the record need to be considered on their own. It is surely obvious that the entire sequence could not be considered to have a single "cause". The pretence that the satellite record is compatible with the surface data is absurd.
213	TS	62	5	62	5	This is a trick to try and cover up the very real difference between the surface record and the satellite and radiosonde records of the lower troposphere. The radiosonde record should be displayed separately, as it shows no change in temperture between 1958 and 2004, in direct conflict with the surface record. The satellite record shows no change from 1979 to 1997, also The uncertainties in the surface record are much greater than with the others because there is no indication of the bias that has been found by the recent statistical studies

#	Chapter	Start Page	Start Line	End Page	End Line	Comment
						Comment ** If you are cutting and pasting comments from another application into the review form, please DOUBLE-CLICK in the appropriate spreadsheet comment cell before pasting your comment. Only ONE comment per row, please.
214	TS	71	6	71	6	This diagram is deliberately misleading as it does not take into account the fluctuations in ocean heat content. The current figure is approximately the same as it was in 1980. Previous measurements only started in 1955
215	TS	72	8	72	8	Again, no responsible statistician would draw a straight line through such irregular, fluctuating data. Any "trend" is meaningless. It seems highly probable that ocean heat content fluctuates over periods greater than the current measurements
216	TS	74	5	74	5	Another "linear trend" How irregular were these data?
217	TS	76	3	76	3	Yet another unjustified "linear trend"
218	TS	6	19	6	19	Delete "It is very likely that"
219	TS	6	20	6	20	Delete "well-mixed" They are NOT well-mixed"
220	TS	77	7	77	7	The increased temperature after 1910 is obviously due to the proximity of the instruments to human habitation, not to greenhouse gas increases.
221	TS	79	5	79	5	Another misleading diagram. Where it has been possible to correct the surface figures by "homogeneity adjustmen' (USA and China)t the supposed "warming" all but disappers
222	TS	80	4	60	4	I do not believe this diagram because I do not think it is possible to simulate "natural" forcing since 1900 without taking into account urban influences and even the "recovery from the little ice age" which was postulated in the 1990 IPCC Report. In particular I do not believe that the temperature rise of 0.4°C between 1910 and 1942 can be explained exclusively by changes in the sun and volcanoes.. At least this diagram proves that models based exclusively on increases in greenhouse gases cannot possibly be used to forecast future climate.
223	TS	81	5	81	5	"Trends" again!, I wonder how regular these were?
224	TS	82	5	82	5	Here we go again. The poor hemispheric coverage of the "proxies" is ignored and the obvious influence of proximity to human habitation for the readings after 1900 is ignored
225	TS	83	5	83	5	The models are for the lower troposphere, and you insist on comparing them with the unreliable surface record. But the troposphere measurements suggest negligible warming.
226	TS	84	5	84	5	Further evidence that scenario A2 is stupid. But who believes any of them?. None of them agree with what actually happens in the climate
227	TS	87	5	87	5	You can forget the absurd A2 and A1F1, but the others are't much either. Still we might only get 2 degrees.
228	TS	88	5	88	5	It is not happening this way. But who cares?
229	TS	90	5	90	5	Again, if you substitute the records that have been "homogeneity adjusted" for the USA and for China most of the "warming" disappears. The same would happen if you carry out the same process for the other continents
230	TS	12	19	12	19	Replave "very likely" with "possibly"
231	TS	12	21	12	21	Replace "anthropogenic" with 'human-induced"

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232	TS	12	24	12	24	Replace "very unlikely" with "somewhat improbable"
233	TS	12	33	12	33	Replace "are" by "seem to display"
234	TS	13	47	13	47	Replace "increase confidence" by "indicate"
235	TS	13	48	13	48	Replace "show" by "suggest"