Appendix F

Data Review

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Acronym List

LD = last day
CIR = chemical intake rate
Css = concentration at steady state
SS = steady state
DL = detection limit

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Table F-1. Experiment List

CAS	Chemical	Experiment_ID	ShortRef	Beef	Milk
50293	DDT	10	Claborn et al., 1960	X	
50293	DDT	66	Ely et al., 1952		X
50293	DDT	68	Gyrisco et al., 1959		X
50293	DDT	73	Williams et al., 1964		X
50293	DDT	74	Zweig et al., 1961		X
50293	DDT	93	Thomas et al., 1951	X	
50293	DDT	94	Arant, 1948	X	
50293	DDT	95	Bovard et al., 1961	X	
50293	DDT	100	Thomas et al., 1951	X	
50293	DDT	104	Gannon et al., 1959b	X	X
50293	DDT	152	Fries et al., 1969		X
50293	DDT	157	Fries et al., 1971		X
50293	DDT	192	Laben et al., 1966 Jun 15	X	X
50293	DDT	194	Martin et al., 1976	X	
50293	DDT	195	Shepherd et al., 1949		X
50293	DDT	199	Whiting et al., 1973	X	X
55389	fenthion	22	Johnson and Bowman, 1972		X
56382	parathion	141	Gyrisco et al., 1959		X
57749	chlordane	24	Claborn et al., 1960	X	
57749	chlordane	204	Dorough and Hemken, 1973	X	X
58899	lindane	32	Claborn et al., 1960	X	
58899	lindane	88	Williams et al., 1964		X
58899	lindane	140	Gyrisco et al., 1959		X
58899	lindane	193	Treece and Ware, 1965		X
60571	dieldrin	2	Potter et al., 1974	X	X
60571	dieldrin	11	Claborn et al., 1960	X	
60571	dieldrin	12	Claborn et al., 1960	X	
60571	dieldrin	40	Wilson and Cook, 1972	X	X
60571	dieldrin	42	Claborn et al., 1960	X	
60571	dieldrin	70	Ely et al., 1954b	X	X
60571	dieldrin	71	Ivey et al., 1961	X	
60571	dieldrin	75	Gannon et al., 1959a	X	X
60571	dieldrin	76	Williams et al., 1964		X
60571	dieldrin	77	Ely et al., 1954a		X
60571	dieldrin	99	Gannon et al., 1959c	X	
60571	dieldrin	101	Gannon et al., 1959b	X	X
60571	dieldrin	102	Gannon et al., 1959b	X	X
60571	dieldrin	146	Rumsey and Bond, 1974	X	
60571	dieldrin	190	Harris et al., 1956 Aug	X	X
72208	endrin	20	Baldwin et al., 1976	X	X
72208	endrin	27	Claborn et al., 1960	X	
72208	endrin	78	Williams et al., 1964		X
72208	endrin	79	Kiigemagi et al., 1961	X	X
72208	endrin	80	Ely et al., 1957		X
72208	endrin	197	Ely et al., 1957		X
72435	methoxychlor	90	Ely et al., 1953		X
72435	methoxychlor	105	Gannon et al., 1959b	X	X
72548	DDD	155	Fries et al., 1969		X
72559	DDE	7	Fries and Marrow, 1976	X	X
72559	DDE	151	Fries and Marrow, 1977	X	
72559	DDE	156	Fries et al., 1969		X
87865	pentachlorophenol	139	Firestone et al., 1979		X
93721	fenoprop (silvex)	5	Clark et al., 1975	X	
93721	fenoprop (silvex)	35	Bjerke et al., 1972		X
93765	2,4,5-T	34	Bjerke et al., 1972		X
94746	MCPA (2-methyl-4-chlorophenoxyacetic acid)	36	Bjerke et al., 1972		X
94757	2,4-D	6	Clark et al., 1975	X	
94757	2,4-D	33	Bjerke et al., 1972		X
118741	hexachlorobenzene	8	Fries and Marrow, 1976	X	X
118741	hexachlorobenzene	46	Borzelleca et al., 1971	X	X
118741	hexachlorobenzene	149	Fries and Marrow, 1977	X	
118741	hexachlorobenzene	158	Dingle and Palmer, 1977	X	
118741	hexachlorobenzene	203	Firestone et al., 1979		X
297789	isobenzan (telodrin)	98	Hardee et al., 1964		X
309002	aldrin	69	Gyrisco et al., 1959		X
314409	bromacil	154	Gutenmann and Lisk, 1970		X

Tablel F-1. (continued)

CAS	Chemical	Experiment_ID	ShortRef	Beef	Milk
1024573	heptachlor epoxide	26	Bruce et al., 1965	X	X
1024573	heptachlor epoxide	28	Claborn et al., 1960	X	
1024573	heptachlor epoxide	43	Claborn et al., 1960	X	
1024573	heptachlor epoxide	47	Claborn et al., 1960	X	
1024573	heptachlor epoxide	49	Claborn et al., 1960	X	
1024573	heptachlor epoxide	82	Ely et al., 1955		X
1024573	heptachlor epoxide	83	Hardee et al., 1964		X
1024573	heptachlor epoxide	84	Bache et al., 1960		X
1024573	heptachlor epoxide	86	Williams et al., 1964		X
1024573	heptachlor epoxide	103	Gannon et al., 1959b	X	X
1024573	heptachlor epoxide	189	Harris et al., 1956 Aug	X	X
1402682	aflatoxins	153	Polan et al., 1974		X
1746016	2,3,7,8-TCDD	38	Jensen and Hummel, 1982		X
1746016	2,3,7,8-TCDD	138	Jensen et al., 1981	X	
1746016	2,3,7,8-TCDD	161	McLachlan et al., 1980		X
1918009	dicamba	9	Oehler and Ivie, 1980	X	X
1918021	picloram	142	Kutschinski and Riley, 1969	X	
2385855	mirex	31	Dorough and Ivie, 1974		X
2385855	mirex	39	Bond et al., 1975		X
2921882	chlorpyrifos	23	McKellar et al., 1976		X
2921882	chlorpyrifos	187	Dishburger et al., 1977	X	
3268879	OCDD	167	McLachlan et al., 1980		X
3268879	OCDD	182	Parker et al., 1980	X	
3268879	OCDD	202	Firestone et al., 1979	X	X
8001352	toxaphene	19	Claborn et al., 1960		X
8001352	toxaphene	30	Claborn et al., 1960	X	
8001352	toxaphene	91	Claborn et al., 1963	X	X
8001352	toxaphene	92	Bateman et al., 1953		X
11097691	aroclor 1254	1	Fries et al., 1973	X	X
11097691	aroclor 1254	147	Willett et al., 1987	X	X
19408743	HxCDD, 1,2,3,7,8,9-	165	McLachlan et al., 1980		X
19408743	HxCDD, 1,2,3,7,8,9-	179	Parker et al., 1980	X	
19666309	oxadiazon	41	Guardigli et al., 1976	X	X
20354261	methazole	136	Atallah et al., 1976	X	X
22212551	benzoylprop-ethyl	3	Crayford et al., 1976	X	X
23950585	kerb	135	St.John and Lisk, 1975		X
35367385	di-flubenzuron	137	Miller et al., 1976	X	X
35822469	HpCDD, 1,2,3,4,6,7,8-	166	McLachlan et al., 1980		X
35822469	HpCDD, 1,2,3,4,6,7,8-	181	Parker et al., 1980	X	
35822469	HpCDD, 1,2,3,4,6,7,8-	201	Firestone et al., 1979	X	X
39001020	OCDF	176	McLachlan et al., 1980		X
39001020	OCDF	184	Parker et al., 1980	X	
39227286	HxCDD, 1,2,3,4,7,8-	163	McLachlan et al., 1980		X
40321764	PeCDD, 1,2,3,7,8-	162	McLachlan et al., 1980		X
51207319	TCDF, 2,3,7,8-	168	McLachlan et al., 1980		X
51630581	fenvalerate	25	Wszolek et al., 1980		X
51630581	fenvalerate	188	Boyer et al., 1992	X	X
52315078	cypermethrin	106	Croucher et al., 1985	X	X
52645531	permethrin	132	Gaughan et al., 1978	X	X
52756226	flamprop-isopropyl	4	Crayford et al., 1976	X	X
52918635	deltamethrin	127	Akhtar et al., 1986	X	X
52918635	deltamethrin	133	Akhtar et al., 1992	X	X
53780340	mefluidide	144	Clark et al., 1981	X	X
55511983	buthidazole	130	Atallah et al., 1980	X	X
55673897	HpCDF, 1,2,3,4,7,8,9-	175	McLachlan et al., 1980		X
57117314	PeCDF, 2,3,4,7,8-	169	McLachlan et al., 1980		X
57117416	PeCDF, 1,2,3,7,8-	170	McLachlan et al., 1980		X
57117449	HxCDF, 1,2,3,6,7,8-	172	McLachlan et al., 1980		X
57653857	HxCDD, 1,2,3,6,7,8-	164	McLachlan et al., 1980		X
57653857	HxCDD, 1,2,3,6,7,8-	180	Parker et al., 1980	X	
57653857	HxCDD, 1,2,3,6,7,8-	198	Firestone et al., 1979	X	X
60851345	HxCDF, 2,3,4,6,7,8-	173	McLachlan et al., 1980		X
67562394	HpCDF, 1,2,3,4,6,7,8-	174	McLachlan et al., 1980		X
67562394	HpCDF, 1,2,3,4,6,7,8-	183	Parker et al., 1980	X	
70648269	HxCDF, 1,2,3,4,7,8-	171	McLachlan et al., 1980		X

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
66	DDT	Yes. Animals all fed well beyond 100 days.	Concentrations were measured on the LD.	DLs are not provided. Considering other DDT experiments, concentrations appear to be well above DLs.	Concentrations were not measured during the depuration phase.	No statistically significant deviation from linearity. Visually, the highest concentration seem to slightly deviate.	Used LD to estimate Css.
68	DDT	Two animals were fed 160 mg/kg for 26 days, and another two were fed 1120 mg/kg for 63 days. Based on data from other experiments, only the last two would be at SS. One of the animals fed 1120 mg/kg was excluded because field-applied feed was used.	For the animals fed 160 mg/kg, concentrations were measured on the LD. For the animals fed 1120 mg/kg, concentrations were not measured on the LD.	DLs are not provided. Considering other DDT experiments, concentrations appear to be well above DLs.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Reject the animals fed only 26 days. For the animal fed 1120 mg/kg from barn-applied contaminated feed, estimate Css using the LD concentrations are measured during uptake (i.e., day 57).
73	DDT	Not Likely. Animals were fed 35 days. Based on other DDT experiments, we would not expect SS until ~50-70 days. No concentrations are provided during uptake or depuration.	Concentrations were measured on the LD.	Animals were fed three CIRs. The animals fed the lowest two CIRs have reported concentrations that are less then 5 times the DL. The concentrations reported for these two animals are the same despite them having been fed different amounts.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Accept the animal fed the highest CIR. Estimated Css based on the LD and using a kd of -0.065.
74	DDT	Not likely. Animals were fed 30 days. Based on other DDT experiments, we would not expect SS until ~50-70 days. Concentrations are reported during depuration, but the fit to determine kd is extremely poor and confounded by the DL. Visually, concentrations appear to be nearing SS for the animals fed the highest CIR.	Concentrations were measured on the LD.	For most animals, concentrations remained at or near DLs and are highly scattered. Only the animals fed either 60 or 100 mg/day had concentrations exceeding 5 times the DL.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	Only use data from the animals fed the higher concentrations. The Css is based on the LD. Estimated Css based on the LD and using a kd of -0.065.
104	DDT	Yes. Animals were all fed ~100 days. The kd values indicate 18 days to SS. This is lower than other studies indicate for DDT. Visually, concentrations do not reach SS until ~70 days.	Concentrations were measured on the LD.	Concentrations remain above 5 times the DL even in the depuration stage.	No evidence of two-compartment behavior.	In comparison to other DDT studies, the highest CIRs is in the nonlinear range (i.e., 3200 mg/Kg).	Use the concentration on the LD to estimate Css. Do not use the kd values. Reject the highest CIR based on nonlinearity.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
152	DDT	No. Animals were fed for 60 days. Article states that the concentrations are nearing, but not yet at, SS.	Concentrations are reported as an average from day 40 to day 60.	DLs are not provided. Considering other DDT experiments, concentrations appear to be at least 5 times above the DL.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Reject this experiment. Concentrations are not provided on a daily basis and cannot be used to extrapolate to SS. Article states SS was not reached.
157	DDT	No. Animal was fed only for 20 days. Based on other DDT experiments, we would not expect SS until ~50-70 days.	Concentrations are reported as an average from day 10 to day 20.	DLs are not provided. Considering other DDT experiments, concentrations appear to be at least 5 times above the DL.	Not enough data were provided during the depuration phase to make any determination.	No apparent nonlinear behavior.	Reject this experiment. Concentrations are not provided on a daily basis and cannot be used to extrapolate to SS. Based on other experiments, animals were not fed long enough to have reached SS.
192	DDT	No depuration data to model. Likely at SS. Concentrations are last measured at 126 days during uptake.	No. Four animals were all fed for 184 days. For three animals, concentrations were reported at 126 days. For the remaining animals, concentrations were reported at 154 days.	No DLs were provided but do not appear to be a problem. Concentrations were measured in milk fat, which allowed for lower than typical concentrations estimated in whole milk.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Use the last concentration measured during uptake to estimate Css.
195	DDT	Yes. Animals were fed for >100 days. Based on kd, concentrations are expected to reach SS after ~50-70 days.	Out of four animals, only one had concentrations measured on the LD.	DLs were not provided. Considering reported limits from other experiments, the three highest concentrations should be over 5 times the DL. For the animal fed the lowest CIR, concentrations may be within 5 times the DL and are somewhat scattered, but the BTF is consistent with other animals.	Concentrations in two animals were monitored for almost 200 days during depuration. After about 50 days into depuration concentrations begin to plateau in a manner not explained by the one-box model.	For this study alone, the data are highly linear across the entire concentration range. Compared to other DDT studies, results are outside of the range for other data. Does not lead to statistically significant deviations from the linearity.	Estimated Css using concentratins measured in fat. In two cases, we limited data used to derive kd. When concentrations were not reported on the LD, the day closest to the LD in the uptake phase was used for modeling.
199	DDT	Yes. Animals were all fed 365 days. By visual inspection, concentrations are clearly at SS, almost from the onset of the experiment. Note that the kd values from the data are much lower than expected and indicate about 300 days to SS. These kd values result in a poor fit of the uptake curve.	Concentrations were measured on the LD.	Concentrations were measured over a year after LD. After 100 days into the depuration period, concentrations leveled to a point where DL would be a concern for this chemical.	Possibly, or may be confounded by DL.	No apparent nonlinear behavior.	Estimated Css using an average of concentrations reported from 70+ days. When estimating kd, concentrations were limited to 100 days past the LD. Because they conflicted with the uptake data, kd values from this experiment were not used.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
22	fenthion	Unclear. Animals were fed for 28 days, and concentrations appear to still be climbing.	Concentrations were measured on the LD.	For the animal fed the lowest CIR, concentrations remain below 5 times the DL.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior. BTFs are conistent over the range of CIR considered (i.e., up to ~200 mg/day).	Use the LD from the animals fed the two highest amounts to estimate Css.
141	parathion	Likely. Animals were fed for 26 days. We do not have a depuration rate to derive time to SS. This chemical is not persistent, so the time to SS is likely less than 26 days.	Concentrations were measured on the LD.	No dection limit given but concentrations are all somewhat low (e.g., 0.01 and 0.02 ppm). Given a colorimetric method was used this is likely at or near the DL.	Concentrations were not measured during the depuration phase.	No data to judge.	Estimate Css using the measured concentrations on the LD.
204	chlordane	Yes. Animals were fed for 60 days. Based on kd values, time to SS is ~40 days.	Concentrations were measured on the LD.	Concentrations remain above DLs even in the depuration stage.	In all cases, concentrations plateau at about 30 days into the depuration period in a manner not explained by the one-box model.	BTFs are significantly lower for highest CIR, which was ~2g/d. Given small sample size, statistical test is not sensative.	Estimate Css using modeled concentrations. Limit data used to derive kd.
88	lindane	Animals were fed for 35 days. No depuration rates or time series data to judge SS.	Concentrations were measured on the LD.	For the animal fed the lowest CIR, concentrations are less than 5x the DL. For all other animals, concentrations are well above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use the LD from the animals fed the two highest amounts to estimate Css.
140	lindane	Animals were fed for 26 days, but we do not have a depuration rate to derive time to SS. This chemical is somewhat persistent, so the time to SS is likely more than 26 days. Concentrations are also highly variable.	Concentrations were measured on the LD.	None provided but colorimetric method was used so likely not very low. Also data indicates potential interferences resulting in poor quality data.	No depuration data to judge.	NA. Experiment rejected.	Reject this experiment. We have no data to judge time to SS for this chemical but there is another study having a longer feeding time with higher BTFs.
193	lindane	Animals were fed for 17 and 24 days, but we do not have a depuration rate to derive time to SS. This chemical is somewhat persistent so the time to SS is likely more. Concentrations are also increasing and somewhat variable.	Concentrations were not measured on the LD.	None provided but GC was used so likely DLs were not a concern.	No depuration data to judge.	NA. Experiment rejected.	Reject this experiment. The animals were fed field applied grain and the authors note that the concentrations were decreasing in the grain overtime. This is good experiment for understanding how the controlled feeding experiments compare to field conditions but this is not good data for model development.
2	dieldrin	No. Based on other studies, expect SS at ~70-80 days. All animals were fed out to <30 days.	Concentrations were measured on the LD.	No problems with DLs.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using a kd of -0.05 and the concentration on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
40	dieldrin	Based on kd from one of two animals, neither were run to SS. For one animal, concentrations were not measured during depuration.	Concentrations were measured on the LD.	DLs are not provided. Considering other dieldrin experiments, DLs do not appear to be a problem.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	For the animal with depuration data, estimate Css using model. For the animal without depuration data, estimate Css using the kd from the animal with depuration data.
70	dieldrin	No. Only ran out to 29 or 44 days. Not at SS.	Concentrations were measured on the LD.	No problems with DLs.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using a kd of -0.05 and the concentration on the LD.
75	dieldrin	Yes. Animals were fed for 84 days. Based on depuration rate, expect SS at ~ 80 days.	Concentrations were measured on the LD. After depuration, the concentrations did not decrease as expected for animals fed the highest intake rates.	Intake rates relatively low (4-36mg/day). The animal with the lowest intake rate had a high r-square on the depuration curve but had several reported concentrations at the DL confounding the ultimate Css from the model.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	For the animal fed the lowest amount, estimate Css using model. For the remaining animals, estimate Css using the kd from the first experiment and the concentration on the LD.
76	dieldrin	No. Animals were fed for 35 days. Based on other studies, expect SS at ~70-80 days.	Concentrations were measured on the LD.	Concentrations are 5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using a kd of 0.05 and the concentration on the LD.
77	dieldrin	No. Animals were fed for 40 or 50 days. Based on other studies, expect SS at ~70-80 days.	Concentrations were measured on the LD.	Concentrations all over 5 times the DL.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	Estimate Css using a kd of 0.05 and the concentration on the LD.
101	dieldrin	Based on depuration rate, expect SS at ~70 days. All animals were fed out to >100.	Concentrations were measured on the LD.	No problems with DLs.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	For the animal with depuration data, estimate Css using modeled concentrations. For the animal without depuration data, estimate Css using an average of concentrations reported after 70 days.
102	dieldrin	Yes. Out of three animals, one had sufficient depuration data to estimate a kd. Based on this kd, concentrations should reach SS at ~70 days. All animals were fed out to >100.	Concentrations were measured on the LD.	No problems with DLs.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	For the animals with depuration data, estimate Css using modeled concentrations. For other animals, estimate Css using an average of concentrations reported 70+ days.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
190	dieldrin	Based on other studies, expect SS at ~70-80 days. All animals were fed out to >100. Clearly at SS.	Concentrations were measured on the LD.	No problems with DLs.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the concentration in fat measured on the LD. Reject the two animals that did not have fat concentration measured.
20	endrin	Unclear. Animals were fed for 21 days. Data appear to have leveled off from 12 to 14 days, but no kd to verify time to SS.	Concentrations were measured on the LD.	Concentrations are all 5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use an average of day 14 and 21 to determine Css.
78	endrin	Unclear. Animals were fed for 35 days. No kd to verify time to SS.	Concentrations were measured on the LD.	The animal with the lowest concentration fed has concentrations less than 5 times the DL but the BTFs remain consistent with other animals.	No depuration data to judge.	No apparent nonlinear behavior.	Only use the data from the animals fed the higher concentrations. The Css is based on the LD.
79	endrin	Unclear. Animals were fed 84 days. The authors only reported one concentration during the depuration period. Only one data point after the LD. Not enough data to conduct SS analysis.	Concentrations were measured on the LD.	Low concentrations were fed (4-32 mg/day) and concentrations measured were at or near DL in several cases. For the animals fed the lowest two CIRs, the reported concentrations never reached >2 times the DL and were the same on the LD.	No depuration data to judge.	No apparent nonlinear behavior.	Only use data from the animal fed the highest concentration. Since no kd is available, the Css for this animal is estimated based on data from 14+ days. Concentrations in other animals remain below 5 times the DL.
80	endrin	Unclear for two animals fed for 64 days. One animal was fed only for 2 days and clearly would not be at SS.	Concentrations were measured on the LD.	All data is below 5 times the DL.	No depuration data to judge.	NA. Study was rejected.	Reject this experiment. Concentrations are all very near the DL and are lesser quality than other endrin studies.
197	endrin	Unclear. Animals were fed for 48 days. No kd to verify time to SS.	Concentrations were measured on the LD.	All data is below 5 times the DL.	No depuration data to judge.	NA. Study was rejected.	Reject this experiment. Concentrations are all very near the DL and are lesser quality than other endrin studies.
90	methoxychlor	Unclear. Animals were fed for 50 days.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	BTFs are lower for highest CIR. Given small sample size, statistical test is not sensative.	Estimate Css using the measured concentrations on the LD.
105	methoxychlor	Likley. Animals were fed for >100 days. Fit of the depuration data has an r-square <0.9 but indicates ~10 days to SS.	Concentrations were measured on the LD.	For all animals, concentrations reduce very fast and quickly reach the DL. For the animals fed the two lowest concentrations, the concentrations remained below 5 times the DL.	No evidence of two-compartment behavior.	BTFs are lower for highest CIR. Given small sample size, statistical test is not sensative.	Limit data used to derive kd. Reject the animals fed the two lowest concentrations. Given the scatter in the data, use the LD to estimate Css.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
155	DDD	Animals were fed for 60 days. There are no depuration data to judge. Considering other similar chemicals we would expect this chemical to be at or nearing SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	Not likely given the intake rate but not enough data to judge.	Estimate Css using the measured concentrations on the LD.
7	DDE	Animals were fed for 60 days. There are no depuration data to consider. Based on similar chemicals, we would expect this chemical to be at or nearing SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	No issues with nonlinear behavior are noted.	Estimate Css using the measured concentrations on the LD.
156	DDE	Animals were fed for 60 days. There are no depuration data to judge. Considering other similar chemicals we would expect this chemical to be at or nearing SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	No issues with nonlinear behavior are noted.	Estimate Css using the measured concentrations on the LD.
139	pentachloro phenol	Likely at or near SS given the persistence of this chemical. Animals were fed for 70 days.	Concentrations were measured 10 days prior to the LD at day 60.	No DL is provided.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
35	fenoprop (silvex)	Unclear. Animals were fed for 21 days. Concentrations apear to be climbing.	Concentrations were measured on the LD.	Concentrations remained below 5 times the DL and are very scattered.	No depuration data to judge.	No data to judge. These data are very scattered but are the only data we have for this chemical.	Estimate Css using the measured concentrations on the LD.
34	Trichlorophe noxyacetic acid, 2,4,5-	Yes. Depuration data indicate about 5 days to SS. The data for two of the cows are fairly consistent throughout. For the third animal, the time series data have two unexplained spikes.	Concentrations were not measured on the LD.	Concentrations exceeded 5 times the DL for all three animals.	No evidence of two-compartment behavior.	No data to judge.	The day before the LD was set to LD for estimating depuration rates. The animal without depuration data is rejected.
36	MCPA (2-methyl-4-chloropheno xyacetic acid)	Animal was fed for 19 days. No depuration rates and limited time series data to judge SS.	Concentrations were measured on the LD.	Concentrations remained less than 2x the DL throughout the experiment.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
33	2,4-D	No data to determine time to SS. Based on the chemical structure, expect it would be very fast (e.g., 5).	Concentrations were measured on the LD.	Concentrations remained below 5 times the DL.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
8	hexachlorob enzene	Unclear. Animals were fed 60 days. No kd is available to verify time to SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
46	hexachlorobenzene	Concentrations appear to be nearing SS but have not yet reached a plateau. Animals were fed to 112 days.	Concentrations were not measured on the LD. Milk concentrations are provided to day 56.	For one of three animals, concentrations exceeded 5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Only accept the animal fed the highest concentrations. Use LD to estimate Css.
203	hexachlorobenzene	Unclear. Animals were fed 70 days. No kd is available to verify time to SS.	Concentrations were measured on the LD.	No DL given.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
98	isobenzan (telodrin)	Model was used to derived SS for two animals.	Concentrations were measured on the LD.	Concentrations were below 5 times the DL for one animal. The other animal's concentrations were above this threshold but the data were somewhat scattered.	After about 30 days into depuration period concentrations begin to platue in a manner not explained by the one-box model.	Not enough data to judge.	The determination of kd was limited to concentrations near to the LD. Reject the animal with the lowest intake rate of chemical.
154	bromacil	Based on estimated kd, chemical requires ~16 days to reach SS. Animals were fed only 4.		No problems with DLs.	No evidence of two-compartment behavior.	Not enough data to judge.	Use the derived kd to estimate SS. Note that the kd is only based on two points but, given that they are one day apart and that this chemical is not very persistent, these estimates were accepted.
26	heptachlor epoxide	Animals were fed for 84 days and would be expected to be at SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No evidence of two-compartment behavior.	No apparent nonlinear behavior. Compared to other experiments, these BTFs are higher. Not clear why.	Calculate Css based on LD.
82	heptachlor epoxide	Animals were fed for 70 days and would be expected to be at SS.	Concentrations were measured on the LD.	DLs were not provided but appear to be an issue based on the trends in the data.	No evidence of two-compartment behavior.	This experiment does not follow a linear trend. In fact, BTFs decrease with decreasing concentrations, which also indicates a problem with DLs.	Reject this experiment. Clearly there are some problems with the analytical DLs.
83	heptachlor epoxide	No. Animals were fed 28 days. Depuration rate from this experiment indicates ~50 days to SS.	Concentrations were measured on the LD.	Animals were fed low concentrations but were measured using radiometric methods resulting in a low DL. Concentrations for the animal fed 0.11 mg/day remained mostly 5x below the DL. Concentrations were less stable for this animal compared to the animal fed 0.45mg/d.	Possibly. For the 16 mg/d animal, concentrations reached a plateau 45 days after dosing ended in a manner not explained by the one compartment model.	Not enough data to judge. Only two CIRs were measured.	For estimating kd, reject the last two measured concentrations from the animal fed 0.45 mg/d. For the 0.11 mg/d animal, reject the kd from the animal fed 0.11 mg/d and estimate Css using a depuration rate from the 0.45 mg/day animal to extrapolate SS.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
84	heptachlor epoxide	No. Animals were fed 14 days. Based on depuration rate expect SS ~25 days.	Concentrations were measured on the LD.	Not reported. Concentrations fed were low 8 and 16 mg /day. The data for the 8 mg/d animal are somewhat scattered and appear unreliable since they do not decrease as expected after feeding stopped..	Possibly. The last measured day from the 16 mg/d animal was rejected.	Not enough data to judge. Only one CIR was measured.	Reject the last measured concentration for 16 mg/d animal. Rejected the data for the 8 mg/d animal due to possible interferences or DL issues.
86	heptachlor epoxide	No. Animals were fed for 35 days and are not expected to be at SS until ~day 50.	Concentrations were measured on the LD.	No problems with DLs.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	Use a kd of -0.07 to extrapolate to SS.
103	heptachlor epoxide	Yes. Based on depuration rate, these animals would reach SS at ~50 days. Animals were fed >100. Because concentrations jump for three of the four animals between ~50-90 days, it is not possible to use the model to fit the uptake data.	Concentrations were measured on the LD.	No problems with DLs.	No evidence of two-compartment behavior.	No apparent nonlinear behavior. Compared to other experiments, these BTFs are lower Not clear why.	Calculate Css using the concentration measured on the LD.
189	heptachlor epoxide	Unclear. Animals were fed <5 mg/day for 112 days. No uptake curve.	Concentrations were measured on the LD.	DLs were not provided but concentrations remain at ~0.2ppm using photometric methods. This is likely at or near the DL.	No evidence of two-compartment behavior.	NA. data were rejected.	Reject this experiment. DL is not provided but based on other studies the concentrations here are likely very close or at the DL and the concentrations do not increase over time.
153	Aflatoxins	Concentrations are only available at 4 and 8 days into feeding. They do remain constant over time.	Data were not measured on the LD (i.e., day 12).	The animals fed the lowest concentration did not have concentrations in milk above the DL.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	Reject the animal fed the lowest amount. For the other two animals, estimate Css using an average the concentrations at day 4 and 8
38	TCDD, 2,3,7,	No. Using kd, extrapolated Css for two out of three animals. For one animal, concentrations were not reported during the depuration phase.	Concentrations were measured on the LD.	Points at the end of the experiment were not used for the determination of kd. (WHY DL?)	Possible. After about 50 days into depuration period concentrations begin to plateau.	No apparent nonlinear behavior.	Limit data used to derive kd. One plot of the depuration data had an R-square >0.9. For this animal, we estimated Css based on the model. For the other two animals, we estimated Css based using this kd of -0.0255 and the concentration on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
161	TCDD, 2,3,7,	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
9	dicamba	Animals are fed for only four days. The concentrations fall from day 3 to 4.	Concentrations were measured on the LD.	Concentrations remained below 5 times the DL.	No depuration data to judge.	No data to judge.	Use the concentration on day three, the highest concentration reached during the experiment.
31	mirex	Unclear. The animal was fed for 28 days. We could not derive a kd from the depuration data due to interferences with the DL.	Concentrations were measured on the LD.	During uptake, concentrations exceed 5 times the DL. During depuration, concentrations reduce very fast and are below the DL.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
39	mirex	Likely. Animals were fed for 217 days. We would expect mirex to have reached SS in this experiment.	Concentrations were measured on the LD.	For the animal fed 0.01 ppm, concentrations remained less than 5 times the DL. For the animal fed 1ppm, concentrations remained less than 5 times the DL until day 168, at which point the concentrations continued to rise slightly until the LD.	No depuration data to judge.	No apparent nonlinear behavior.	Reject the animal fed only 0.01 ppm. For the animal fed 1 ppm, estimate Css using the measured concentrations on the LD.
23	chlorpyrifos	Experiments were run for 12 days. Based on the log Kow for this chemical, we would not expect concentrations to reach SS in this amount of time.	Concentrations were measured on the LD in both milk and cream.	In milk, concentrations remained at the DL In cream, concentrations exceeded 5 times the DL.	No data to judge. Concentrations were not measured during depuration.	No data to judge. Only one intake rate was measured.	For cream, estimate Css using the measured concentrations on the LD and convert to a concentration in fat assuming 45% fat in cream. Reject milk data since at the DL.
167	OCDD	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
202	OCDD	Unclear. Animals were fed 69 days. The fit of the depuration data is not adequate for determining time to SS.	Concentrations were measured on the LD.	No problems with DLs.	Possibly. The last two measurements are identical.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
91	toxaphene	Yes. Animals were fed for 56 days. Based on kd, animals should reach SS after 20 days.	Concentrations were measured on the LD.	For most of the animals, DLs do not seem to be a problem until the end of the depuration period where concentrations reach the DL.	Possibly. For three of the animals, the Rsquare for the kd plot is above Rsquare of.9 and no effects are seen. The rest of the animals concentrations were monitored out 7 days further. These animals do not have a good fit on the kd and have concentrations that are leveling out sooner than expected though in some cases the concentrations are reaching the DL.	No apparent nonlinear behavior.	Accept the kd for the animals with the good fits. For the other animals, use concentrations at 21 days and beyond to estimate Css.
92	toxaphene	Yes. Animals were fed for 112 days. Time to SS is ~20 days for this chemical based on depuration data from another experiment. However, most of the animals showed unexplained spikes in the concentrations early in the experiment.	Concentrations were measured on the LD.	No problems with DLs.	No depuration data to judge.	NA. This study was rejected.	Reject this experiment. The animals were fed field applied grain, which likely had concentrations changing in the grain overtime. This is good experiment for understanding how the controlled feeding experiments compare to field conditions but this is not good data for model development.
1	aroclor 1254	Animals were fed 60 days. Likely at or near to SS, though no kd to verify.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	This study only has one CIR. Compared to other aroclor data, the BTFs from this study are slightly higher.	Use concentration at LD to estimate Css.
147	aroclor 1254	Animals were fed 60 days. Likely at or near to SS, though no kd to verify.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Use concentration at LD to estimate Css.
165	HxCDD, 1,2,3,7,8,9-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
41	oxadiazon	Unclear. Animals were fed 28 days. No kd is available to verify time to SS.	Concentrations were measured on the LD.	Concentrations exceeded 5 times the DL.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
136	methazole	Likely at or nearing SS. Animals were fed for 14 days. Concentrations visually level off from 7 to 14 days in all three animals.	Concentrations were measured on the LD.	No dection limit was given but given the use of a radiolabeled technique the experiment would likely have a very low limit of detection.	No depuration data to judge.	No apparent nonlinear behavior. BTFs are conistent over the range of CIR considered (i.e., from 11 to 220 mg/day).	Use average of concentrations from day 7 to 14 to estimate Css.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
3	benzoylprop-ethyl	Likely. One animal was fed for 7 days. Concentrations were measured on each day and are fairly constant after day 2. Only two points are available to derive a kd. Using this kd, we obtain a reasonable fit on the uptake data and an estimated time to SS of 6 days.	Concentrations were measured on the LD.	At no point did concentrations exceed 5 times the DL.	No data to judge. Only one concentration was measured during the depuration phase.	No data to judge. Only one intake rate was measured.	Estimate Css using the modeled concentrations based on the kd.
135	kerb	Unclear. Animal was fed for 4 days. No depuration or time series data to judge time to SS.	Concentrations were measured one day after the LD.	Reported concentration is five times below the DL.	No data to judge. Only one concentration was measured during the depuration phase.	No data to judge. Only one intake rate was measured.	Reject this experiment.
137	di-flubenzuron	Unclear. Animals were fed 95 days, but no time series data or kd.	Concentrations were measured four days before the LD.	Concentrations are below reported DL.	No data to judge. Concentrations were not measured during depuration.	No data to judge. Only one intake rate was measured.	Reject this experiment. The concentration is below the DL.
166	HpCDD, 1,2,3,4,6,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
201	HpCDD, 1,2,3,4,6,7,8-	Unclear. Animal was fed 69 days. Based on the kd, time to SS would be ~260 days. However using this kd results in a poor fit of the uptake data. The kd is not based on concentrations directly after the LD.	Concentrations were measured one day before the LD.	No problems with DLs.	No evidence of two-compartment behavior.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	Estimate Css using the measured concentration on the LD.
176	OCDF	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentration on the LD.
163	HxCDD, 1,2,3,4,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentration on the LD.
162	PeCDD, 1,2,3,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentration on the LD.
168	TCDF, 2,3,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentration on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
25	fenvalerate	Likely at near SS. From this study, kd indicates SS at ~4 days. Animals were fed for 4 days, and concentrations are rising each day. Other fenvalerate studies predict a time to SS of 5 days.	Concentrations were measured on the LD. The depuration period began two days after the LD.	For the animal fed the lowest CIR, concentrations remain below 5 times the DL.	None. The fit of the depuration data is linear.	No data to judge. Only two intake rates were measured. The lowest CIR is rejected based on the DL.	For the animal fed the highest CIR, calculate Css based on one day after the LD since concentrations are still accumulating. Reject animal fed the lowest amount.
188	fenvalerate	Yes. Expect SS at ~5 days. Run to >20.	Concentrations were all reported on the LD or one day prior.	The first animal has concentrations less than 5x the DL throughout the experiment.	None. The fit of the depuration data is linear.	No apparent nonlinear behavior. BTFs are conistent over the range of CIR considered.	Reject animal fed the lowest CIR. For the animal with depuration data, use the model to estimate Css. For the animal without depuration data, use the reported concetrations from day 6+ to estimate Css.
106	cypermethrin	Animals were fed only for 7 or 20 days. This chemical is known to readily metabolize. This could be enough time to reach SS but no data to confirm.	Concentrations were measured on the LD.	Only one animal had concentrations that exceeded 5 times the dection limit; however, BTFs are consistent across all CIRs.	No data to judge. Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior. BTFs are conistent over the range of CIR considered.	Estimate Css using the measured concentrations on the LD.
132	permethrin	Unclear. Animals were fed only for 3 days. In the article, time series plots are provided, which indicates that concentrations would likey have risen if animals were fed longer.	Concentrations were measured on the LD.	No DL is provided.	No data to judge. Concentrations were not measured during the depuration phase.	No data to judge. CIRs were all ~ 400 mg/d.	Estimate Css using the measured concentrations on the LD.
4	flamprop-isopropyl	Unclear. Animals were fed 5.3 mg/day for 8 days. No uptake curve.	Concentrations were measured on the LD.	Concentrations remained below 4 times the DL.	No data to judge. Concentrations were not measured during the depuration phase.	No data to judge. Only one CIR was used.	Estimate Css using the measured concentrations on the LD.
127	deltamethrin	Unclear. Animals were fed 3 days. Other experiment for this chemical indicates 4 days to SS.	Concentrations were measured on the LD.	Concentrations exceed 5 times the DL.	No data to judge. Concentrations were not measured during the depuration phase.	Not enough data to judge. Both animals were fed ~5,000 mg/day.	Estimate Css using the measured concentrations on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
133	deltamethrin	Yes. Chemical reaches SS after ~4 days. Both animals ran beyond this point.	Concentrations were measured on the LD.	Based on other reported DLs for this chemical, the concentrations from the cow with the lowest CIR are likely confounded by the DL. Unlike the concentrations for the animal fed the highest CIR, these data are highly scattered and show not clear trends in terms of uptake or depuration.	None. For the animal fed the highest CIR, The fit of the depuration data is linear.	No data to judge. Only two intake rates were measured. The lowest CIR is rejected based on the DL.	Reject the animal fed the lowest CIR. For the animal fed the highest CIR, estimate Css using the measured concentrations on the LD.
144	mefluidide	Unclear. Animals were fed for 28 days. During that time the concentrations remained fairly constant but were all close to the DL.	Concentrations were measured on the LD.	For all three animals the concentrations were below 5x the dection limit.	No depuration data to judge.	No data to judge. Only two intake rates were measured.	Estimate Css using the measured concentrations on the LD.
130	buthidazole	Unclear. Animals were fed for 14 days. There is no depuration rate to confirm time to SS.	Concentrations were measured on the LD.	Concentrations are all 5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
175	HpCDF, 1,2,3,4,7,8,9-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
169	PeCDF, 2,3,4,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
170	PeCDF, 1,2,3,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
172	HxCDF, 1,2,3,6,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
164	HxCDD, 1,2,3,6,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.

Table F-2. Milk Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
198	HxCDD, 1,2,3,6,7,8-	Unclear. Animal was fed 69 days. Based on the kd, time to SS would be ~260 days. However using this kd results in a poor fit of the uptake data. The kd is not based on concentrations directly after the LD.	Concentrations were measured one day before the LD.	No problems with DLs.	No evidence of two-compartment behavior.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	Estimate Css using the measured concentration on the LD.
173	HxCDF, 2,3,4,6,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
174	HpCDF, 1,2,3,4,6,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
171	HxCDF, 1,2,3,4,7,8-	Unclear. Animals were fed 100 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
10	DDT	Unclear. Animals were fed 112 days. The depuration data indicate > 250-300 days to SS. However, these data do not capture the concentrations immediately after the LD. Using the kd derived from these data, we obtain a poor fit of concentrations during uptake. Based on the uptake data, concentrations may be closer to SS than indicated by the kd.	Concentrations were measured on the LD.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
93	DDT	Likely nearing SS. One animal was fed 160 days and the rest were fed for 230 days.	Concentrations were measured on the LD.	Concentrations are all 5 times above the DL.	Concentrations were not measured during the depuration phase.	Data are very scattered, likely due to this being a field applied study. The intercept does not go through zero.	Reject this experiment. This is a field applied study using 10 day old calves.
94	DDT	Likely nearing SS. One animal was fed 143 days and the rest were fed for 105 days.	Concentrations were measured on the LD.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
95	DDT	Unclear. The last concentrations measured were at 79 days. The depuration data indicate > 500 days to SS. However, these data do not capture the concentrations immediately after the LD. Using the kd derived from these data, we obtain a poor fit of concentrations during uptake.	No. Six animals were fed 104 days. For three animals, concentrations were reported on day 79. For the remaining three animals, concentrations were reported 80 days past the LD.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	In comparison to other DDT studies, IRs are in the nonlinear range (i.e., 824 mg/Kg).	Reject the three animals with concentrations only available 80 days past LD. For the remaining animals, we estimated Css based on the LD; however, these animals are ultimately rejected based on nonlinear behavior.
100	DDT	Likely nearing SS. One animal was fed 176 days.	Concentrations were measured on the LD.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Concentrations were not measured during the depuration phase.	Compared to all other DDT studies, this study is a significant outlier. If this data is included, the intercept does not go through zero for DDT.	Use the concentration on the LD to estimate Css. Based on the examination of nonlinear behavior, this experiment is rejected as an outlier. This study used 10 day old calves and the extreme growth rate make the assumption of a constant dose questionable for these animals.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
104	DDT	Not in SS analysis for beef but was in for milk. Animals were all fed ~100 days. Based on the review of milk data, concentrations have reached SS. Out of 4 animals, only one concentrations measured in tissue.	Concentrations were measured on the LD.	Concentrations are all 5 times above the DL.	Concentrations were not measured during the depuration phase.	In comparison to other DDT studies, IRs is in the nonlinear range (i.e., 1600 mg/Kg).	Estimate Css using the measured concentrations on the LD.
192	DDT	Likely nearing SS. No depuration data to model. Concentrations are last measured at 126 days during uptake.	No. Four animals were all fed for 184 days. For three animals, concentrations were reported at 126 days. For the remaining animals, concentrations were reported at 154 days.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
194	DDT	Yes. Animals were fed 216 days and the depuration data indicate about 209 days to SS.	Concentrations were measured on the LD.	DLs are not provided. Based on other reported DLs for this chemical, concentrations are well above this level.	Concentrations were measured out to 50 days beyond the LD. After 30 days beyond the LD, concentrations level off in a way not explained by the one-box model.	No apparent nonlinear behavior.	Determination of the depuration rate was limited to the first 30 days after the LD. BTFs are based on modeled SS concentrations, which are in good agreement with the concentrations on the LD.
199	DDT	Yes. Not in SS analysis for beef but was in for milk. Animals were fed 365 days and concentrations were deemed SS based on milk data.	Concentrations were measured on the LD.	DLs are not provided. Given the number of significant figures, the reported concentrations are at least 5 times above the DL.	Concentrations were not measured during the depuration phase.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
24	chlordane	Likely nearing SS. Animals were fed 112 days. There were only two points to available to estimate kd.	Concentration were not measured on the LD in all cases. However, concentrations were recorded at other points during uptake.	Concentrations all 5 times above the DL.	Limited depuration data to judge.	This study does not have any statistically significant nonlinear behavior. The BTF from this study are much higher data from other chlordane studies.	Estimate Css using the measured concentrations on the LD or day nearest the LD.
204	chlordane	Based on analysis of milk data, this experiment reached SS.	Concentrations were measured on the LD.	Concentrations all 5 times above the DL.	No depuration data to judge.	This study does not have any statistically significant nonlinear behavior. The BTF from this study are much lower data from other chlordane studies.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
32	lindane	No. Documentation indicated that the animals were fed for 112 days. The data show that concentrations at 112 days are significantly lower than the reported concentration at 84 days (1/2 to 1/4 less on day 112). This would likely be near or at SS. Depuration data indicate 130 days to SS.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	None. When day 84 is assumed to be the LD, depuration data is well fit for the animals fed the two highest concentrations.	No apparent nonlinear behavior. BTFs are relatively constant over the CIR considered (I.e., 8 - 800 mg/day).	For the animals fed the two lowest CIRs, use the concentration at day 84 to estimate Css. For the animals fed the two highest CIRs use the model fits. Note there is no significant difference between model concentrations and the concentrations at day 84.
2	dieldrin	No. Not in SS analysis for beef but was in for milk. Based on depuration rate for this chemical, expect SS at ~70 days. All animals were fed out to <30 days.	Concentrations were measured on the LD.	Concentrations all 5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using a kd of -0.05 and the concentration on the LD.
11	dieldrin	Unclear. Depuration rates using all the data indicate >200 days to SS but fits are poor in many cases and the overall model does not fit the uptake data well. Based on the uptake data, concentrations may be closer to SS than indicated by the kd. If only the LD and point immediately following the LD are used to derive a kd, ~100 days are required to reach SS. Two animals were fed 54 days and six animals were fed 122 days.	Concentrations were measured on the LD.	Concentrations all 5 times above the DL.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css. Note that two animals were fed only 54 days, but the concentrations at day >100 was almost unchanged from day 54 and the BTFs using day 54 are consistent with other BTFs. It is possible that the LD is not assigned correctly.
12	dieldrin	Unclear. Only one animal has depuration data, which indicate >200 days to SS but provides a very poor fits of the uptake curve. Based on the uptake data, concentrations may be closer to SS than indicated by the kd. One animal fed 54 days and five animals were fed 122 days.	Concentrations were measured on the LD.	Concentrations all 5 times above the DL.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css. Note that one animal was fed only 54 days, but the BTFs using day 54 are consistent with other BTFs. It is possible that the LD is not assigned correctly.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
40	dieldrin	No. Not in SS analysis for beef but was in for milk. Based on kd from one of two animals, neither were run to SS. For one animal, concentrations were not measured during depuration.	Concentrations in tissue fat were measured on the LD for one of two animals.	For the animal fed the highest CIR, DLs are not provided but do not appear to be a problem. For the animal fed the lowest CIR, concentrations reported during uptake are very low and could be confounded by the DL.	No depuration data to judge.	No apparent nonlinear behavior.	For the animal with concentrations reported on the LD, estimate Css using the kd derived from the milk data. Data for the other animal was not used.
42	dieldrin	Unclear but likely. Animals were all fed for 84 days.	For six out of eight animals, concentrations were measured on the LD. For two animals, concentrations were measured >40 days after the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css. Reject the two animals without concentrations on the LD.
70	dieldrin	No. Based on depuration rate for this chemical, expect SS at ~70 days. Animals were fed for 29 days.	Concentrations were measured on the LD.	Concentration is >3 times the DL.	Not enough depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using a kd of -0.05 and the concentration on the LD.
71	dieldrin	Unclear but likely. Animals were all fed for 84 days.	Concentrations were measured on the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css.
75	dieldrin	Yes. Not in SS analysis for beef but was in for milk. Animals were fed for 84 days. Based on depuration rate, expect SS at ~ 80 days.	Concentration were measured on the LD.	For the animal fed the lowest CIR, the concentration is 2 times the DL but the BTFs are consistent with the other animals. For all other animals, the concentrations is >5 times the DL. The animal fed the lowest CIR	Not enough depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
99	dieldrin	Unclear but likely. Animals were all fed for 84 days.	Concentrations were measured on the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
101	dieldrin	Yes. Not in SS analysis for beef but was in for milk. Based on depuration rate, expect SS at ~70 days. All animals were fed out to >100.	Concentrations were measured on the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
102	dieldrin	Yes. Not in SS analysis for beef but was in for milk. Based on depuration rate, expect SS at ~70 days. All animals were fed out to >100.	Concentrations were measured on the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
146	dieldrin	Unclear but likely. One animal was all fed for >400 days.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
190	dieldrin	Yes. Based on depuration rate, expect SS at ~75 days. All animals were fed out to >100. Clearly at SS.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
20	endrin	Animals were fed for 21 days. Based on the fact that the corresponding milk concentrations level off from day 14 to 21, this is likely nearing or at SS.	Concentrations were measured on the LD.	Concentration is >5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
27	endrin	Likely. Animals were fed 122 days.	Concentrations were measured on the LD.	Concentrations are approximately 2 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css. These data are somewhat variable, which is likely due to being so near the DL. This is the only nonlactating study for this chemical.
79	endrin	Likely. Animals were fed over 84 days.	Concentrations were measured on the LD.	For the animals fed the two lowest CIRs, the concentrations are < 5 times the DL but they are consistent with the BTF from the animal fed the highest CIR.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
105	methoxychlor	Not in SS analysis for beef but was in for milk. Yes. Based on milk data, concentrations should reaches SS very quickly (i.e., <10 days). Animals were fed for >100 days.	Concentrations were measured on the LD.	Only one animal had concentrations measured in body fat. Concentration is >5 times the DL.	No depuration data to judge.	No other CIRs to compare.	Estimate Css using the measured concentrations on the LD.
7	DDE	Animals were fed for 60 days. There are no depuration data to judge. Considering other similar chemicals we would expect this chemical to be at or nearing SS.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
151	DDE	Unclear. Animals were fed for 28 days. No depuration data to judge time to SS. Concentrations on day 14 are similar to day 28 indicating the concentrations may be nearing SS.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
5	fenoprop (silvex)	Unclear. Animals were fed for 28 days. No depuration data to judge time to SS.	Concentrations were measured on the LD.	DLs could be a problem with the lowest CIR.	No depuration data to judge.	Possible. Data are highly scattered and could be due to nonlinearity.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
6	2,4-D	Unclear. Animals were fed for 28 days. No depuration data to judge time to SS.	Concentrations were measured on the LD.	DLs could be a problem with the lowest CIR.	No depuration data to judge.	Possible. Data are highly scattered and could be due to nonlinearity.	Estimate Css using the measured concentrations on the LD.
8	hexachloro benzene	Unclear. Animals were fed 60 days. No kd is available to verify time to SS.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
46	hexachloro benzene	Concentrations appear to be nearing SS but are not yet reached a plateau. Animals were fed to 112 days.	Concentrations were measured on the LD.	For the animal fed the lowest CIR, the concentration is at the DL. For the remaining animals, the concentration is 5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Reject the animal fed the lowest CIR. For the remaining animals, use the concentration on the LD to estimate Css.
149	hexachloro benzene	No. Fed only for 28 days. Based on other data for this chemical, we would require ~60 days to SS.	Concentrations were measured on the LD.	Concentrations are >5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Reject this experiment because it is not at SS and we have other data for this chemical that is at SS.
158	hexachloro benzene	Unclear. Animals were fed for 70, 42, or 21 days. The animals fed 42 days are lactating. The fit of the depuration data is poor.	Concentrations were measured on the LD.	Concentrations are >5 times above the DL.	Not clear. The depuration has a poor fit but is due more to concentrations either rising after the LD or falling before the LD.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD. Reject the animals fed 21 days.
158	hexachloro benzene	Based on visual review of the uptake data, concentrations are clearly at or nearing SS after 60 days of feeding. There are three other animals with only depuration data that were fed only for 21 days. The kd based on this data indicates a very long time to SS (e.g., >200 days).	Concentrations were measured on the LD.	Concentrations are >5 times above the DL.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD. Do not use the data for the animals with on the depuration data.
26	heptachlor epoxide	Animals were fed for 84 days and would be expected to be at SS.	Concentrations were measured on the LD.	DLs were not provided but do not appear to be an issue.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
28	heptachlor epoxide	Likely, animals were fed more than 100 days.	For all but three animals, concentrations were measured on the LD.	For the animal fed the lowest CIR, concentrations reported are the DL. For all animals with concentrations reported on the LD, concentrations are >5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Use the concentration on the LD to estimate Css. Reject the three animals without concentrations on the LD. Reject the animal fed the lowest CIR.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
43	heptachlor epoxide	For most animals at or nearing SS. Several animals in the study were fed either 54, 70, 98, or 112 days. The animals at 112 days had BTFs ~ 2 times many of the animals fed the lesser amounts.	Concentrations were measured on the LD.	Concentrations are >5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
47	heptachlor epoxide	Unclear. Animal was fed for 56 days. A kd was derived but gave a poor fit on the uptake data. This kd indicates a very long time to SS (e.g., >500 days).	Concentrations were measured on the LD.	DLs are not provided. It is possible that the difficulty in fitting this data is related to the DLs.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
49	heptachlor epoxide	Unclear. Animal was fed for 56 days. A kd was derived but gave a poor fit on the uptake data. This kd indicates a very long time to SS (e.g., >500 days).	Concentrations were measured on the LD.	DLs are not provided. It is possible that the difficulty in fitting this data is related to the DLs.	Possibly. As noted under the SS question, the kd derived from these data result in a poor fit of concentrations during uptake. Because this kd is not based on data immediately following the LD, two-compartment behavior is a possible explanation.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
103	heptachlor epoxide	Yes. Based on depuration rate derived using the milk data, these animals would reach SS at ~ 50 days. Animals were fed >100. Note only one animal in the study was analyzed for chemical in the body fat.	Concentrations were measured on the LD.	Concentrations are >5 times above the DL.	No depuration data to judge.	Compared to all other studies, this is a somewhat of an outlier; however, the intercept for all experiments still goes through zero. Also, the analysis of linearity for corresponding milk data was strongly linear.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
189	heptachlor epoxide	Unclear. Animals were fed <5 mg/day for 112 days. Based on the milk time series data, there is no uptake curve.	Concentrations were measured on the LD	DLs were not provided but concentrations remain are reported at <0.2ppm using photometric methods. This is likely at or near the DL.	No depuration data to judge.	NA. Study rejected.	Reject this experiment. Data quality seems poor based on milk time series data and milk data were also rejected. These results are also questionable because the reported concentration in beef is so close to the milk concentration. This result is inconsistent with other studies without DL problems.
138	2,3,7,8-TCDD	No. Animals were fed for 28 days. Difficult to get a good fit on depuration data since animals consistently seem to have continued rising concentrations after LD. Regardless, expect SS >200 days.	Concentrations were measured on the LD	No problems with the DLs.	None noted.	No data to judge.	Estimate Css using the measured concentrations on the LD.
9	dicamba	Animals were fed for only four days. In milk, the concentrations fall from day 3 to 4.	Concentrations were measured on the LD.	Concentration is two times the DL.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
142	picloram	Animals were fed for 14 days. No data to confirm SS.	Concentrations were measured on the LD.	Concentrations for the animal fed the lowest CIR is <5 times the DL. All other concentrations are >5 times the DL.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD. Reject the animals fed the lowest CIR.
187	chlorpyrifos	Yes. Animals were fed for 30 days. Based on kds derived from this experiment, time to SS is between 21 to 30 days.	For 11 out of 14 animals, concentrations were measured on the LD. For the remaining animals, time series concentrations were measured starting at 7 days past LD.	For the animals fed the lowest CIR, concentrations are < 5 times the DL. For the remaining animals, concentrations are > 5 times the DL.	No apparent two-compartment beahvior.	No apparent nonlinear behavior.	For the animals with concentrations on the LD, estimate Css using the measured concentrations on the LD. For the animals with depuration data, accept kd when r-square > 0.9 (i.e., 2 out of 3 animals).
182	OCDD	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentrations are >5 times above the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
202	OCDD	Unclear. Animals were fed 69 days. There is a poor for the depuration data for determining time to SS.	Concentrations were measured on the LD.	No problems with DLs.	Possibly. The last two measurements are close.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
30	toxaphene	Yes. Depuration data from two animals was accepted for deriving a kd. The time to SS is estimated at ~110 days. Animals were fed for 112 days.	Concentrations were measured on the LD	Concentrations are > 5 times the DL.	No evidence of two-compartment behavior.	No apparent nonlinear behavior.	For the two animals with acceptable kds, estimate Css using the model. For the remaining animals, estimate Css using the measured concentrations on the LD.
91	toxaphene	Yes. Animals were fed for 56 days. Based on kd from milk, animals should reach SS after 20 days.	Concentrations were not measured on the LD. They are only available for the day after the LD.	Concentrations are all > 5 times the DL.	No depuration data to judge.	For this experiment alone, the results are linear across the range of concentrations considered. However the BTFs are considerably lower compared to experiment 30.	Reject this experiment. The concentrations are measured one day after the LD, which could have a considerable impact on the concentrations.
1	aroclor 1254	Animals were fed 60 days. Likely at or near to SS though no kd to verify.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to ju	This study only has one CIR. Compared to other aroclor data, the BTFs from this study are slightly higher.	Estimate Css using the measured concentrations on the LD.
147	aroclor 1254	Animals were fed 60 days. Likely at or near to SS though no kd to verify.	Concentrations were measured on the LD.	DLs are not provided but do not appear to be a problem.	No depuration data to ju	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
179	HxCDD, 1,2,3,7,8,9-	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentration is < 2 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
41	oxadiazon	Unclear. Animals were fed 28 days. No kd is available to verify time to SS.	Concentrations were measured on the LD.	Concentrations exceeded 5 times the DL.	No depuration data to ju	No data to judge.	Estimate Css using the measured concentrations on the LD.
136	methazole	Likely at or nearing SS. Animals were fed for 14 days. Based on the review of milk data, concentrations visually level off after from 7 - 14 days in all three animals. Note that only the animal with the highest CIR has tissue data avaialble.	Concentrations were measured on the LD	DLs were not provided.	No depuration data to judge.	No data to judge.	Estimate Css using the measured concentrations on the LD.
3	benzoylprop ethyl	Likely at or nearing SS based on milk data. Animal was fed for 7 days.	Concentrations were not measured on the LD for beef. They were given for one day after the LD.	Concentrations did not exceed 5 times the DL.	No data to judge. Only one concentration was measured during the depuration phase.	No data to judge. Only one intake rate was measured.	Reject this experiment. This chemical is rapidly removed from the animal and we have not tissue/body fat data on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
137	di-flubenzuron	Unclear. Animals were fed 95 days, but no time series data or kd.	For the animal fed the lower CIR, concentrations were measured 22 days before the LD. For the animal fed the higher CIR, concentrations were measured four days before the LD.	For the animal fed the lower CIR, concentrations were at the DL. For the animal fed the higher CIR, concentrations were > 5 times the DL.	No data to judge. Only one concentration was measured during the depuration phase.	No data to judge. Two intake rates were measured but the concentrations from one were at the DL.	For the animal fed the higher CIR, estimate Css using the measured concentrations on the LD. Reject the animal fed the lowest CIR.
181	HpCDD, 1,2,3,4,6,7, 8-	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentration is > 5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
201	HpCDD, 1,2,3,4,6,7, 8-	Unclear. Animal was fed 69 days. We could not derive a kd based on the depuration data.	Concentrations were measured one day before the LD	No problems with DLs.	Possibly. The concentrations at the LD measured in the depuration phase are actually a little higher than the prior measurement.	No data to judge.	Estimate Css using the measured concentrations on the LD.
184	OCDF	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentration is < 2 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
188	fenvalerate	Yes. Based on milk time series data, expect SS at ~5 days. Run to >20.	Concentrations were measured on the LD.	For the animal fed the lowest CIR, concentrations were at the DL. For the remaining two animals, concentrations were > 5 times the DL.	No depuration data to judge.	The BTFs are lower for the highest CIR but there is not enough data to determine statistical significance.	Reject animal fed the lowest CIR. For the remaining animals, estimate Css using the measured concentrations on the LD.
106	cypermethrin	Animals were fed only for 7 or 20 days. This chemical is known to readily metabolize. This could be enough time to reach SS but no data to confirm.	Concentrations were measured on the LD.	Only one animal had concentrations that exceeded 5 times the dection limit. For the animals fed the two highest CIRs, BTFs that are consistent. BTFs are ~ 5 times higher for the animal fed the lowest CIR.	No depuration data to judge.	No apparent nonlinear behavior. BTFs are conistent from 50 to 100 mg/day.	Reject animal fed the lowest CIR. For the remaining animals, estimate Css using the measured concentrations on the LD.
132	permethrin	Unclear. Animals were fed only for 3 days. In the article, milk time series plots are provided, which indicates that concentrations would likey have risen if animals were fed longer.	Concentrations were measured 9 days after the LD.	DLs were not provided.	No data to judge. Only one concentration was measured during the depuration phase.	No data to judge. CIRs were all ~ 400 mg/d.	Reject this experiment. We do not have tissue/body fat data on the LD.
4	flamprop-isopropyl	Unclear. Animals were fed 5.3 mg/day for 8 days. For milk time seried concentrations, no uptake curve.	Concentrations were measured one day past the LD.	Reported concentration is below 2 times the DL.	No data to judge. Concentrations were not measured during the depuration phase.	No data to judge. Only one CIR was used.	Reject this experiment. We do not have tissue/body fat data on the LD.

Table F-3. Beef Review

Exp ID	Chemical	Did concentrations reach steady state?	Were concentrations measured on the LD of feeding?	Were concentrations at or near the analytical DLs?	Do the data indicate two-compartment behavior?	Do the data indicate nonlinear behavior across chemical intake rates?	Conclusion
127	deltamethrin	Unclear. Animals were fed 3 days. Other milk experiment for this chemical indicates 4 days to SS.	Concentrations were measured one day past the LD.	Concentrations exceed 5 times the DL.	No data to judge. Concentrations were not measured during the depuration phase.	Not enough data to judge. Both animals were fed ~5,000 mg/day.	Reject this experiment. We do not have tissue/body fat data on the LD.
133	deltamethrin	Yes. Based on milk data, chemical reaches SS after ~4 days. Both animals ran beyond this point.	Concentrations were measured after the LD.	DLs were not provided.	No data to judge. Only one concentration was measured during the depuration phase from each animal.	No data to judge. Only two intake rates were measured.	Reject this experiment. We do not have tissue/body fat data on the LD.
144	mefluidide	Unclear. Animals were fed for 28 days.	Concentrations were measured one day after the LD.	For all three animals the concentrations were below 5x the dection limit.	No depuration data to judge.	No data to judge. Only two intake rates were measured.	Reject this experiment. We do not have tissue/body fat data on the LD.
180	HxCDD, 1,2,3,6,7,8-	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentration is > 5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.
198	HxCDD, 1,2,3,6,7,8-	Unclear. Animal was fed 69 days.	Concentrations were measured one day before the LD	No problems with DLs.	Possibly. The concentrations at the LD measured in the depuration phase are actually a little higher than the prior measurement.	No data to judge.	Estimate Css using the measured concentrations on the LD.
183	HpCDF, 1,2,3,4,6,7,8-	Unclear. Animals were fed for 160 days.	Concentrations were measured on the LD	Concentration is > 5 times the DL.	No depuration data to judge.	No apparent nonlinear behavior.	Estimate Css using the measured concentrations on the LD.