

Table B-1. Summary of Total Annual Average Respondent Burden

Deemandont	Number	Burden	Average Burden
Respondent Reporting and Analysis Burden:	of Respondents	(hours/year)	per Respondent
States	35	20,336	581.03
POTWs	1,512	670,502	443.45
IUs	23,193	774,401	33.39
Subtotal	24,740	1,465,239	59.23
Recordkeeping:			
States	35	5,865	167.57
POTWs	1,512	151,200	100.00
IUs	23,193	46,386	2.00
Subtotal	24,740	203,451	8.22
TOTAL	24,740	1,668,690	67.45

Table B-2. Respondent Burden for States

	(2) Hours Per	(3)	(4) Annual Responses Per	(5)= (2)*(3)*(4) Hours
Item	Response	Respondents	Respondent	Per Year
State Pretreatment Program Approval Request	300.0	1.3	1.0	400.0
Issuance of SIU Discharge Permits	20.0	35.0	1.8	1292.0
Inspection and Sampling of SIUs Not - Inspection	8.0	35.0	22.5	6312.1
- Sampling and Analysis	15.2	35.0	21.0	11196.6
Inspection and Sampling of Middle-Tien - Inspection - Sampling and Analysis	er CIUs 8.0 15.2	35.0 35.0	0.5 0.5	136.0 258.6
Evaluation of NSCIUs	2.0	35.0	0.9	65.9
Evaluation of SIUs for SCP	0.0	0.0	0.0	0.0
Public Notification of Significant Noncompliance	3.0	5.0	3.4	51.0
Evaluation of the Need to Revise Local Limits*	50.0	5.0	2.0	510.0
Excellence Award Program Information	2.0	30.0	1.5	90.0
Minimum Monitoring Requirements for Indirect	2.4	10.0	1.0	24.0
TOTAL ALL ITEMS				20,336

^{*} States that implement pretreatment programs for their POTWs must evaluate the need to revise local limits once every five years. Therefore, the number of respondents is equal to the number of States that implement pretreatment programs for their POTWs (5). The number of evaluations/responses per year is equal to the average number of pretreatment programs in each State divided by five to obtain a number of average annual responses.

Table B-3. Respondent Burden for POTWs

ltem	(2) Hours Per Response	(3) Number of Respondents	(4) Annual Responses Per Respondent	(5)= (2)*(3)*(4) Hours Per Year
POTW Pretreatment Compliance Schedule Progress Report*	5.0	46.0	3.0	690.0
POTW Pretreatment Program Approval Request*	250.0	21.3	1.0	5325.0
Annual POTW Reports	40.0	1512.0	1.0	60480.0
POTW Program Modification Approval Request**	40.0	302.4	1.0	12096.0
Issuance of SIU Discharge Permits	20.0	1512.0	2.8	85480.0
Mass Limits*	8.0	1512.0	0.02	192.0
Equivalent Concentration*	8.0	1512.0	0.004	45.3
Inspection and Sampling of SIUs Not Includin - Inspection	g Middle-Tier S 8.0	IUs 1512.0	14.2	171569.0
Sampling and Analysis, In-houseSampling and Analysis, Contract	15.2 15.2	1512.0 1512.0	6.6 6.6	151995.0 151995.0
Inspection and Sampling of Middle-Tier CIUs - Inspection - Sampling and Analysis, In-house - Sampling and Analysis, Contract	8.0 15.2 15.2	1512.0 1512.0 1512.0	0.3 0.2 0.2	3695.5 3510.7 3510.7
Evaluation of NSCIUs	2.0	1512.0	0.6	1790
Evaluation of SIUs for SCPs	0.0	0.0	0.0	0.0
Public Notification of Significant Noncompliance	3.0	504.0	1.0	1512.0
Evaluation of the Need to Revise Local Limits	50.0	302.4	1.0	15120.0
Excellence Award Program Information	12.0	10.0	1.0	120.0
Removal Credit Approval Request*	125.0	3.0	1.0	375.0
Removal Credit Self- Monitoring Report	40.0	25.0	1.0	1000.0
TOTAL ALL ITEMS				670,502

^{*} These are one-time only reporting requirements. The total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of average annual burden.

^{**} This reporting requirement is based on an event which occurs sporadically. A single response is all that is required for each occurrence.

Table B-4. Respondent Burden for Industrial Users

	(1) Hours Per	(2)	(3) Annual Responses Per	(4)= (1)*(2)*(3) Hours
Item	Response	Respondents	Respondent	Per Year
Baseline Monitoring				
Report/Reporting* -New Sources	20.0	225.0	1.0	6300.0
-New Sources	28.0	225.0	1.0	6300.0
Baseline Monitoring				
Report/Analysis*				
-New Sources	14.3	225.0	1.0	3208.4
IU Compliance				
Schedule Report				
-New Sources	4.0	56.3	1.0	225.0
CILL Compliance				
CIU Compliance Attainment Report/Reporting*				
-New Sources	20.0	225.0	1.0	4500.0
-New Sources	20.0	225.0	1.0	4300.0
CIU Compliance				
Attainment Report/Analysis*				
-New Sources	14.3	225.0	1.0	3208.4
IU Resampling Compliance Report				
-Sampling	4.0	2169.3	1.0	8677.2
-Analysis	11.7	2169.3	1.0	25372.9
-Reporting	1.0	2169.3	1.0	2169.3
IU/SIU Self-Monitoring Report				
Categorical SIUs, Not Including NSCIUs and Middle	ı e-Tier CIUs			
-Sampling	4.0	8552.1	2.0	68417.0
-Analysis***	11.6	8552.1	2.0	197867.2
-Reporting	1.0	10052.1	2.0	20104.3
Non-Categorical SIUs				
-Sampling	4.0	12183.0	2.0	97464.0
-Analysis	9.5	12183.0	2.0	230380.1
-Reporting	1.0	12183.0	2.0	24366.0
Nonsignificant CIUs > 0 and <100 GPD				
-Sampling	4.0	296	0.2	236.4
-Analysis	11.6	296	0.2	683.7
-Reporting/Annual Certicification	1.0	296	1.0	295.5
Middle Tier				
-Sampling	4.0	958	1.0	3831.5
-Analysis	11.6	958	1.0	11080.9
-Reporting	1.0	958	1.0	957.9
Nonsignificant CIUs - Zero dischargers				
-Reporting	1.0	633	1.0	632.5
DEDD DO Diag				
PFPR P2 Plan	0.0	2.2	0.0	0.0
-Initial Plan	0.0	0.0	0.0	0.0
-Modifications	20.0	150.0	1.0	3000.0

^{*} These are one-time only reporting requirements. Total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of annual burden.

^{**} These reporting requirements are based on events which occur sporadically. A single response is all that is required for each occurrence.

	(1) Hours	(2)	(3) Annual Responses	(4)= (1)*(2)*(3)
Item	Per Response	Number of Respondents	Per Respondent	Hours Per Year
Discharging Mills in the Bleached Papergrade Kraft	Пооролос	поорониона	пооронион	1 01 1001
and Soda Subcategory and the Papergrade Sulfite				
Subcategory	825.9	10.0	1.0	8259.0
Pollution Prevention Compliance Alternative. Transpo	I ortation Equipme	nt Cleaning (TEC)		
-Prepare and submit a statement of intent	1.0	20.0	1.0	19.0
-Prepare and submit a PMP	24.9	5.0	1.0	124.5
-Collect information and maintain records	186.8	84.0	1.0	15691.2
-Perform operator training	22.0	84.0	1.0	1848.0
BMPs for the Bleached Papergrade Kraft and Soda				
Subcategory	617.0	10.0	1.0	6170.0
CWT Multiple Wastestream Category				
-Initial Certification Statement	60.0	0.0	1.0	0.0
Periodic Certifications				
-Electroplating & Metal Finishing	1.0	5733.0	2.0	11466.0
-Electrical and Electronic Components	1.0	45.5	2.0	91.0
-Steam Electric Power Generating	1.0	87.8	1.0	87.8
-Pulp, Paper, and Paperboard	1.0	119.0	0.2	23.8
- Bleached Papergrade Kraft and Soda Subcategory of the Pulp, Paper, and Paperboard	0.5	6.0	12.0	36.0
-Centralized Waste Treatment	1.0	34.0	1.0	34.0
-Pharmaceutical Manufacturing	1.0	85.8	0.2	17.2
-Pesticide Chemicals	1.0	1500.0	2.0	3000.0
-Coil Coating	1.0	30.8	1.0	30.8
-Can Making	1.0	1.0	0.3	0.3
-Porcelain Enameling	1.0	73.0	1.0	73.0
-Aluminum Forming	1.0	54.0	1.0	54.0
IU Slug Load Notification (Categorical)	2.0	100.0	1.0	200.0
IU Slug Load Notification (Non-Categorical)	0.3	450.0	1.0	112.5
Notification of Changed Discharge	4.0	1000.0	1.0	4000.0
Bypass Notification	5.0	1427.0	1.0	7135.0
Follow-Up	2.0	1070.0	1.0	2140.0
Notification of Changed	1.0	50.0	1.0	50.0
Monitoring Location		55.5		00.0
Slug Control Plan	2.0	22.5	1.0	45.0
Categorical Determination Request	0.0	0.0	0.0	0.0
Alternative Limits Modification Requests/Combined Wastestream Formula	2.0	22.5	1.0	45.0
Fundamentally Different Factors	160.0	0.0	1.0	0.0
Variance Request				
Net/Gross Adjustment Request	50.0	2.0	1.0	100.0
Request for Mass Limits*	8.0	40.0	1.0	320.0
Request for Coverage Under GCM	0.5	500.0	1.0	250.0
TOTAL ALL ITEMS (IUs)				774,401

^{*} These are one-time only reporting requirements. Total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of annual burden.

^{**} These reporting requirements are based on events which occur sporadically. A single response is all that is required for each occurrence.

Table B-5. Recordkeeping Burden for Industrial Users, POTWs, and States

	(2)	(3)	(4)=(2)*(3)
Item	Hours per Recordkeeper	Number of Recordkeepers	Hours Per Year
IU Maintenance of Monitoring Records	2	23,193	46,386
POTW Maintenance of Monitoring Records	100	1,512	151,200
Approval Authority Maintenance of Info. Approval Authority Maintenance of Monitoring Records *	50 823	35 5	1,750 4,115
TOTAL ALL ITEMS			203,451

^{*} Additional burden due to States that act as Control Authorities. Assumes 5 hours per SIU per year.

Table B-6. Average Annual Responses per Respondent

Туре	Title	(1) Number of Respondents	(2) Responses Per Respondent	(3)=(1)*(2) Responses Per Year
Program Development	State Pretreatment Program Approval Request	1.3	1.0	1.3
	POTW Pretreatment Compliance Schedule Progress Report	46.0	3.0	138.0
	POTW Pretreatment Program Approval Request	21.3	1.0	21.3
Program Implementation	Baseline Monitoring Report & Analysis -New Sources	225.0	1.0	225.0
	CIU Compliance Schedule Progress Report -New Sources	56.3	1.0	56.3
	CIU Compliance Attainment Reporting & Analysis -New Sources	225.0	1.0	225.0
	IU Resampling Compliance Report -Sampling & Reporting	2,169.3	1.0	2,169.3
	IU/SIU Self-Monitoring Compliance Report			
	Categorical SIUs -Sampling, Analysis, and Reporting	10,052.1	2.0	20,104.3
	Non-Categorical SIUs -Sampling, Analysis, and Reporting	12,183.0	2.0	24,366.0
	Nonsignificant CIUs -Sampling, Analysis, and Reporting	295.5	1.0	295.5
	Middle Tier	957.9	1.0	957.9
	Nonsignificant CIUs - Zero dischargers -Sampling, Analysis, and Reporting	632.5	1.0	632.5
	PFPR P2 Plan			
	-Initial Plan -Modifications	0.0 150.0	0.0 1.0	0.0 150.0
	Minimum Monitoring Requirements for Indirect Disch	10.0	1.0	10.0
	Pollution Prevention Compliance Alternative. Transp	ortation Equipme	nt Cleaning (TEC)	
	-Prepare and submit a statement of intent	20.0	1.0	20.0
	-Prepare and submit a PMP	5.0	1.0	5.0
	-Collect information and maintain records	84.0	1.0	84.0
	-Perform operator training	84.0	1.0	84.0
	BMPs for the Bleached Papergrade Kraft and Soda	10.0	1.0	10.0
	CWT Multiple Wastestream Category -Initial Certification Statement	0.0	1.0	0.0
	Periodic Certifications			
	-Electroplating & Metal Finishing -Electrical and Electronic Components	5,733.0 45.5	2.0 2.0	11,466.0 91.0
	-Steam Electric Power Generating	87.8	1.0	87.8
	-Pulp, Paper, and Paperboard - Bleached Papergrade Kraft and Soda	119.0	0.2	23.8
	Subcategory of the Pulp, Paper, and Paperboard	6.0	12.0	72.0
	-Centralized Waste Treatment	34.0	1.0	34.0
	-Pharmaceutical Manufacturing	85.8	0.2	17.2
	-Pesticide Chemicals -Coil Coating	1,500.0 30.8	2.0 1.0	3,000.0 30.8
	-Can Making	1.0	0.3	0.3
	-Porcelain Enameling	73.0	1.0	73.0
	-Aluminum Forming	54.0	1.0	54.0
	Annual POTW Reports	1,512.0	1.0	1,512.0
	POTW Program Modifications	302.4	1.0	302.4
	IU Slug Load Notification (Categorical)	100.0	1.0	100.0
	IU Slug Load Notification (Non-Categorical)	450.0	1.0	450.0
i	Notification of Changed Discharge	1,000.0	1.0	1,000.0

Table B-6. Average Annual Responses per Respondent

Туре	Title	(1) Number of Respondents	(2) Responses Per Respondent	(3)=(1)*(2) Responses Per Year
Program Implementation	Bypass Notification	1,427.0	1.0	1,427.0
(Continued)	Follow-up	1,070.0	1.0	1,070.0
	Notification of Changed Monitoring Location	50.0	1.0	50.0
	Issuance of Discharge Permits for SIUs			
	States	35.0	1.8	64.6
	POTWs	1,512.0	2.8	4,274.0
	Mass Limits	1,512.0	0.0	24.0
	Equivalent Concentration	1,512.0	0.0	5.7
	State Inspection and Sampling the Effluent of IUs and SIUs			
	Inspection and Sampling of SIUs	35.0	22.5	789.0
	Inspection and Sampling of Middle-Tier CIUs	35.0	0.5	17.0
	Inspection of NSCIUs	35.0	0.9	32.9
	Evaluation of SIUs for SCP	0.0	0.0	0.0
	POTW Inspection and Sampling the Effluent of IUs and SIUs			
	Inspection and Sampling of SIUs	1,512.0	14.2	21,446.1
	Inspection and Sampling of Middle-Tier CIUs	1,512.0	0.3	461.9
	Inspection of NSCIUs	1,512.0	0.6	895.1
	Evaluation of SIUs for SCP	0.0	0.0	0.0
	Public Notification of Significant Noncompliance			
	States	5.0	3.4	17.0
	POTWs	504.0	1.0	504.0
	Slug Control Plan	22.5	1.0	22.5
	Evaluation of the Need to Revise Local Limits			
	States	5.0	2.0	10.2
	POTWs	302.4	1.0	302.4
	Excellence Award Program Information			
	States	30.0	1.5	45.0
	POTWs	10.0	1.0	10.0
	Request for Mass Limits	40.0	1.0	40.0
	Request for General Permit	500.0	1.0	500.0
	Categorical Determination Request	0.0	0.0	0.0
Program/Categorical	Minimum Monitoring Requirements for in the Bleached Papergrade Kraft and Soda Subcategory and the Papergrade Sulfite Subcategory	10.0	1.0	10.0
Determination	Alternative Limite Medification Descripts/Combined	20.5	4.0	22.5
	Alternative Limits Modification Requests/Combined \ Fundamentally Different Factors	22.5 0.0	1.0 1.0	22.5 0.0
	Variance Request Net/Gross Request	2.0	1.0	2.0
	•	3.0	1.0	2.0 3.0
	Removal Credit Approval Request Removal Credit Self-Monitoring Report	25.0	1.0	25.0
Total				
Total:	or Year (From Table 1):			99,940.5
Number of Respondents P	er rear (From rable 1):			24,740.0

Table B-7. Average Annual Respondent Costs

Respondent	Burden hours per year	Labor rate	Cost
State	26,201	\$38.21	\$1,001,031
POTWs	821,702	\$25.68	\$21,098,260
IUs	820,787	\$66.48	\$54,563,805
TOTAL	1,668,690		\$76,663,095

Table B-8. Labor Hours for State Governments as Users of the Data

Item	(2) Hours per Response	(3) Number of Respondents	(4) Number of Responses Per Year	(5) Hours Per Year (2)*(3)*(4)
State Pretreatment Program Approval Request*	N/A	N/A	N/A	N/A
POTW Pretreatment Compliance Schedule Progress Report***	2	34	1 **	68
POTW Pretreatment Program Approval Request***	40	16	1 **	628
POTW Pretreatment Program Modification Approval Request***	20	223	1	4,460
Baseline Monitoring				
Report -New Sources	24	8	1 **	192
IU Compliance Schedule Progress Report -New Sources	1	2	1 **	2
CIU Compliance				
Attainment Report -New Sources	2	8	1 **	16
IU Resampling Compliance Report	4	77	1 **	308
IU/SIU Self-Monitoring Compliance Report Categorical SIUs	2	424	2	1,694
Non-Categorical SIUs	1	432	2	865
PFPR P2 Plan				
-Initial Plan -Modifications	10 3	0 5.3	1 * 1	0 16
Discharging Mills in the Bleached Papergrade Kraft and Soda Subcategory and the Papergrade Sulfite	_			
Subcategory	7	0.4	1	3
Pollution Prevention Compliance Alternative. Transportation Equipment Cleaning (TEC)	2	3.0	1	7
BMPs for the Bleached Papergrade Kraft and Soda Subcategory	10	0.4	1	4
Periodic Certifications -Electroplating & Metal Finishing -Electrical and Electronic Components	1.0 1.0	203.4	2.0 2.0	407 3
-Steam Electric Power Generating -Pulp, Paper, and Paperboard - Bleached Papergrade Kraft and Soda	1.0 1.0	3.1 4.2	1.0 0.2	3 1
Subcategory of the Pulp, Paper, and Paperboard -Centralized Waste Treatment	1.0	0.2	0.2	0
-Centralized Waste Treatment -Pharmaceutical Manufacturing	1.0 1.0	1.2 3.0	1.0 0.2	1 1
-Pesticide Chemicals	1.0 1.0	53.2	2.0	106
	1.0	1.1	1.0	1
-Coil Coating -Can Making	1.0	0.0	0.3	0

Table B-8. Labor Hours for State Governments as Users of the Data

ltem	(2) Hours per Response	(3) Number of Respondents	(4) Number of Responses Per Year	(5) Hours Per Year (2)*(3)*(4)
IU Slug Load Notification (Categorical)	0.25	4	1 #	1
IU Slug Load Notification (Non-Categorical)	0.25	16	1 #	4
Notification of Changed Discharge	2	35	1 #	71
Annual POTW Reports*** Inspection and Sampling of IU and SIU Effluent	20 0.5	1,115 1,115	1 15	22,300 8,552
Slug Control Plan	1	1	1	1
Evaluation of the Need to Revise Local Limits***	1	223 ##	1	223
Excellence Award Program Information***	1.2	7	1	9
Categorical Determination Request*	N/A	N/A	N/A	N/A
Alternative Limits Modification Requests/Combined Wastestream Formula	2	1	1	2
Fundamentally Different Factors Variance Request*	N/A	N/A	N/A	N/A
Net/Gross Adjustment Request	10.0	2.0	1.0 **	20
Request for GCM	0.5	166.7	1	83
Removal Credit Approval Request***	80.0	2.2	1.0 **	177
Removal Credit Self-Monitoring Report***	1	18	1	18
TOTAL ALL ITEMS				40,250

Control Authorities evaluate the need to revise local limits once every five years. Therefore, the number of respondents divided by 5 to obtain the average annual burden.

^{*} All burden for this activity will fall on the Federal Government.

^{**} These are one-time only reporting requirements. The total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of average annual burden.

^{***} For these activities, burden is apportioned to the States only where the State is the Approval Authority.

[#] These reporting requirements are based on events that occur sporadically, if at all. A single response is all that is required for each occurrence.

Table B-9. Labor Hours for POTWs as Users of the Data

ltem	(2) Hours per Response	(3) Number of Respondents	(4) Number of Responses Per Year	(5) Hours Per Year (2)*(3)*(4)
Baseline Monitoring				
Report -New Sources	24	217	1	5,208
IU Compliance Schedule Progress Report -New Sources	1.0	217.0	1.0	217.0
CIU Compliance				
Attainment Report -New Sources	2	217	1	434
New Courses	_	217	'	101
IU Resampling Compliance Report	4	2,092	1 *	8,369
IU/SIU Self-Monitoring Compliance Report				
Categorical SIUs	2	8,249	2	32,995
Non-Categorical SIUs	1	11,751	2	23,501
PFPR P2 Plan	40			•
-Initial Plan -Modifications	10 3	0 145	1 * 1	0 434
Minimum Monitoring Requirements for Indirect Dischargir	7.2	10	1	69
Pollution Prevention Compliance Alternative. Transportati	2.2	81	1	178
BMPs for the Bleached Papergrade Kraft and Soda Subc	10	10	1	96
Periodic Certifications	4.0	5500.0	0.0	44.050
-Electroplating & Metal Finishing -Electrical and Electronic Components	1.0 1.0	5529.6 43.9	2.0 2.0	11,059 88
-Steam Electric Power Generating	1.0	84.6	1.0	85
-Pulp, Paper, and Paperboard	1.0	114.8	0.2	23
- Bleached Papergrade Kraft and Soda Subcategory of	1.0	5.8	0.2	1
-Centralized Waste Treatment	1.0	32.8	1.0	33
-Pharmaceutical Manufacturing	1.0	82.8	0.2	17
-Pesticide Chemicals	1.0	1446.8	2.0	2,894
-Coil Coating	1.0	29.7	1.0	30
-Can Making -Porcelain Enameling	1.0 1.0	1.0 70.4	0.3 1.0	0 70
-Aluminum Forming	1.0	52.1	1.0	52
IU Slug Load Notification (Categorical)	0.25	96	1 **	24
IU Slug Load Notification (Non-Categorical)	0.25	434	1 **	109
Notification of Changed Discharge	2	965	1 **	1,929
Slug Control Plan	1	22	1	22
Alternative Limits Modification Requests/Combined Waste	2	22	1	43
Request for GCM	0.5	333.3	1	167

^{*}These are one-time only reporting requirements. The total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of average annual burden.

** These reporting requirements are based on events which occur sporadically, if at all. A single response is all that

is required for each occurrence.

Table B-10. Labor Hours for Federal Government As Users of the Data

ltem	(2) Hours per Response	(3) Number of Respondents	(4) Number of Responses Per Year	(5) Hours Per Year (2)*(3)*(4)
State Pretreatment Program Approval Request	325	1.33	1 *	433
POTW Pretreatment Compliance Schedule Progress Report**	2	12	1 *	24
POTW Pretreatment Program Approval Request**	40	6	1 *	224
POTW Pretreatment Program Modification Approval Request**	20	79	1	1,588
Annual POTW Reports**	20	397	1	7,940
Inspection and Sampling of IU and SIU Effluent**	0.5	397.0	15.3	3044.8
Evaluation of the Need to Revise Local Limits**	1	79	1	79
Excellence Award Program Information**	1.2	3	1	3
Categorical Determination Request	20	0	1 *	0
Fundamentally Different Factors Variance Request	400	0	1 *	0
Removal Credit Approval Request**	80	1	1 *	63
Removal Credit Self-Monitoring Report**	1	7	1	7
TOTAL ALL ITEMS				13,406

^{*} These are one-time only reporting requirements. The total number of respondents anticipated over the next three years has been spread out over the three-year time span for calculation of average annual burden.

^{**} For these activities, burden is apportioned to the Federal Government only where the Federal Government is the Approval Authority.

Table B-11. Total Average Annual Respondent Burden and Costs

	Annual Burden Hours	Annual Costs
Respondent reporting burden	1,465,239	\$69,473,141
Respondent recordkeeping burden	203,451	\$7,189,954
State and Municipal Government burden		
(Users of the Data)	128,397	\$3,801,067
Total	1,797,087	\$80,464,162

Note: Federal Government incurs a burden of 13,406 hours as user of the data (see Table 10)