



**Raju Agrawal**

Head, Environment Clearance & Compliance (TSL)  
Environment Management

EMD/C-23/252/21  
September 22, 2021

**The Member Secretary**

Jharkhand State Pollution Control Board  
T.A. Division Building, HEC Campus, Dhurwa  
**RANCHI – 834004**

**Subject: Environmental Statement 2020-2021 for the Township of Tata Steel Limited, Jamshedpur**

Dear Sir,

This has reference to the captioned subject. Please find enclosed the “**Environmental Statement**” for the Township of Tata Steel Limited, Jamshedpur for the year 2020-2021 duly filled in the prescribed format is enclosed for your kind consideration.

Thanking you

Yours faithfully,  
**For Tata Steel Limited**

**Raju Agrawal**  
**Head, Environment Clearance & Compliance (TSL)**

Encl: As Above

Copy to: Regional Officer, Jharkhand State Pollution Control Board, Adityapur,  
Jamshedpur – 831013

**TATA STEEL LIMITED**

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Corporate Identity Number L27100MH1907PLC000260 Website [www.tatasteel.com](http://www.tatasteel.com)

**ENVIRONMENTAL STATEMENT  
FOR THE YEAR 2020-2021**

**Township  
TATA STEEL LIMITED**

**Submitted by:  
ENVIRONMENTAL MANAGEMENT DEPARTMENT  
TATA STEEL LIMITED  
JAMSHEDPUR-831001  
JHARKHAND**

# Environmental Statement for 2020-2021

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[Form V]

**Environmental Statement for the Financial Year ending 31<sup>st</sup> March 2021**

## **Part A**

<b>(i)</b>	<b>Name &amp; address of the owner/occupier of the industry operation or process:</b>	Mr. T.V. Narendran CEO & MD Tata Steel Limited Jamshedpur-831001 East Singhbhum, Jharkhand
<b>(ii)</b>	<b>Industry Code</b>	SIC Code: 4941, 4950 & 4953
	<b>Primary STC Code:</b>	Water Treatment & Supply, Sanitary Services, Sewage Treatment and Municipal Solid Waste Handling within Tata Steel Leasehold Area
	<b>Secondary SIC Code</b>	-
<b>(iii)</b>	<b>Production Capacity</b>	List of services provided, and Major Installations within Tata Steel Leasehold Area for Township Operations is enclosed as <b>Annexure I</b>
<b>(iv)</b>	<b>Year of Establishment</b>	1907
<b>(v)</b>	<b>Date of last Environment Statement submitted</b>	September 18 <sup>th</sup> , 2020 vide letter no. EMD/C-23/407/20

# Environmental Statement for 2020-2021

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## Part B

### WATER & RAW MATERIAL CONSUMPTION

#### i) Water Consumption (m<sup>3</sup>/day)

<b>Water Consumption</b>	During the previous Financial year (2019-20)	During the Current Financial year (2020-21)
<b>Domestic Consumption</b> (As drinking water supplied to township)	2,05,100 m <sup>3</sup> /day	2,06,670 m <sup>3</sup> /day

<b>Name of the product</b>	<b>Process water consumption/unit of product output</b>	
	During the previous Financial year (2019-20)	During the Current Financial year (2020-21)
<b>Township Services</b>		
<b>Water Treatment at WTP</b>	62,55,550 m <sup>3</sup> /month	62,86,000 m <sup>3</sup> /month

#### ii) Raw Material Consumption (Water Treatment Plant):

<b>Name of Raw Material</b>	<b>Name of the Products/Services</b>	<b>Consumption of Raw material (Tonnes)</b>	
		<b>During the Previous Financial year (2019-2020)</b>	<b>During the Current Financial year (2020-2021)</b>
Solid Alum	Water Treatment	818.04	200
Liquid PAC		631.01	400
Liquid Chlorine		271.55	229.9
Powder PAC		89.45	90
Bleaching Powder		1.9	60
Polyelectrolyte		27.9	8

# Environmental Statement for 2020-2021

## Part C

### **Pollution Discharged to Environment / Unit of Output (Parameter as Specified In the Consent Issued)**

#### **Township Ambient Air Quality (2020-21):**

Parameter	UoM	Standards	River Pump House			Southern Sewage Treatment Plant			Golmuri			Jugsalai / TATA Pigments		
			max	min	avg	max	min	avg	max	Min	Avg	max	min	avg
Particulate Matter, PM10	µg/m3	100	368.2	39.0	143	318.9	43.0	142	349.2	255.0	302	277.9	215.0	246
Particulate Matter, PM2.5	µg/m3	60	90.0	18.0	46	95.1	20.6	51	105.6	65.0	85	69.2	45.0	57
Sulphur Dioxide (SO2)	µg/m3	80	18.3	9.0	13	16.0	7.4	12	22.8	11.0	17	17.6	6.0	12
Nitrogen Dioxide, (NO2)	µg/m3	80	60.5	16.9	37	51.6	18.2	40	52.0	44.0	48	33.2	24.0	29
Carbon Monoxide(CO)	mg/m3	2	0.4	0.3	0	0.5	0.3	0	0.3	0.2	0	0.3	0.3	0
Ammonia (NH3)	µg/m3	400	207.0	39.0	100	168.0	52.0	97	76.4	68.0	72	81.1	32.0	57
Ozone (O3)	µg/m3	100	21.4	7.0	12	21.0	2.0	14	14.5	11.0	13	10.7	10.3	11
Nickel (Ni)	ng/m3	20	9.2	<5	<5	11.1	<5	<5	<5	<5	<5	<5	<5	<5
Arsenic (As)	ng/m3	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead (Pb)	µg/m3	1	0.2	0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1
Benzene (C6H6)	µg/m3	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo alpha Pyrene (BaP)	ng/m3	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

#### **Town Sewage Treatment Plant Monitoring (2020-21):**

Parameter	UoM	Standards	Northern STP (Bara) Treated Outlet			Southern STP (Kharkai) Treated Outlet		
			Max	Min	Avg	Max	Min	Avg
pH	mg/L	6.5-9.0	8.0	7.4	7.7	8.2	7.5	7.8
Total Suspended Solids (TSS)	mg/L	100	74.0	<10	<10	19.0	<10	<10
Biochemical Oxygen Demand(BOD)	mg/L	30	9.7	3.3	6.6	9.7	3.2	6.7

## **Part D**

### **Hazardous Waste**

**(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016)**

Hazardous Waste	Total Quantity (Tonnes)*	
	During the previous Financial year (2019-20)	During the current Financial year (2020-21)
<b>(a) From Process</b>	NA	NA
<b>(b) From Pollution Control Facilities</b>	NA	NA

\*unless mentioned otherwise

## **Part E**

### **Solid Waste**

#### **Total Quantity Generated**

Name of the Waste	Total Quantity Generated (tonnes)	
	During the previous Financial year (2019-20)	During the current Financial year (2020-21)
Municipal Solid Waste	97,567	99,518
<b>(b) From Pollution Control Equipment (cubic meter)</b>		
STP Sludge	840	1100

#### **(c)(1). Total Quantity Recycled/ Reutilized within the unit**

Name of the Waste	Total Quantity Recycled/ Re utilized within the unit (tonnes)	
	During the previous Financial year (2019-20)	During the current Financial year (2020-21)
Organic Compost from Municipal Solid Waste	8,957	42400

## Environmental Statement for 2020-2021

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### (c)(2). Total Quantity Sold

Name of the Waste	Total Quantity Sold (tonnes)	
	During the previous Financial year (2019-20)	During the current Financial year (2020-21)
Organic Compost from Municipal Solid Waste	1171	6293

### (c)(3). Total Quantity Disposed

Name of the Waste	Total Quantity Disposed (tonnes)	
	During the previous Financial year (2019-20)	During the current Financial year (2020-21)
Inert Municipal Solid Waste	85,413	54,928

## Part F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

### A. Physical Analysis

Sl. No.	Waste Stream Materials	% Content	Qty MT out of 400TPD
01.	Short Term Bio-degradable: Leafy matter, food waste, remains of fruits, vegetables	50.20	200.60
02.	Remains of fish, meat, poultry	2.80	11.20
03.	Tree twigs, banana stump, hardnuts, coconut shells, palm leaves	4.00	16.00
04.	Cotton, jute, wool, rags, textiles, yarn	4.50	18.00
05.	Rubber and leather products	1.80	7.20
06.	Bamboo products, wooden materials, coir, cane, furniture etc.	4.80	19.20
07.	Diapers, napkins, bandages etc.	1.50	6.00
08.	Paper products of all kinds	3.70	14.8
09.	Plastic products of all kinds	4.80	19.20
10.	Glass & Metals	1.20	4.60
11.	Stone, earth, street sweeping dust	12.00	48.00
12.	Cattle dung and others	8.70	34.60
<b>Total</b>		<b>100.00</b>	<b>400.00</b>

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### B. Waste Suitability Analysis for Product Recovery

Sl. No.	Items	%	Qty. MT
1.	Easily Compostable matter incl. food waste, fish, meat waste and cattle dung	58.00	232.00
2.	Combustible materials with high C.V. to be recovered as refused derived fuels	18.30	73.20
3.	Recyclable plastic	4.00	16.00
4.	Construction material	12.00	48.00
5.	Non-usable inert for SLF	7.70	30.80
<b>Total</b>		<b>100.00</b>	<b>400.00</b>

### C. Calorific Value Analysis:

- Gross Calorific Value of mixed sample 1130 K.Cal/Kg
- Gross Calorific Value of combustibles 2320 K.Cal/Kg

### D. Chemical Analysis

Sl. No.	Parameter	Observed Values
1.	pH	6.2
2.	Organic Carbon %	35.00
3.	Nitrogen %	0.84
4.	Phosphorus %	0.46
5.	Potassium %	0.42
6.	Calcium %	1.40
7.	Magnesium %	0.36
8.	Sulphates %	0.40
9.	C : N Ratio	41.6:1

### E. Heavy Metal Analysis:

Sl. No.	Parameter	Observed Values (PPM)
1.	Lead	60.00
2.	Cadmium	Below Detectable Limits
3.	Nickel	8.50
4.	Chromium	4.00
5.	Mercury	Below Detectable Limits
6.	Copper	30.00
7.	Zinc	70.00



# Environmental Statement for 2020-2021

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## **Part G**

<b>Sl. No.</b>	<b>Pollution abatement Measures taken</b>	<b>Impact on conservation of natural resources &amp; others</b>
1	Tree Plantation 2019-20= 101095 nos.	Increase in green cover
2	Tree Plantation 2020-21= 104908 nos.	Increase in green cover

## **Part H**

### **Additional Measures Investment Proposal of Environmental Protection Including Abatement of Pollution**

- Bio-Methanization: Modular Biogas 16 nos. installations.
- Installed Electronic Waste Collection Mechanism.
- Scientific capping of old Bara dumpsite – Profiling work Initiated, HDPE, Geo membranes.
- Installation of OWC at flat complex’s completed.
- Home composting at 500 Locations completed and further 500 locations planned.
- Door to door Source Segregation at 50,000 household and establishments. Capturing of bulk generators
- Bioremediation and Biomining activity under progress.
- Plastic Tar Road laying at the Township.
- Rated 3 star in the Climate Smart City Assessment of Jamshedpur
- Increased in capacity of Organic waste processing.
- Begunadih MSW Site-ToR received, and EC Clearance is in process.

## **Part I**

### **Any other particulars for improving the quality of environment**

- Optimization of Bara Sewage treatment plant to treat more than 30 MLD of Sewage
- Development of greeneries in different parts of the township. Tree bank developed at Bistupur and Nildih.
- Maintenance & Upkeep of hygiene and sanitation services with high priority during COVID-19.
- River clean-up and mass awareness drives in the township.

### List of services provided and Major Installations within Tata Steel Lease Hold Area for Township Operations

<p><b>I. Type of services provided</b></p> <ol style="list-style-type: none"><li>1. Power Supply to Company accommodations and adjoining area.</li><li>2. Drinking Water Supply to Company accommodations and adjoining area.</li><li>3. Repair and Maintenance of roads of lease area.</li><li>4. Maintenance and operation of Sewage network of command area (Sewage pumping stations and Sewage Treatment Plant)</li><li>5. Fleet Management Services – Maintenance of company vehicles.</li><li>6. Municipal Solid Waste Management – Collection, transportation, processing and Disposal from township.</li><li>7. Horticulture and green cover of township.</li></ol>
<p><b>II. Office Installations</b></p> <ol style="list-style-type: none"><li>i. Chamaria Guest House</li><li>ii. Tubes Guest House</li><li>iii. Directors Bungalow - 1</li><li>iv. Directors Bungalow - 2</li><li>v. Tata Workers Union</li><li>vi. JUSCO Shramik Union</li><li>vii. Security Training Centre.</li><li>viii. Urban Services</li><li>ix. Corporate Communication TSL</li><li>x. Centre for Excellence,</li><li>xi. JUSCO Corporate Office</li><li>xii. Town Electrical Office</li><li>xiii. Horticulture Office</li><li>xiv. ICS Centres (South Park, Central, Kadma, Sakchi, Sidhghora)</li><li>xv. Public Health Centres (RDB, NT, Kasidih, Baridih, Burma mines)</li><li>xvi. Tata Zoological Park</li><li>xvii. Public conveniences throughout township (Urinals / Public Latrines)</li></ol>
<p><b>III. Market</b></p> <ol style="list-style-type: none"><li>i. Bistupur Market</li><li>ii. Kadma Market</li><li>iii. Sakchi Market</li><li>iv. Golmuri Market</li><li>v. Sidhghora Market</li><li>vi. Burmamines Market</li><li>vii. Kagal Nagar Market</li><li>viii. Gudri Market</li><li>ix. Airport Market</li></ol>

## Environmental Statement for 2020-2021

<b>IV RESIDENTIAL ACCOMMODATIONS</b>									
SL. NO.	AREA	QTRS	FLAT	BUNG.	SL. NO.	AREA	QTRS	FLAT	BUNG.
	AGRICO					KADMA			
1	NEW BARA FLATS		84		47	KAISER BUNG. (2 ROOMED)			16
2	AGRICO - BARA FLATS		748		48	KAISER BUNG. (3 ROOMED)			75
3	RN1/AGRICO	12			49	NEW TC BHA KADMA- 2 ROOMED			24
4	M2/AGRICO	2			50	NEW TC BHA KADMA- 3 ROOMED			37
5	L4/AGRICO- H6/GOLMURI	1310			51	TS FLAT (OLD)		60	
6	L5/AGRICO	179			52	T.S.FLAT (NEW)		24	
7	L6/AGRICO	100			53	KF4 FLATS,KADMA		153	
	BARIDIH				54	BELDIH LAKE SUP.FLAT		167	
8	M.SUP.FLAT, TUBES		56		55	GPS FLATS		237	
9	BARIDIH FLATS		725		56	GREEN ENCLAVE, KADMA		181	
10	NEW K2 TYPE	82			57	PRAKRITI VIHAR(NOPR)		167	
11	MODIFIED NB	244			58	ULIYAN FLATS		1892	
12	TJ1/TJ2, BARIDIH	459			59	GREEN ENCLAVE(OPR)		70	
13	K2/TUBES BARIDIH	814			60	PRAKRITI VIHAR, KADMA		140	
14	L4/TUBES BARIDIH	89			61	K/K.D. TYPE		28	
15	L5 & S TYPE TUBES	67			62	DINDLI ENCLAVE, KADMA		70	
16	L6/TUBES BARIDIH	121			63	K.D.FLATS, C.H.AREA		32	
17	NEW BARIDIH	162			64	K.D.FLATS, KADMA		76	
18	MODIFIED TJ TYPE, BARIDIH	35			65	KAISER FLATS, KADMA		8	
	BISTUPUR				66	PROF.FLATS,I.C.ROAD		152	
19	TR/BISTUPUR	206			67	PROF.FLATS, K.S.LINK		300	
20	L4/BISTUPUR	41			68	PROF.FLATS, FARM AREA		80	
21	L5/BISTUPUR	38			69	K.S LINK EXECUTIVE FLATS		24	
22	H2,H3,H4,H6,G1 & G2,BIST.	441			70	GT (ULIYAN FLAT)		90	

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23	G,H1 & H5,BISTUPUR	60			71	RN1,N2,N1 & RMR,KADMA	35		
24	P & P1 BISTUPUR	27			72	M2 KADMA	96		
	BURMAMINES				73	TR INCLUDING R.D.BHATTA.	549		
25	SECURITY FLAT B.MINES		140		74	MODIFIED TR TYPE,KADMA	140		
26	S-TYPE B/MINES	162			75	L4/XN(R.D.BHATTA)T J4,BHA	975		
27	L,L3,L4 & BML,B/MINES	484			76	L5 KADMA	546		
28	H6 & BMH BURMA MINES	91			77	L6 & G5, KADMA	103		
29	BUNG. BURMA MINES	6			78	H6 KADMA	100		
	DHATKIDIH				79	PC & PCF	20		
30	DHATKIDIH FLATS		96		80	T.C. (OLD)	61		
31	PROTO TYPE FLAT		8		81	MODIFIED M-2 TYPE	8		
32	CS QUARTERS	789				SAKCHI			
	GOLMURI		251		82	SF1, SWARNAREKHA FLAT		198	
33	GF1,GF2,GF3,GF4 FLATS		80		83	SF3, BARADWARI FLAT		190	
34	GF5 FLATS		196		84	NEW SWARNREKHA FLATS		48	
35	GOLMURI FLATS - 6				85	PIPE LINE FLATS, SAKCHI		32	
	NILDIH				86	RN & N1 SAKCHI	78		
36	B TYPE BUNGALOW, NILDIH			2	87	M2/SAKCHI	110		
37	DS/B BUNGALOW, NILDIH			10	88	TR & SM SAKCHI	156		
38	C TYPE BUNGALOW, NILDIH			21	89	L,L1,L2,L3,L4,LH - SAKCHI	784		
39	DSB TYPE FLATS, NILDIH		8		90	SECURITY FLATS SAKCHI	176		
40	C TYPE FLATS, NILDIH		32		91	H6/SAKCHI	189		
41	D TYPE FLATS, NILDIH		28		92	G4/SAKCHI	12		
42	P TYPE FLATS, NILDIH		66		93	MODIFIED TR TYPE SAKCHI	18		
	NORTHERN TOWN					SIDHGORA			
43	N TOWN BUNGALOW			199	94	NEW SR/SIDHGORA	10		
44	VIP BUNGALOW			25	95	SR/SIDHGORA	14		

## Environmental Statement for 2020-2021

45	PARK ROAD OFFICERS' FLATS	48	96	X/XN-SIDHGORA	684		
46	JUBILEE RD.OFFICERS' FLAT	64	97	MODIFIED X-XN, SIDHGORA	151		
<b>TOTAL RESIDENTIAL ACCOMMODATIONS</b>					<b>11036</b>	<b>7049</b>	<b>409</b>

V	<b>Work Installations</b>	
	<b><u>S.No.</u></b>	<b><u>Location</u></b>
		<b><u>Premises Type</u></b>
	i	Southern STP (Kharkai) 16 MLD
	ii	Bara Sewage Treatment Plant 45 MLD
	iii	Northern SPS (CH Area)
	iv	Sonari SPS
	v	Old Uliyan SPS
	vi	New Uliyan SPS
	vii	Baradwari Sewage Pumping Station
	viii	Burma Mines Sewage pumping station
	ix	Bhuiyandi Sewage Pumping Station
	x	Baridih SPS
	xi	Swarnarekha SPS
	xii	Southern SPS
	xiii	WTP Sakchi (Including Chlorination)
	xiv	Central WT
	xv	Sakchi WT
	xvi	Kadma WT
	xvii	Tata Nagar WT
	xviii	Burma Mine WT
	xix	Sidhghora WT
	xx	Sonari WT
	xxi	River Pump House
	xxii	Dimna Filter Plant
	xxiii	Dimna Management Development Centre
	xxiv	Fleet Management
	xxv	Horticulture Nursery
	xxvi	Town Electric Office
	xxvii	Compost Plant – 50 TPD
VI	<b>Sonari Airport</b>	
VII	<b>Hospitals and dispensaries</b>	
	i.	Tata Main Hospital
	ii.	Dispensaries (ECC, Sonari, Kadma, South Park, Tubes, Sakchi, Sidhghora, Agrico, Burmamines)
	iii.	Adarsh Dalal Memorial Hospital.

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	<ul style="list-style-type: none"> <li>iv. Kantilal memorial Hospital</li> <li>v. Centre for Family Initiative</li> <li>vi. Veterinary Hospital</li> <li>vii. Dog Sterilization Centre</li> </ul>
VIII	<p><b>Educational Institutions</b></p> <ul style="list-style-type: none"> <li>i. SNTI, N-Road.</li> <li>ii. Mrs. KMPM Intercollege</li> <li>iii. JUSCO School , South Park</li> <li>iv. JUSCO School, Kadma.</li> <li>v. Kasidih High School</li> <li>vi. RD Tata Technical Institute, Golmuri.</li> <li>vii. Burmamines High School</li> <li>viii. DM Madan Girls High School</li> <li>ix. Sakchi Girls High School</li> <li>x. Jamshedpur Public School</li> <li>xi. AIWC School, Old Baridih</li> <li>xii. Tube Baridih High School.</li> </ul>
IX	<p><b>Parks</b></p> <ul style="list-style-type: none"> <li>i. Jublee Park</li> <li>ii. Droabji Park</li> <li>iii. Bistupur Postal Park</li> <li>iv. Bhetia Park</li> <li>v. Kagal Nagar Park</li> <li>vi. Golmuri Park</li> <li>vii. Agrico Park</li> <li>viii. Nildih Park</li> <li>ix. Tubes Guest House Park</li> </ul>
X	<p><b>Playgrounds/ Golf ground/ Clubs</b></p> <ul style="list-style-type: none"> <li>i. JRD Sports complex</li> <li>ii. Keenan Stadium</li> <li>iii. Mohan Ahuja Stadium</li> <li>iv. Gopal Maidan</li> <li>v. Armoury Ground</li> <li>vi. Aaam Bagan</li> <li>vii. Bari Maidan</li> <li>viii. Agrico Maidan</li> <li>ix. G-Town Maidan</li> </ul> <p><b>Golf ground</b></p> <ul style="list-style-type: none"> <li>x. Beldih Golf Course</li> <li>xi. Golmuri Golf Course</li> </ul> <p><b>Clubs</b></p> <ul style="list-style-type: none"> <li>xii. G-Town Club</li> <li>xiii. United Club</li> <li>xiv. Beldih Club</li> <li>xv. Tube Makers Club</li> <li>xvi. Golmuri Club</li> </ul>
XI	<p><b>Bustees</b></p> <ul style="list-style-type: none"> <li>i. Gurudwara Bustee</li> <li>ii. Harijan Bustee, Dhatkhedi</li> </ul>

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	iii. Ranikudar
	iv. New Ranikudar
	v. Sonari Bustee
	vi. Khutadih Bustee
	vii. Kumharpada Bustee
	viii. Kasidih Bustee
	ix. Hume Pipe Bustee
	x. Bhalubasha Bustee
	xi. Sitaramdera Bustee
	xii. Baridih Bustee
	xiii. Toiladungri Bustee
	xiv. Gadabasha Bustee
	xv. East Plant Bustee
	xvi. Namda Bustee
	xvii. Monifit Bustee