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**PRESENTATIONS ON SCIENTIFIC FINDINGS FROM LATEST
VISIT TO SSF ROCK CRUSHER PLANT
January 10, 2019**



**DEPARTMENT OF COMPLIANCE AND
ENFORCEMENT**

AN EPA PRESENTATION

Background



- On January 9, 2019, an EPA technical team conducted a field verification visit at SSF facilities in Tower Hill Community, Margibi County
- This presentation covers field findings and data from Laboratory Analysis of samples collected from the project area

Map of Sampling Points

Map Showing Sample of SSF Air and Water Quality Samples



Air Quality Data

Sample Code	Sample Location	GPS Coordinates	Air Quality Parameters (ppm)				
			CO	CO ₂	SO ₂	NO ₂	O ₃
001	In front of garage	06.23748 ⁰ N 010.50248 ⁰ W	559.00	474.00	0.00	0.00	-0.09
002	In front of Admin. Building	06.23639 ⁰ N 010.50181 ⁰ W	784.00	454.00	0.00	0.00	-0.17
003	Behind Living Water Fence	06.23600 ⁰ N 010.50531 ⁰ W	566.00	447.00	0.00	0.00	591.00

Water Sample Information

Sample Code	GPS Coordinates	Sample Location	Nature of Sample	Date and Time
SP 1	06.623710 ⁰ N 010.50226 ⁰ W	Stream behind admin building	Surface Water	Jan-09-19 (11:41am)
SP 2	06.623713 ⁰ N 010.50284 ⁰ W	New Garage	Surface Water	Jan-09-19 (11:54am)
SP 3	06.623713 ⁰ N 010.50284 ⁰ W	Borehole	Ground Water	Jan-09-19 (12:28pm)

Water Quality Results

Parameters (Unit)	Behind Bldg.	Adm.	Near Garage	Borehole	National Standard Class II
Free Chlorine (mg/l)	0.07		0.06	0.00	50.00
Total Chlorine (mg/l)	0.19		0.09	0.02	50.00
Combine Chlorine (mg/l)	0.12		0.03	0.02	50.00
Fluoride (mg/l)	0.03		0.20	0.00	≤ 1.5
Ammonia (mg/l)	0.04		0.08	0.04	≤ 3.0
Turbidity (NTU)	28.8		10.54	3.84	≤ 10.0
Nitrate (mg/l)	0.00		0.00	3.60	≤ 60.0
Nitrite (mg/l)	0.002		0.004	0.001	≤ 0.5
Chromium Hexavalent (mg/l)	0.57		0.70	0.54	≤ 0.1
ORP(mg/l)	10.66		48.30	0.00	0.00

Summary of Findings

- Spilled bitumen observed in huge quantity in wetland covered with earth
- Leachates of bitumen observed in surrounding surface water
- Air Quality Results showed that SSF operation is having a net negative impact on the Ozone
- Water Quality Results showed that the surrounding surface water is polluted with ORP (oil residue and Petroleum)
- Turbidity and hexavalent chromium levels were also in excess around the project vicinity

Recommendations

- Invite the management of SSF to “show cause why” they should not be held accountable for bitumen spill which resulted into Environmental pollution
- Ensure to impose fines consistent with the Environmental protection and Management Law of Liberia
- Ensure a remediation plan is prepared and implemented by a third party environmental firm at the expense of SSF



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**THANK
YOU**