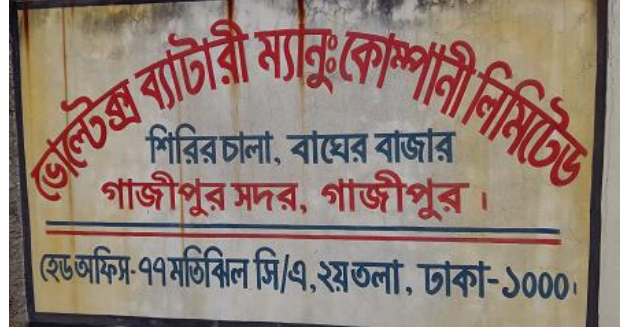


# FACTORY VISIT REPORT

## VOLTEX Battery & Manufacturing Company Limited



**ShirirChala, Bager Bazar**

**Gazipur Shadar, Gazipur- Bangladesh**

**Infrastructure Development Company Limited**

**April 2017**

## **Background:**

VOLTEX Battery & Manufacturing Company Limited got approval for several models of solar batteries from IDCOL's technical standard committee.

They have completed the required ISO 14001:2004 and OHSAS 18001:2007 compliances, which will expire on 17<sup>th</sup> June 2019. To assess the actual compliance scenario, IDCOL's Environmental Specialist visited the battery manufacturing plant according to the requirement of ESMF of IDCOL on April 2017.

## **Objective of the Visit:**

The objective of the visit was to assess the actual progress accomplished by VOLTEX to meet the requirement of ISO 14001, OHSAS 18001 and ESMF of IDCOL as well.

## **Brief Description:**

VOLTEX is located at ShirirChala, Bager Bazar, Gazipur Shadar, Gazipur. The factory comprises an area of about 79 Decimals of own land. There are 70 workers and 7 management officials working in the plant. At present VOLTEX operates in two shifts with duration of 8 hours each, produces about 3000 batteries every month.

## **ESMF compliance scenario at battery manufacturing facilities:**

VOLTEX was found to practice the requirement of ISO 14001 and OHSAS 18001 standards at a satisfactory level but have room for improvements, like; 1. Exits/evacuation routes, 2. Storage area 3. Improvements of drainage system in the facilities 4. Need more visible signage 5. Eye wash & shower system need to be improved 6. Awareness and proper training required for using Personal Protective Equipment (PPE). Overall housekeeping was found in moderate level.

ETP is one of the most important concern for battery manufacturing industries to mitigate waste water effluent pollution. VOLTEX established a well-designed ETP with capacity of 2 m<sup>3</sup>/hr each, which seems to be adequate to treat the waste water. Recently, Air treatment plant (ATP) are established by VOLTEX battery manufacturing unit to protect the health hazards and air pollution during charging and smelting of lead.

## Annex 1- Photographs of VOLTEX battery manufacturing facility



**Photograph:** Practicing PPE



**Photograph:** Practicing PPE



**Photograph :** A view of welding section



**Photograph :** Signage



**Photograph : First Aid Box**



**Photograph : Aisles with signage**



**Formation section with ATP suction line**



**ATP**

## Fire fighting



**Photograph :** Firefighting arrangement & Safe Assembly area

## **FACTORY HEALTH & SAFETY CHECK LIST**

Name: VOLTEX Battery Manufacturing Co. Limited

Date: 26-04-2017

Inspected by Dr. Ahmedul Hye Chowdhury

Question	yes	No	Remarks
<b><i>Mandatory Questions</i></b>			
<b><i>Total Employees: 70 Workers: 55 and Officials: 7</i></b>			
<b><i>Name of the MR: Md. Habibur Rahman (01711234293)</i></b>			
<b><i>His/her qualification: B.Sc Eng. Electrical</i></b>			
<b><i>Management review report / minutes: Need improvement</i></b>			
<b><i>Budget Allocation: Not found</i></b>			
<b><i>Training report: Need improvement</i></b>			
<b><i>DOE Clearance Certificate: Updated</i></b>			
<b><i>Acid License: Up dated till 31 July 2017</i></b>			
<b><i>EMS &amp; OHASAS Certificate: Up to date</i></b>			
<b><i>Civil Defense: Up dated till 31 July 2017</i></b>			
<b><i>ETP design and discharge water QC report: OK</i></b>			

<i>Exits / Evacuation routes</i>		
Are exit signs, evacuation routes illuminated, visible, marked and maintained clear from work areas?	X	<b>Need more improvement</b>
Is evacuation plans posted in local language in a prominent place where they can be easily read, with 'You are here' clearly marked?	X	
Do evacuation plans match the floor layout? Also, areas in front of Exits marked with "KEEP CLEAR" markings and maintained clear.	X	
<b>Aisles</b>		
Are aisles clearly marked and spacious and maintained clear of any obstruction?	X	<b>Need more improvement</b>
Emergency lights maintained properly to provide adequate illumination?	X	
Are all Emergency lights tested monthly and records of test maintained?	X	

<b>Fire Extinguishers/ Hose Reel / Hydrant</b>		
Is there adequate number of fire extinguishers available and the location are clearly marked? Does it maintained clear of obstruction?		At least one hose reel required.
Are extinguishers visually checked monthly and control tags maintained?		Log book need to be maintained
Are fire extinguishers inspected annually by an outside professional agency;		All up-to-date

<b>Emergency Preparedness</b>		
Does the facility have a documented emergency preparedness program?		Not adequate. Need to improve more
Does the facility conduct evacuation drills and maintain records?	X	
Does the facility maintain test records of fire alarms and Phone numbers of local fire dept(s)/ factory management and Hospitals Ambulance & Police easily available / posted?	X	
Are Assembly areas easily accessible and maintained clear?	X	



Question	yes	No	Remarks
<b>Medical care / First Aid</b>			
Does the First Aid kits provided in all work areas with locations highlighted and easily accessible? Are medicines being checked to ensure that expired medicines are not being administered?			Need more medicine and medical accessories and accessible to all employees.
Does the First Aid kits kept unlocked or if the kits locked, are the keys available within close proximity?			
Is there adequate number of employees been trained in First Aid by a recognized organization and the certificates checked to ensure the validity?			There is no trained employees working in the plant
Does factory conduct checks to ensure that if any first-aid trained employee has left the organization he/she is replaced with another such trained person?			

<b>Lead alloy and Chemical Storage Area</b>			
Is there any appropriate warning signs displayed?		X	
Is there an effective ventilation system to discharge fumes?		X	
Is there any effective secondary containment system for liquid chemicals to avoid spillage on floor? Does the floor		X	

maintained clean and free of chemical spillage?			
Is MSDS (Material Safety Data Sheet) posted in areas where chemicals are stored / being used?		X	
Is there any appropriate PPE (Personal Protective Equipment) are available and being used in the chemical storage and usage areas?			Proper Environmental Health and Safety awareness training required
Is entry restricted in the chemical storage area?		X	Need to set up a restricted flammable and inorganic chemical storage area immediately.
Does hazardous sign or label being used in all drums, containers, and dispensers clearly labeled?		X	Need to label immediately.
<b>Eye Wash/shower</b>			
Is there any functional eye wash station available near the chemical storage/usage area/working area?		X	Need to set up at least two eye wash and shower in the plant immediately.

<b>Question</b>	<b>yes</b>	<b>No</b>	<b>Remarks</b>
<b>Electrical Safety</b>			
Are all electrical switches labeled in English & local language?		X	
Are power-generators suitably earthed?			
Is all electrical maintenance carried out, logged?			Not found (Take necessary action immediately)

Question	yes	No	Remarks
<b>Personal Protective Equipment</b>			
Are appropriate gloves / masks / eye protection provided for workers in charging area and other areas where needed? Are they being used?	X		Need appropriate training and awareness program
Accident Register are updated			Not found
<b>Machinery</b>			
Are exhaust fans installed at safe heights to avoid injury?			Formation section found open on the top, need to be close. Exhaust fan need to install instead of the open area
Are safety devices in working condition?			
Are noise levels in work areas within the desired norms?			
<b>Waste water treatment and Air treatment plant</b>			
Are all discharges within the parameters defined by the country's Environment laws?	X		Lead test need to check from waste water regularly.
Does the ATP perform well? Does all parameters been tested regularly as guided?			ATP connection found in the formation area but not found in the lead melting and processing area. Which is a very important are need to cover.

<b>Dining and Kitchen Facilities</b>			
Are Kitchen & Dining area floors maintained clean?			
Is adequate seating arrangement provided?			
Is cooked food kept covered?			
Are those serving food using appropriate gloves?			
Are fire extinguisher's installed near cooking areas?			
Is potable drinking water provided?			
Are hand wash and utensils washing areas well maintained?			
<b>Bathrooms / Toilets</b>			
Are the number of toilets adequate, marked and segregated for both men and women?	√		
Are wash rooms/ toilets well maintained and ventilated?	√		
Is running water available?	√		
<b>House-Keeping</b>			
Are waste chemical removed regularly?	√		
Are floors cleaned regularly to remove dust and garbage?			Need to improve
Are floors cleaned and check ventilation system periodically?			
Is garbage appropriately disposed off?			

**Storage**

Is all materials appropriately stored on racks or pallets with well defined aisles between rows, maintained free of obstruction?			Not maintained properly. Need Immediate action.
Are the general and trims stores well kept with passages maintained clear?			
Are fuels like diesel, petrol, cooking gas appropriately stored away from rain and sunlight in well ventilated areas with entry restricted to authorized personnel only?			
Are 'No Smoking' signs and appropriate Firefighting equipment installed in storage areas?	√		