Quarterly EHS Compliance Report for the Battery Recyclers and Manufacturers

Presented By:
Dr. Ahmedul Hye Chowdhury
Environmental Specialist (AVP)
Infrastructure Development Company Limited (IDCOL)
Contents

✓ Introduction:
✓ Hazard Identification, Risk assessment and determining control:
✓ Legal and other compliance requirements:
✓ Competence, Training and Awareness:
✓ Emergency Preparedness and Response
✓ Incident Investigation, Nonconformity, Corrective action and preventive action
✓ Sludge, Effluent and Air pollution Management
✓ Internal Audit
✓ Management Review
✓ PPE and House Keeping
Introduction:

➢ Description of the Factories and their facilities.

➢ EMS & OSHAS implementation date and expiry date.
Hazard Identification, Risk assessment and determining control:

Need to be clarify about

✓ the present situation in hazardous substances
✓ its risk assessment and
✓ determining control.

Note:
List of hazards and environmental aspects are reviewed and the necessary changes / action are integrated in the requisite fields. Like:
- 100 hazards are identified
- 10 are significant or above acceptable risk and
- out of 100 environmental aspects 10 are found significant.
- Necessary action has been taken and set with time line to mitigate.
## List of Environmental Aspects (Aspects Inventory)

**Ref No.: NG/NBL/ES/2011/S2-C-01**

<table>
<thead>
<tr>
<th>SL</th>
<th>Operational Area</th>
<th>Activities Product</th>
<th>Aspect</th>
<th>Impact</th>
<th>Severity (S)</th>
<th>Likelihood (P)</th>
<th>Legal Expose with reference (L/E)</th>
<th>Score = (S X P + L/E)</th>
<th>Significance/ Non-significance</th>
<th>Operation control instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Generator</td>
<td>Fuel Consumption</td>
<td>Spillage/Leakage of fuel (cleaning cloth)</td>
<td>Soil Pollution</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>9</td>
<td>Non significant</td>
<td>NG/NBL/ES 2001/OP 004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Generator run</td>
<td>Fuel fume</td>
<td>Air pollution</td>
<td>4</td>
<td>2</td>
<td>5(ECR/S11)</td>
<td>13</td>
<td>Significant</td>
<td>NG/NBL/ES 2001/OP 003</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Noise</td>
<td>Noise Pollution</td>
<td>4</td>
<td>4</td>
<td>6(ECR/S4)</td>
<td>22</td>
<td>Significant</td>
<td>NG/NBL/ES 2001/OP 005</td>
</tr>
</tbody>
</table>
Environmental Aspect Chart with Scoring is given below:

<table>
<thead>
<tr>
<th>Likelihood (P) Or – Possibility Of Occurrence (P)</th>
<th>Score</th>
<th>Severity of Occurrence (S)</th>
<th>Score</th>
<th>Legal Expose with reference (L/E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remotely Possible</td>
<td>1</td>
<td>Only slight negative effect</td>
<td>1</td>
<td>No (0) / Yes (5)</td>
</tr>
<tr>
<td>Reasonably Possible</td>
<td>2</td>
<td>Cause Unisance effect internal only</td>
<td>1</td>
<td>No (0) / Yes (5)</td>
</tr>
<tr>
<td>Very Likely</td>
<td>3</td>
<td>Cause Unisance negative affect internal &amp; external</td>
<td>3</td>
<td>No (0) / Yes (5)</td>
</tr>
<tr>
<td>Near certain</td>
<td>4</td>
<td>Could cause impact with undesirable but reversible effect.</td>
<td>4</td>
<td>No (0) / Yes (5)</td>
</tr>
<tr>
<td>Certain</td>
<td>5</td>
<td>Long term negative effect</td>
<td>5</td>
<td>No (0) / Yes (5)</td>
</tr>
</tbody>
</table>

**Significance range of environmental aspect can be divided into following two steps:**

Total Score are calculated by the following rule:

Score, \( R = S \times P + L/E \)

Where,

\( R = \) Total Score.

\( S = \) Severity of Occurrence.

\( P = \) Possibility of occurrence.

\( L/E = \) Legal Exposure (As per ECR-97)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Significant</td>
<td>01 to 11</td>
</tr>
<tr>
<td>Significant</td>
<td>12 to 30</td>
</tr>
<tr>
<td>SL</td>
<td>Source</td>
</tr>
<tr>
<td>----</td>
<td>--------</td>
</tr>
<tr>
<td>1</td>
<td>Bangladesh Labor code 2006</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SL</td>
<td>Operational Area</td>
</tr>
<tr>
<td>----</td>
<td>------------------</td>
</tr>
<tr>
<td>1</td>
<td>Tubular Filling</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**OHSAS Hazard Identification with Scoring is given below:**

<table>
<thead>
<tr>
<th>Steps of Probability of occurrence (P)</th>
<th>Score</th>
<th>Steps of Magnitude of Partial Loss (L)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remotely Possible</td>
<td>1</td>
<td>Only Slight negative effect</td>
<td>1</td>
</tr>
<tr>
<td>Reasonably possible</td>
<td>2</td>
<td>Cause Unisance negative effect internal only.</td>
<td>2</td>
</tr>
<tr>
<td>Very Likely</td>
<td>3</td>
<td>Cause Unisance negative affect internal &amp; External.</td>
<td>3</td>
</tr>
<tr>
<td>Near certain</td>
<td>4</td>
<td>Could cause impact with undesirable but reversible effect.</td>
<td>4</td>
</tr>
<tr>
<td>Certain</td>
<td>5</td>
<td>Long term negative effect</td>
<td>5</td>
</tr>
</tbody>
</table>

**Significance range of OHSAS Hazard Identification can be divided into following two steps:**

<table>
<thead>
<tr>
<th>Risk</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Significant</td>
<td>01 to 11</td>
</tr>
<tr>
<td>Significant</td>
<td>12 to 30</td>
</tr>
</tbody>
</table>

Total Score are calculated by the following rule:

Score, $R = P \times L$

Where,

$R =$ Risk.

$P =$ Probability of occurrence (P).

$L =$ Magnitude of Partial Loss (L).
Legal and other compliance requirements:

✓ Respective organization should consult with the Government and regulatory affairs department to identify their requirements.

✓ List of the requirements are maintained by the management representative for EMS and OHSAS.

✓ List of legal and other requirements are reviewed once in every six months to assess.

✓ Any addition or other changes required should be kept in record.

✓ Organization should follow the following rules and regulations:
  • Bangladesh Labor Law’s 2006
  • Factory Rules 1979, Acid Control Act
  • Bangladesh National Building Code 2006
  • ECA’95, ECR’97, and
  • DOE guideline for EMS.
Organization should have the following clearance from the respective authorities:

- DOE clearance certificate,
- Fire License,
- Acid user License
- Monitor the quality of air and
- Quality of water and level of sound.
Competence, Training and Awareness:

✓ **Organization** required to build competence for their personnel’s performing task under the control that can impact on EMS and OHSAS.

✓ From ........ To ........ (Date should be mentioned) **organization** took an initiative to arrange in-house or external training program for the build up their personnel’s awareness in the EMS and OHSAS sector.

✓ Training Content:

  • ........
  • ........
  • ........

  • All details please see **Annex**.
Emergency Preparedness and Response:

- Cross functional team (CFT) identifies the potential emergencies with the EHS. Contingency plan need to be developed for identifies emergencies- according to the organization’s procedures manual.

- Necessary equipments and infrastructure need to be monitored every quarterly.

- Mock drill need to be arranged on every six month to assess the effectiveness of the preparedness and the next mock-drill will be arrange on .........

- (Please insert some pictures in Annex )
Incident Investigation, Nonconformity, Corrective action and preventive action:

- **Organization** should maintain a documented procedure defining the method of dealing with the incident investigation, nonconformity and taking corrective actions.
- Reviewed through the risk assessment process prior to implementation.
- Any changes in procedures resulting from corrective and preventative actions are implemented and recorded.
- During the last quarter (Date…..), there was …. Incidents happen and investigation and action point implementation of all the incidents’ have been completed.
- Please see Annex
Sludge, Effluent and Air pollution Management:

- “X” m³/day capacity of an effluent treatment plant was establish in the factory and average volume of the effluent is ----- m³/day.
- Last quarter (Date…..) the average chemical consumption of the ETP is …… ton
- Testing results of the discharge water is…. (attach in the Annex)
- The volume of generated sludge within these months was …. Tons and the sludge are deposited in a landfill/filling area
Air treatment system (ATP) and acid scrubber was established in the facility and its performance was satisfactory / unstatisfactory.

Air sample is being collected from different outlet and tested once in every Six months as per the DOE requirement.

The testing results of the air monitoring is attach in Annex.

Please Note: If there is any sample exit the Bangladesh standard limit, which need to be mentioned on the report and also mention its mitigation details.
Internal Audit:

✓ **Organization should** conducts internal audit in every six months to assess the level of ISO 14001 and ISO 18001 standards.

✓ Last internal audit was held on ……. (date) and the next audit will be ……. (date)

✓ *If there was any corrective action taken place which need to be mentioned.*
Management Review:

➢ Every six months interval, top management review on all the elements of the EMS and OHSAS management system been conducted to ensured-

- its continuing suitability,

- adequacy and

-effectiveness.
The management review should address the possible needs for changes to the

- policy
- objectives
- commitment to continual improvement.

**Note:** Meeting minutes should recorded these reviews and kept by the MR.
**Management Review meeting**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Agenda / Discussion</th>
<th>Decision</th>
<th>Action by</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lead dust has to reduce in plate parting and enveloping area which causes health effects.</td>
<td>Dust collector of enveloping area has to install within February, 2014.</td>
<td>Action will be done by maintenance department.</td>
<td>Mr. Shamim and Mr. Shahid will be responsible to finish the job within stipulated time.</td>
</tr>
<tr>
<td>2</td>
<td>Some electrical loose &amp; hanging cables found all around the factory which may occurs electrical hazard.</td>
<td>Electrical loose &amp; hanging cables have to fix up.</td>
<td>Maintenance department will finish the work within March, 2014.</td>
<td>Mr. Shamim will be responsible to finish the job.</td>
</tr>
<tr>
<td>3</td>
<td>Formation rectifier room have to redesigned to avoid the overheat.</td>
<td>Necessary civil works and blower system have to implement.</td>
<td>Necessary civil works done and necessary blower system will be implemented by maintenance department.</td>
<td>Civil works done by Admin Department and Maintenance will do the other system for temperature control.</td>
</tr>
<tr>
<td>4</td>
<td>Discussed about the compliance evaluation of applicable legal &amp; other requirements.</td>
<td>It has been observed at compliance evaluation table that the sound level of generator is yet above the maximum level, about which decision has been taken earlier.</td>
<td>Modification works for reducing sound level is going on through Admin. Department.</td>
<td>Factory MR and Mr. Suman in association with maintenance dept. will responsible to finish the work within December, 2014.</td>
</tr>
</tbody>
</table>
PPE and House Keeping:

- **Organization** should maintain a daily checklist in regards to QMS and EHS.
- submit in to Annexure
<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>NAME OF THE ITEMS</th>
<th>পরিবর্তন</th>
<th>CASTING</th>
<th>PASTING</th>
<th>FORMATION</th>
<th>ASSEMBLY</th>
<th>CR ASSEMBLY</th>
<th>PACKING</th>
<th>MAINTENANCE</th>
<th>LAB/GCC</th>
<th>DT</th>
<th>CHARGING</th>
<th>Store</th>
<th>OXIDE</th>
<th>Admin &amp; Officer</th>
<th>ETP</th>
<th>CLEANER</th>
<th>CANTEEN</th>
<th>SECURITY</th>
<th>TOTAL</th>
<th>ISSUED</th>
<th>BALANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>কটন প্ল্যাস্টি</td>
<td>ভজন</td>
<td>30</td>
<td>9</td>
<td>3</td>
<td>175</td>
<td>8</td>
<td>5</td>
<td>0.4</td>
<td>9</td>
<td>1.5</td>
<td>4</td>
<td>245</td>
<td>215</td>
<td>30</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>কুন্ড প্ল্যাস্টি</td>
<td>ভজন</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>21</td>
<td>61</td>
<td>40</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>বিন্দিপাশ / রাসায়নিক প্ল্যাস্টি</td>
<td>ভজন</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.8</td>
<td>6</td>
<td>1</td>
<td>0.3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>61</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>ইলেকট্রিয়াল প্ল্যাস্টি</td>
<td>ভজন</td>
<td>60</td>
<td>8</td>
<td>60</td>
<td>20</td>
<td>12</td>
<td>20</td>
<td>10</td>
<td>3</td>
<td></td>
<td>20</td>
<td>465</td>
<td>385</td>
<td>80</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>21</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>মাখ / পিচ</td>
<td>50</td>
<td>45</td>
<td>50</td>
<td>180</td>
<td>50</td>
<td>20</td>
<td>25</td>
<td>12</td>
<td>20</td>
<td></td>
<td>20</td>
<td>54</td>
<td>43</td>
<td>11</td>
<td>16</td>
<td>14</td>
<td>11</td>
<td>11</td>
<td>46</td>
<td>11</td>
<td>46</td>
</tr>
<tr>
<td>6</td>
<td>মাখ (লোহা) / পিচ</td>
<td>6</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>30</td>
<td>14</td>
<td>2</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>বিন্দু বর্গ 1%</td>
<td>60</td>
<td></td>
<td>80</td>
<td>60</td>
<td>20</td>
<td>8</td>
<td>18</td>
<td>18</td>
<td>8</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>130</td>
<td>100</td>
<td>30</td>
<td>30</td>
<td>21</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>8</td>
<td>কটন কাপড় 2%</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>12</td>
<td>5</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>12</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>প্লাস্টিক কেমি</td>
<td>50</td>
<td>30</td>
<td>140</td>
<td>20</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>2</td>
<td>20</td>
<td>12</td>
<td>30</td>
<td>17</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>পাত চাওক</td>
<td>20</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>সিলিকন প্ল্যাস্টি</td>
<td>পিচ</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>গাদা কোন</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>পাত চাওক</td>
<td>পিচ</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>পাত চাওক (কনার)</td>
<td>জোড়া</td>
<td>2</td>
<td>2</td>
<td>60</td>
<td>20</td>
<td>12</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td></td>
<td>20</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>15</td>
<td>পাত চাওক (কনার)</td>
<td>জোড়া</td>
<td>2</td>
<td>2</td>
<td>60</td>
<td>20</td>
<td>12</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td></td>
<td>20</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

*Authorized by*

*Approved by*
Annexure include:

1. EMS and OHSAS certificate
2. Part –A: List of environmental aspects (aspects Inventory)
   Part- B: Hazard Identification and risk assessment
   2.1 Production
      – Maintenance
      – Quality
      – Store
      – HR and Admin
3. Legal and other Compliances
   3.1 Acid existing License
   3.2 License from Bangladesh Fire service and Civil defense
   3.3 DOE clearance
   3.4 Yearly monitoring report of AIR, water and level of noise
4. Competence, training and compliance report
5. Emergency Preparedness and Response (Pictures insert)
6. Incident Investigation, Nonconformity,
7. Corrective action and preventive action
8. Sludge, Effluent and Air pollution Management
9. PPE and House Keeping

Important Note: Please attach all relevant photographs with the Annexure.
Thank You for
Your
kind participation