Report on Fawakeer (Pottery hand craft) and Arab Abo Saed Brick kilns’ areas

Detailed objectives of the convoy:

- Recognizing regular, chronic, occupational and work- and environment-related illnesses in both areas, through a health and environmental survey of workers and productive units;
- Detecting the availability of professional healthcare services and a basic sound environment for workers and residents in both areas;
- Contribute to reducing the disease burden that workers in both areas may suffer by working, by early detection and management of illnesses, as well as in-depth health and environmental studies using vital indicators and criteria indicating exposure, effects and vulnerability;
- Reducing the chances of disease and fatigue occurrence among workers by designing and providing training programs and awareness campaigns that focus on adopting healthy practices in the work environment.

Goal:
Covering the casual workers and area residents with healthcare incl. environmental health services.
Locations:
- Arab Abu Saed Bricks’ manufacturing Area
- Al-Fawakhir pottery workshops

First: administrative and logistical work

1- Designing the work program to encompass the required measures, in addition to identifying human resource needs and material and administrative / logistic necessities.

2- Consulting (according to signed contracts) the local NGOs; the Association of Brick Factory Owners and the "Misr Bokra" Association to exchange views regarding the health and environmental needs of both areas, while anchoring the required coordination and cooperation aspects;

3- Visiting brick factories and Pottery workshops to get acquainted with work nature and circumstances, as well as workers' conditions and activities;

4- Mobilize the necessary human resources to work while making everyone aware of the objectives and procedures of the project. Frequent meetings with the working team of faculty members, their assistants, and support groups

5- Preparing the needed questionnaires and the detailed spread sheet for periodically entering the data of the employees subject to investigations. Preparing the necessary papers and documents (referral to the Department of Occupational and Environmental Medicine, the list of names, letters to the Vice Dean, the Department of Clinical and Chemical Pathology, work schedules ... etc.)

6- Fixing final work schedules and allocating roles and responsibilities.
Second: Financial measures

- Approval of the Faculty administration to analyze blood, kidney and liver function tests from the account of the community service and environmental development sector
- Providing medical convoy medicines from community service and environmental development sector, as well as from the department individual donations
- Approval of the Cairo Univ hospital administration to use the hospital bus for transportation

Third: Technical achievements

1. Field visits to the two study areas
2- Health status study

Arab Abu Saed: 425 individuals; workers and residents
Al-Fawakhir: 182 individuals; workers
General internal medical examination, including examination of the chest: the respiratory system, heart and abdomen, in addition to the examination of the skin and mucous membranes.
ECG

Abdominal Ultra-sound
Laboratory Analysis
- Kidney function tests (creatinine)
- Liver function tests (ALT, Alkaline phosphatase, total bilirubin)
- Complete blood picture

Ventilatory Function Tests
Plain X-Ray Chest for Fawakheer workers (n=182)

Tuberculin skin test (n=182)
Referring cases to Kasr Al-Aini Hospital

- Department of Occupational and Environmental Medicine, 15 cases
- Nephrology department: 12 cases under investigations & 6 cases for surgery
- Rheumatology and rehabilitation: two cases
- Orthopedics: 6 cases
- Children: 8 cases
- Plastic surgery: 4 cases
- General surgery: 2 cases
- Vascular surgery: 3 cases
- Genital: two cases
- Emergency: 8 cases

-Dispensing medications as soon as they are available
-Recording results periodically and regularly
-Photocopying the results of the analyzes and creating a file for each worker with the knowledge of the Misr Association Bokra

3- Environmental Study
   a- Particulate sampling
- 79 air samples from the Arab Abu Saed area
- 96 samples from Al Fawakheer workshops
- The time of one sample is two hours. These samples were analyzed at the Belgian Institute.

Job description on site
Number of samples taken

<table>
<thead>
<tr>
<th>Job description on site</th>
<th>Number of samples taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing clay</td>
<td>10</td>
</tr>
<tr>
<td>Molding</td>
<td>8</td>
</tr>
<tr>
<td>creeping and shaping</td>
<td>10</td>
</tr>
<tr>
<td>transport the molds</td>
<td>8</td>
</tr>
<tr>
<td>loading kiln</td>
<td>10</td>
</tr>
<tr>
<td>preparing kiln</td>
<td>13</td>
</tr>
<tr>
<td>firing kiln</td>
<td>10</td>
</tr>
<tr>
<td>unloading kiln</td>
<td>9</td>
</tr>
<tr>
<td>other: painting</td>
<td>7</td>
</tr>
<tr>
<td>fiber glass mixing</td>
<td>6</td>
</tr>
</tbody>
</table>

NB: total number of visits = 12
Total number of samples = 91
Number of blanks = 12
Analysis of samples taken at ar sab obo said
(1/3/2019 to 22/7/2019)

<table>
<thead>
<tr>
<th>Job description on site</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing clay</td>
<td>7</td>
</tr>
<tr>
<td>Press and molding</td>
<td>6</td>
</tr>
<tr>
<td>Transport the molding</td>
<td>7</td>
</tr>
<tr>
<td>Stacking the clay</td>
<td>7</td>
</tr>
<tr>
<td>Tram to transport</td>
<td>6</td>
</tr>
<tr>
<td>loading kiln</td>
<td>7</td>
</tr>
<tr>
<td>preparing kiln</td>
<td>7</td>
</tr>
<tr>
<td>manually stacking the clay</td>
<td>7</td>
</tr>
<tr>
<td>firing kiln</td>
<td>7</td>
</tr>
<tr>
<td>unloading kiln</td>
<td>7</td>
</tr>
<tr>
<td>unloading the wagon</td>
<td>6</td>
</tr>
</tbody>
</table>

NB: total number of visits = 9
Total number of samples = 74
Number of blanks = 8 (one not taken).

Environmental sampling
b- Gases
Fourth: Training

- Attendance of the Director of the Belgian Institute of Occupational Health to train the members of the department on environmental examinations

- The Belgian Institute provided the financial measure for the customs release of the PM sampling devices, and the devices are returned back to the Institute after the completion of the sampling.

- Theoretical training in the department premises for 28 trainees from the department, the Poisons Control Center, and the National Research Center

- Field Training of 11 doctors from the department to take samples
A- Theoretical training

B- Practical Training
Positive Aspects (outcomes)

• Preparing 3 MD theses and 6 research papers with joint supervision for one of the theses

• The department received a donation of two devices: an electrocardiogram machine and a spirometry (vitalograph). Another spirometry (vitalograph) is underway

• Fruitful cooperation between hospital departments Community and environmental service, and availability of an applied model for environmental health services with the possibility of sustaining it.

Positive Aspects Outcomes .. Cont.

• Field identification of the occupational and environmental health needs of society

• Experience the department’s mechanisms and procedures as well as the staff and personnel

• Discover the possibility of developing the activity during its presentation

• Familiarizing everybody-self with the work in a "team”

• Evident success of the referral method

• Returning part of the beauty of society ... and satisfying the conscience ... and ... etc.
Ministry of Manpower decree # 162 for 2019

*On the 25 of July 2019, the Ministry of Manpower issued a decree # 162 for 2019 on Operating, caring and protecting casual workers incl. contracting, agricultural, seasonal and temporary workers.

**Article 29:**
- In case of death 10000 L.E.
- In case of complete disability 10000 L.E.
- In case of partial disability 5000 L.E.
- In case of operation total cost if carried according to ministry regulation or 5000
- In minor operation 2000 L.E.
- Death of one of family member degree 2000 L.E.
- In marriage 3000 L.E.
- First and second child 2000 L.E.
- Tom 3000 L.E.
- In feast: 500 L.E.

**Article 34:**
- Hospitals, health centers, laboratories, pharmacies, radiology unit construction or agreement and contract with others health services to serve these categories

*The ministry of manpower is reviewing now a program of occupational health and safety for worker in brick kilns and pottery activities in Arabic languages.

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**Agreements**

- The Productive Cooperative Society for the Industry of Famous Pottery, Ceramics and Refractories No. 764 of 2014 AD, represented by Mr. Shaban Mohamed Zaki Mohamed, member of the Board of Directors and Director of Projects, a first party

- The Department of Occupational and Environmental Medicine, represented by the head of the department, Prof. Dr. Khaled Gamal Mahjoub, a second party
Obstacles

• Modest funding
• Unavailability of an ultrasound scanner and a portable X-ray machine to examine the chest
• Poor maintenance of environmental monitoring devices and the lack of tools for monitoring water pollutants
• Uncomfortable transportation
• Pandemic state

Solutions proposal

- Development of the Environmental Metrics Laboratory:
  ➢ Purchase of tools for measuring water and sewage pollutants,
  ➢ Purchase of air pollutant measuring kits,
  ➢ Maintenance of the devices available in the department

- Sustained cooperation between the various parties involved in the work:
  ➢ Establishing links with interested NGOs
  ➢ Issuing a non-periodic bulletin on the projects of the applied projects committee in the department
  ➢ Address the relevant ministries and bodies regarding the committee’s activities
Solution proposal .. Cont.

- Joint supervision of theses:
  ➢ Addressing research centers and universities inside and outside the region
  ➢ Encouraging graduate students to seek mutual supervision

- Exchange of visits for training and transfer of experiences:
  ➢ Encouraging the members of the department, especially the deputies, teachers and assistant teachers, to search for and training opportunities outside the department
  ➢ Encouraging the department members to invite Arab and foreign experts and …… Out of the department

- Developing the department’s equipment and providing maintenance contracts
  ➢ Buy a portable x-ray machine
  ➢ Buy a portable ultrasound machine
  ➢ Investigating the possibility of setting up a mobile laboratory using dry chemistry
  ➢ Maintenance contracts for available devices

- Financing
  ➢ Allocating a limited amount in the facility of the faculty / hospital to spend on environmental research
  ➢ Addressing economic institutions within the framework of social responsibility to contribute to financing these convoys and the projects of the committee
  ➢ Addressing Cairo University regarding providing financial support for environmental projects and conducting an annual project

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Solution proposal .. Cont.

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Recommendations

- Developing an environmental measurements laboratory to serve the community and the hospital and college environment
- Sustained cooperation between the various parties involved in the work
- Improving the quality of services provided to factories
- Joint supervision of messages
- Exchange of visits for training and transfer of experiences
- The department should have an ultrasound scanning device and a mobile device for regular x-ray examination
- Take care to conduct a social study of the area
- Starting to provide engineering solutions for the environment

Thank you