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Scoping Statement
Sayed Hussein Copper Smelter

Livelihood and Income from the Environment Program
Lead Pollution Clean-up in Qalyoubia

July 26, 2007

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ACRONYMS

AQMC	Air Quality Monitoring Component
Chemonics	Chemonics International
CAP	Compliance Action Plan
CFR	United States Code of Federal Regulations
COPC	Contaminants of Potential Concern
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EEAA	Egyptian Environmental Affairs Agency
GOE	Government of Egypt
GOQ	Governorate of Qalyoubia
HI	Non-carcinogenic Hazard Index
LIFE	Livelihood and Income from the Environment Program
MSEA	Ministry of State for Environmental Affairs
MSE	Millennium Science & Engineering, Inc.
PM	Particulate Matter
RBO	EEAA Regional Branch Office
RBRGS	Risk-Based Remediation Goals
TCLP	Toxicity Characteristic Leaching Procedure
USAID	United States Agency for International Development
USEPA	United States Environmental Protection Agency

INTRODUCTION

Industrial contamination from smelters in Shoubra El Kheima, Qalyoubia poses serious health impacts for the residents living near the smelters. To address this problem, the United States Agency for International Development (USAID) and the Government of Egypt (GOE) designed a lead clean-up component under the Livelihood and Income from the Environment Program (LIFE). The clean-up project is called LIFE-Lead Pollution Clean-up in Qalyoubia (LIFE-Lead). The overall goal of the project is to empower local residents in the polluted communities of Shoubra El Kheima to improve their living conditions and quality of life.

LIFE-Lead is being implemented by Millennium Science & Engineering, Inc. (MSE), in association with Chemonics International (Chemonics). LIFE-Lead was initiated on August 18, 2004 with a closing date of December 31, 2007. The project was extended from March 30, 2007 until December 31, 2007 to allow for additional remediation and remediation capacity building activities.

To date, the project has remediated seven secondary lead smelters, the Shahid Ahmed Shaalan and Delta Solb Schools, and the Kablat Medical Center in Shoubra El Kheima. The area is highly industrialized and industrial contamination has a significant impact on human health and the environment of the area. The remediation of the lead smelters resulted in reduced risks to human health and the environment by lowering lead contamination to acceptable levels. In addition to site remediation, the project includes activities in community involvement and public participation, communications, capacity building, and policy/legal support.

Several governmental and non-governmental entities are directly or indirectly involved in the implementation of the project activities. Governmental entities include the Egyptian Environmental Affairs Agency (EEAA), the Governorate of Qalyoubia (GOQ), and the Ministries of Health, Education, and Industry. Non-governmental organizations include Community Development Associations, the private sector, and the media.

All projects funded by USAID are subject to United States governmental regulations for environmental impact assessment.[1] Under these regulations, actions that will have a significant impact on the environment in the country of implementation require the preparation of an Environmental Assessment (EA). USAID has determined that the clean-up (i.e., remediation) activities to be conducted by LIFE-Lead will have significant impacts on the environment of Egypt, thus the project is subject to an EA.

The first steps in the EA procedure are to host a Scoping Session and to prepare a Scoping Statement. The project hosted a Scoping Session on July 18, 2007 in the Transportation Officer's Club in Shoubra El Kheima, Qalyoubia for the remediation of the Sayed Hussein Copper Smelter.

The objective of this Scoping Statement is to summarize the comments and conclusions drawn during the Scoping Session related specifically to the remediation activities at the Sayed Hussein Copper Smelter that will be funded by USAID. In addition, this Scoping Statement will also specify the methods and schedule for preparation of the EA for these project activities.

[1] Environmental Procedures, Title 22 of the U.S. Code of Federal Regulations, Part 216 (22 CFR 216).

Scoping Objectives

As required by 22 CFR 216.3 (a) (4), the objectives of this Scoping Statement include the following:

- Determine the scope and significance of issues to be analyzed in the EA, including direct and indirect effects of the project on the environment.
- Identify and eliminate from detailed study the issues that are not significant or have been covered by earlier environmental review, or approved design considerations, narrowing the discussion of these issues to a brief presentation of why they will not have a significant effect on the environment.
- Describe the timing of the preparation of the EA, variations in the format of the EA, and the tentative planning and decision-making schedule.
- Describe how the analysis of environmental impacts will be conducted and the disciplines that will participate in the analysis.

This Scoping Statement will be submitted to USAID for review and approval. The EA for the remediation activities of the project will be prepared in accordance with the Scoping Statement as approved by USAID.

Environmental Setting

Location and Status of Site--

The Copper Smelter is located in the southern portion of the Governorate of Qalyoubia in Shoubra El Kheima. A site location map of the Smelter is provided in Figure 1. A layout of the smelter is provided in Figures 2 and 3. The smelter is located in a mixed industrial and residential area in the east District of Shoubra El Kheima. Smelting operations started in 1984 and stopped in 2003. As shown in Figures 2 and 3, the smelter consists of a ground and first floor with a footprint of approximately 170 square meters. The smelter included one crucible furnace fired with mazot. The furnace was not designed according to standards and no pollution abatement equipment existed during operation. The operation of the smelter was out of compliance with Egyptian laws, in that the furnace was charged with copper alloy scrap that contained copper, lead, zinc, and tin. During the site visit, it was noticed that the smelted bouillon was tipped out over the furnace area, and the walls were covered by thick layers of fine metals.

Basic Topographic and Hydrologic Features--

The topography of the area is almost flat with an average elevation of 17 meters above mean sea level. The climate of the site is considered arid with annual rainfall of approximately 25 millimeters.

The dominant winds over the year are with a northern component. The dominant winds over the winter season trend SSW, S, and SW. The affecting dominant winds over the summer period are multidirectional and trend NNW, N, and NNE. In transitional periods (spring and autumn), the winds trend dominantly in the N and NNE directions.

The general area of the smelter is underlain by two hydrogeologic units, an upper silt and clay layer beneath which is a major alluvial aquifer. The water table is from five to six meters below the ground surface. The groundwater flow direction trends to the NNW consistent with the flow direction of the Ismailia Canal. Seasonal variations in flow direction are negligible as the canal is maintained at near the same level throughout the year. The Ismailia Canal is a source of recharge to the aquifer as well as a source of drinking water.

Figure 1: Location of Sites for Remediation

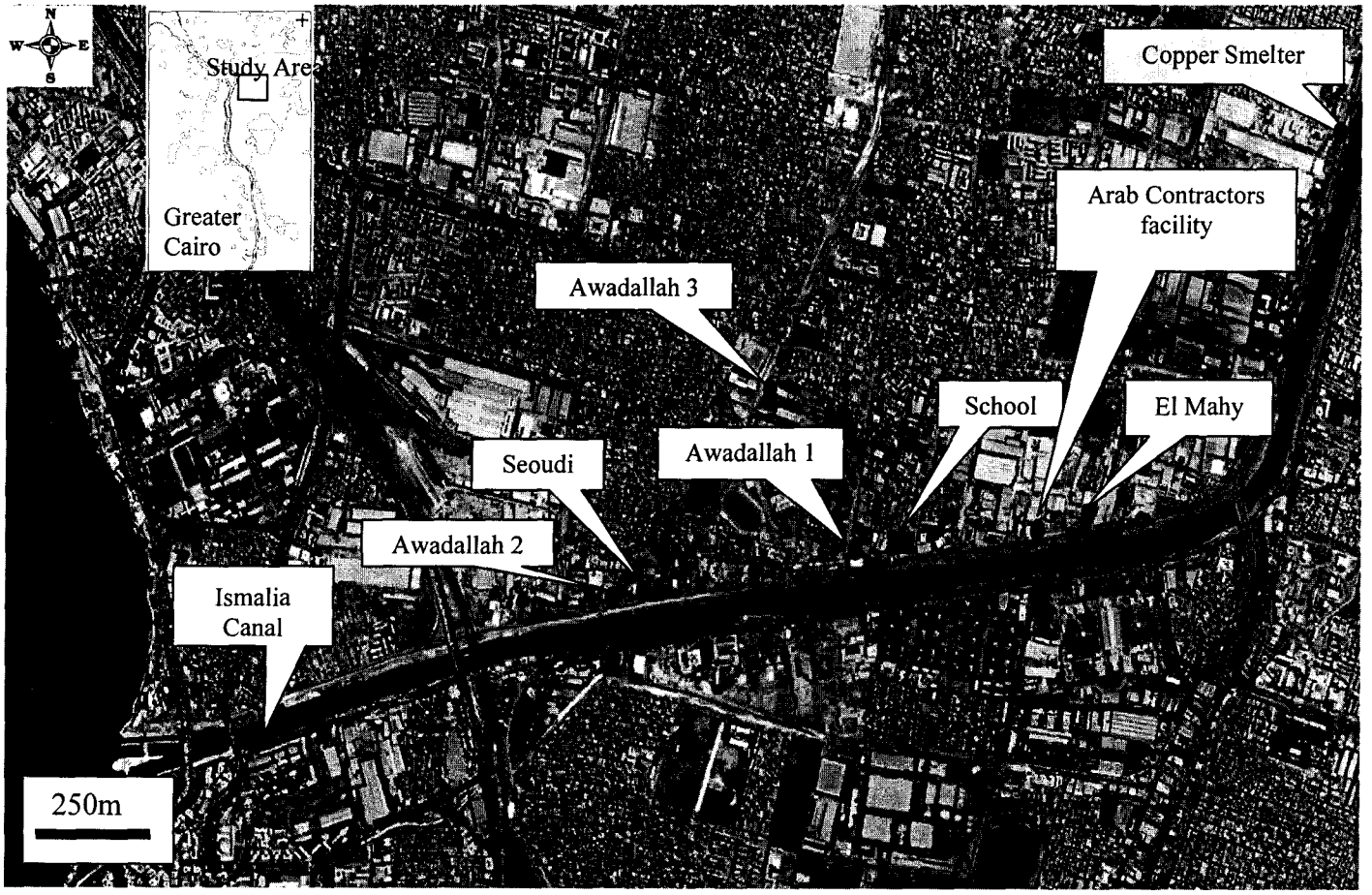


Figure 2: Layout of Copper Smelter (Ground Floor)

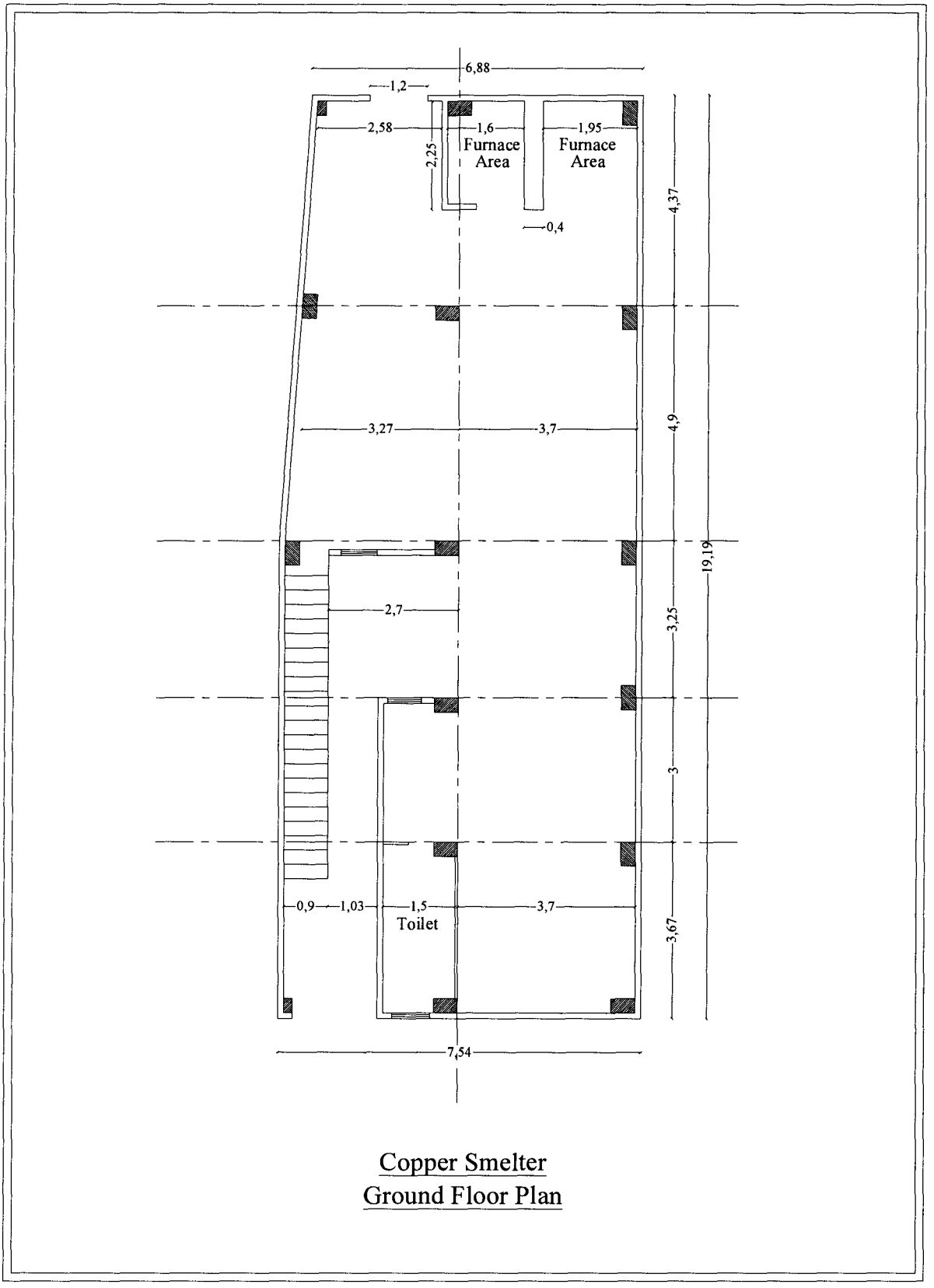
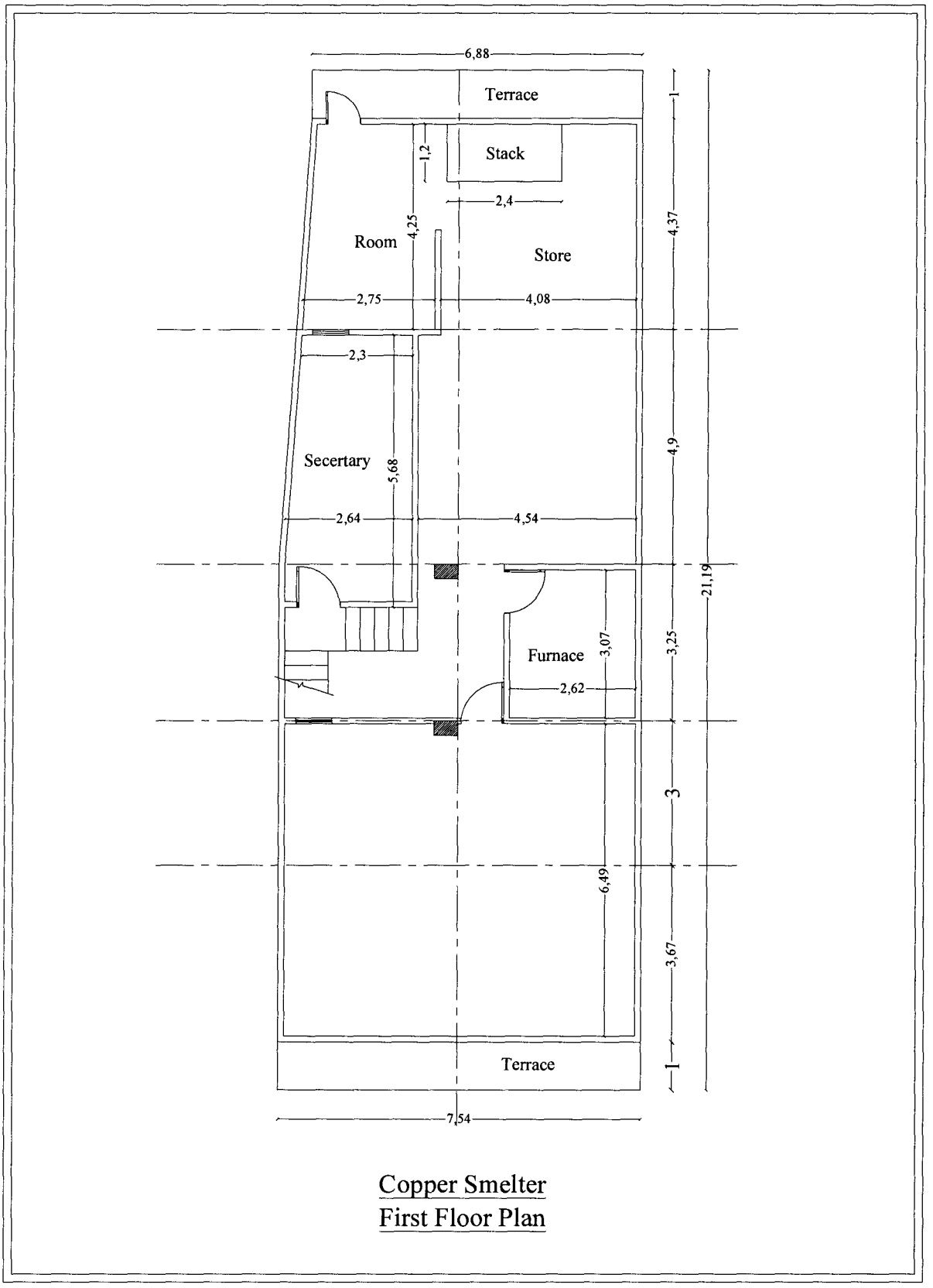


Figure 3: Layout of Copper Smelter (First Floor)



Air Quality--

According to the CAIP Air Quality Monitoring Component (AQMC) particulate matter (PM) and lead monitoring results, obtained from 36 sites in Greater Cairo during the period from October 1998 through July 1999, the highest PM10, PM2.5, and lead concentrations were observed in the industrial areas of Shoubra El Kheima. Mean inhalable particulate matter (PM10) levels were found to be 313 $\mu g/m^3$, which exceeds the allowable limit of Egyptian Law 4/1994 (70 $\mu g/m^3$). As for the lead levels, 26 $\mu g/m^3$ were recorded which also exceeds the Law 4 annual average of 1.0 $\mu g/m^3$.

In 2004, mean inhalable particulate matter (PM10) levels dropped to 178 $\mu g/m^3$. As for the lead levels, 1.02 $\mu g/m^3$ were recorded which nearly meets the Law 4 annual average of 1.0 $\mu g/m^3$. In 2005, mean inhalable particulate matter (PM10) levels dropped to 161 $\mu g/m^3$. As for the lead levels, 1.66 $\mu g/m^3$ were recorded which exceeds the Law 4 annual average of 1.0 $\mu g/m^3$.

Population and Land Use--

The population in the Hai Shark (East District) of Shoubra El Kheima increased from 454,000 in 1996 to 536,900 in 2001 with an annual population growth rate of 3.7 percent. This annual growth rate is higher than in the city, governorate, or in Egypt as a whole.

The site is located in a mixed land use area with industrial, residential, and agricultural uses.

Economic Activities--

The major economic activities in Hai Shark (Hai) are industry and services.[2] Nearly 45 percent of the labor force[3] in the Hai is in the industrial sector, 43 percent in the services sector, and 12 percent in the agricultural sector. One third of the total labor force and one half of the women in the labor force work for the government or in the public sector (which cuts across the other three sectors). The labor force comprised 25.2 percent of the total population in the Hai in 2001. Men comprise 88.7 percent of the labor force, and most people in the labor force are wage earners (78.8 percent).

Overall unemployment in the Hai is relatively low (5.6 percent of the labor force), but is twice as high for women (12 percent) and adults from ages 15 to 29 (11.2 percent). However, all of these unemployment rates are lower than the rates for the city of Shoubra El Kheima, the Governorate of Qalyoubia, and Egypt as a whole.

Sampling and Site Characterization--

Sampling and Analysis Plans--

All samples were collected in accordance with the sampling and analysis plan (SAP) developed for the evaluation of the Copper Smelter. Sampling activities at the Copper Smelter were

[2] Economic data is for the year 2001 and comes from the Central Agency for Public Mobilization and Statistics (CAPMAS) as reported in the Qalyoubia Human Development Report 2003 prepared by the Ministry of Local Development with support from the United Nations Development Program (UNDP).

[3] Labor force is defined as the population of 15 years of age or older who are employed or are actively seeking employment.

performed in June 2007 and included the collection of representative surface and borehole soil samples from selected locations in the interior and front yard areas of the smelter. In addition, wipe samples were collected from the interior walls of the smelter.

Types of Samples--

To determine the extent of heavy metals contamination at the smelter, three types of samples were collected. Specifically, surface soil samples were collected using spooning methods with stainless steel sampling equipment. Borehole samples were collected using a hand auger drill. Hand auger drilling was performed in accordance with ASTM D5784-95 (2000). Dust wipe samples were collected using disposable wipes. Based on the sampling activities described above, a total of 60 samples were collected from inside and outside the smelter distributed as follows:

- Twenty (20) surface soil samples collected from inside of the smelter.
- Six (6) surface soil samples collected from front yard and backyard areas of the smelter.
- Eighteen (18) surface and subsurface soil samples collected from the boreholes.
- Sixteen (16) dust wipe samples collected from the perimeter walls and other exposed surfaces.

Exhibits 1 through 5 in Appendix E provide figures that illustrate approximate sample locations at the smelter.

Site Characterization--

The collected samples were analyzed using a field portable X-ray Fluorescence analyzer (XRF) to detect and quantify the amount of heavy metals in soil and dust wipes. The XRF analyzer has the ability to test for 17 heavy metals including lead, chromium, antimony, cadmium, and arsenic.

Incidental ingestion is the major pathway of exposure to lead in soil and dust. The USEPA's assumption for this exposure pathway is that ingested soil and dust lead is best represented by the lead concentration in the particle size fraction that adheres to hands. USEPA lead models consider this fraction (less than 250 microns) to be the primary source of the ingested soil and dust. In addition, there is a concern that metal concentrations may be enriched in the fine (sieved) fraction (US EPA, 2000). To address the above concerns, surface soil samples collected were sieved using a No. 60 sieve (sieve opening 250 µm) and analyzed for all heavy metals.

The analytical results for all of the soil and dust samples were compared to the proposed USEPA Region 9 Preliminary Remediation Goals (PRGs) for chemicals in industrial areas. Analysis results of all wipe samples were compared to the Contamination Assessment Level proposed by LIFE-Lead project for industrial sites.

Based on this comparison, Antimony (Sb), Cadmium (Cd), Lead (Pb), Zinc (Zn), Copper (Cu), and Iron (Fe) were detected at concentrations greater than the screening levels for several

samples collected from the smelter. Therefore, these elements are considered as COPC. Arsenic was detected at levels less than the limit of detection (LOD) of the XRF which is 15 µg/gm. It is worth noting that this LOD is higher than the USEPA Region 9 Preliminary Remediation Goals for arsenic (1.6 µg/gm). Therefore, arsenic was also considered as a COPC. The analyses result of Arsenic will not be included in results summary because was detected at levels less than LOD. However, arsenic will be further addressed in the baseline human health risk assessment. The results of the XRF analysis are summarized in Tables 1 through 5.

Table 1: XRF Analysis Results of Surface Soil Samples (Unsieved Samples)

Sample ID	Antimony Sb Concentration µg/g	Cadmium (Cd) Concentration µg/g	Lead (Pb) Concentration µg/g	Zinc (Zn) Concentration µg/g	Copper (Cu) Concentration µg/g	Iron (Fe) Concentration µg/g
S1	<LOD	<LOD	1,490	17,944	9,281	24,208
S2	<LOD	239	14,052	583,934	161,532	77,340
S3	<LOD	<LOD	2,819	73,586	24,342	27,212
S4	<LOD	<LOD	549	7,082	2,179	16,350
S5	<LOD	<LOD	930	21,142	5,253	20,832
S6	<LOD	<LOD	940	19,587	4,203	20,140
S7	<LOD	<LOD	543	4,237	1,547	19,496
S8	<LOD	<LOD	385	3,926	901	18,120
S9	<LOD	<LOD	390	4,436	1,386	16,421
S10	<LOD	<LOD	357	3,466	788	16,786
S11	<LOD	<LOD	422	4,876	1,343	18,173
S12	<LOD	<LOD	461	4,909	1,550	21,215
S13	<LOD	<LOD	456	4,795	1,814	18,681
S14	<LOD	<LOD	565	5,629	2,038	21,022
S15	<LOD	<LOD	633	6,250	2,095	19,125
S16	<LOD	<LOD	795	7,301	2,393	21,549
S17	<LOD	<LOD	105	981	581	36,171
S18	<LOD	<LOD	626	5,777	2,591	14,962
S19	<LOD	<LOD	793	5,503	2,534	18,911
S20	<LOD	<LOD	696	7,121	2,063	21,864
EPA Region 9 – PRGs for Industrial Sites	**410**	**450**	**800**	**100,000**	**41,000**	**100,000**

Notes ; (1) < LOD = Less than level of detection,
(2) Limit of detection for COPC as provided by XRF device manufactures are as follows:
LOD for lead = 20 µg/g LOD for zinc= 75 µg/g
LOD for cadmium= 50 µg/g LOD for copper= 125 µg/g
LOD for antimony= 75 µg/g LOD for iron = 250 µg/g

Table 2: XRF Analysis Results of Surface Soil Samples (Sieved Samples)

Sample ID	Antimony Sb Concentration µg/g	Cadmium (Cd) Concentration µg/g	Lead (Pb) Concentration µg/g	Zinc (Zn) Concentration µg/g	Copper (Cu) Concentration µg/g	Iron (Fe) Concentration µg/g
S1	561	103	1,738	20,414	9,225	28,539
S2	1,142	616	19,902	986,028	195,447	138,300
S3	<LOD	<LOD	5,947	186,369	60,826	58,389
S4	415	175	673	7,864	2,195	18,908
S5	352	92	1,277	30,689	6,638	28,107
S6	329	<LOD	1,149	24,482	4,889	23,853
S7	762	207	635	4,856	1,666	22,684
S8	193	<LOD	431	4,767	1,071	21,357
S9	534	153	401	4,546	1,336	16,892
S10	528	134	383	3,925	945	18,237
S11	<LOD	<LOD	526	5,799	1,545	21,597
S12	438	91	554	5,562	1,691	23,224
S13	148	<LOD	629	6,542	2,063	25,065
S14	617	185	665	6,366	2,117	22,411
S15	563	117	728	7,111	2,197	22,861
S16	238	<LOD	856	7,826	2,558	24,819
S17	208	118	104	895	523	18,269
S18	643	192	670	5,860	2,703	15,759
S19	377	112	507	3,346	1,482	13,654
S20	562	159	686	6,922	1,884	20,090
EPA Region 9 – PRGs for Industrial Sites	**410**	**450**	**800**	**100,000**	**41,000**	**100,000**

Notes ; (1) < LOD = Less than level of detection,
(2) Limit of detection for COPC as provided by XRF device manufactures are as follows:
LOD for lead= 20 µg/g LOD for zinc= 75 µg/g
LOD for cadmium= 50 µg/g LOD for copper= 125 µg/g
LOD for antimony= 75 µg/g LOD for iron = 250 µg/g

Table 3: XRF Analysis Results of Front yard and Backyard Surface Soil Samples

Sample ID	Antimony Sb Concentration µg/g	Cadmium (Cd) Concentration µg/g	Lead (Pb) Concentration µg/g	Zinc (Zn) Concentration µg/g	Copper (Cu) Concentration µg/g	Iron (Fe) Concentration µg/g
OS1	<LOD	<LOD	939	9,301	3,865	26,278
OS2	<LOD	<LOD	220	2,456	2,437	33,055
OS3	<LOD	<LOD	976	4,358	4,405	29,835
OS4	<LOD	<LOD	213	2,777	2,012	23,143
OS5	<LOD	<LOD	184	1,404	1,350	16,217
OS6	<LOD	<LOD	102	<LOD	948	22,537
EPA Region 9 – PRGs for Industrial Sites	**410**	**450**	**800**	**100,000**	**41,000**	**100,000**

Notes ; (1) < LOD = Less than level of detection,
(2) Limit of detection for COPC as provided by XRF device manufactures are as follows:
LOD for lead= 20 µg/g LOD for zinc= 75 µg/g
LOD for cadmium= 50 µg/g LOD for copper= 125 µg/g
LOD for antimony= 75 µg/g LOD for iron = 250 µg/g

Table 4: XRF Analysis Results of Borehole Soil Samples

Sample ID	Depth	Antimony (Sb) Concentration µg/g	Cadmium (Cd) Concentration µg/g	Lead (Pb) Concentration µg/g	Zinc (Zn) Concentration µg/g	Copper (Cu) Concentration µg/g	Iron (Fe) Concentration µg/g
B1	Surface	< LOD	< LOD	1,350	40,987	12,179	20,345
	0.0-0.5	162	< LOD	31	193	< LOD	55,073
	0.5–1.0	< LOD	< LOD	50	352	117	46,633
	1.0-1.5	< LOD	< LOD	181	2,453	753	21,897
B2	Surface	< LOD	276	8,943	416,635	158,526	64,696
	0–0.4	< LOD	< LOD	4,466	166,973	66,765	37,621
B3	Surface	< LOD	< LOD	127	1,674	528	10,107
	0.0-0.5	< LOD	< LOD	28	248	126	42,687
	0.5–1.0	< LOD	< LOD	119	122	< LOD	51,827
	1.0-1.5	< LOD	< LOD	36	144	< LOD	50,532
B4	Surface	< LOD	< LOD	503	4,816	2,038	22,037
	0.0-0.5	235	< LOD	88	143	< LOD	42,254
	0.5–1.0	< LOD	< LOD	50	87	< LOD	46,624
	1.0-1.5	284	< LOD	223	66	< LOD	56,168
B5	Surface	< LOD	< LOD	223	2,230	601	14,400
	0.0-0.5	< LOD	< LOD	44	303	157	50,600
	0.5–1.0	518	91	49	194	< LOD	54,096
	1.0-1.5	< LOD	< LOD	26	81	< LOD	61,362
EPA Region 9 – PRGs for Industrial Sites		**410**	**450**	**800**	**100,000**	**41,000**	**100,000**

Table 5: XRF Analysis Results of Dust Wipe Samples

Sample ID	Antimony (Sb) Concentration µg/ft²	Cadmium (Cd) Concentration µg/ft²	Lead (Pb) Concentration µg/ft²	Zinc (Zn) Concentration µg/ft²	Copper (Cu) Concentration µg/ft²	Iron (Fe) Concentration µg/ft²
WW1	< LOD	< LOD	26	175	85	458
WW2	< LOD	< LOD	318	1,981	1,722	1,605
WW3	< LOD	< LOD	1,420	25,189	4,730	1,790
WW4	< LOD	< LOD	2,705	29,423	5,411	1,292
WW5	< LOD	< LOD	323	1,695	841	1,747
WW6	< LOD	< LOD	36	260	62	1,081
WW7	< LOD	< LOD	309	1,851	283	1,073
WW8	< LOD	< LOD	264	1,595	376	1,523
WW9	< LOD	< LOD	113	1,048	253	1,239
WW10	< LOD	< LOD	48	364	106	501
WW11	< LOD	< LOD	53	283	126	864
WW12	< LOD	< LOD	95	394	434	1,005
WW17	< LOD	< LOD	974	10,644	3,312	2,085
WW18	< LOD	< LOD	208	2,841	709	2,076
WW19	< LOD	< LOD	2,088	23,109	11,536	2,612
WW20	< LOD	< LOD	1,180	12,125	3,015	4,502
Contamination Assessment Level proposed by LIFE-LEAD	770	1,800	600	190,000	77,000	380,000

On reviewing the results, it is observed the majority of the samples that contain elevated levels of the COPC were obtained from an area of the smelter where the furnace was located before cessation of operation. Therefore, this area of the smelter will be considered as a hot spot.

Given the above results, LIFE-Lead recommends the following actions:

- A Risk Assessment Study should be conducted to evaluate the health risk for workers in this smelter under the current baseline conditions. The risk assessment will determine if remediation will be deemed necessary. In the event that remediation is required, the following activities will be performed:
  - The interior of the smelter should be remediated to reduce exposure to lead, zinc, antimony, and copper on the floors and in subsurface soils.
  - The interior walls of the facility should be remediated to reduce exposure to lead on the wall.
  - The front yard area of the facility should be remediated to reduce exposure to lead in the soil.

Baseline Human Health Risk Assessment

Because the future intended use of the facility may involve industrial activities (other than smelting) with clean production operations, a Baseline Human Health Risk Assessment was conducted for the Copper Smelter to assess the potential human health risks associated with exposure to carcinogenic and non-carcinogenic heavy metals in the surface soil for adult workers.

This human health risk assessment was conducted under two scenarios. The first scenario was for the current baseline condition and the second was conducted assuming the removal of the hot spot which represents the area where furnace was located. The following is a summary of the significant health risks for workers under both scenarios.

Health Risk to Adult Workers at the Copper Smelter under Baseline Conditions

The non-carcinogenic hazard index (HI) is 4, indicating that adverse non-carcinogenic health risks can be encountered in the smelter. These health risks are primarily due to exposure to antimony, copper, and zinc.

The carcinogenic risk to workers is 2×10^{-5} indicating that corrective action may be necessary. This cancer risk is due to exposure to lead in soil.

Blood lead modeling showed that 12 percent of the fetuses of female workers are expected to have blood lead levels greater than 10 µg/dl. A health protective goal is set by USEPA so that less than 5% of the fetuses of female workers would have blood lead levels greater than 10 µg/dl.

Health Risk to Adult Workers at the Copper Smelter Assuming Removal of the Hot Spot

The non-carcinogenic hazard index (HI) is 2, indicating that adverse non-carcinogenic health effects may occur to workers at the smelter after removal of the hot spot.

The carcinogenic risk to adult workers at the smelter is 4×10^{-6} indicating that corrective action or a site management plan may be necessary. This cancer risk is due to exposure to lead in soil.

Blood lead modeling showed that 3.7 percent of the workers are expected to have blood lead levels greater than 10 µg/dl.

Lead concentrations in wipe samples collected from the interior walls of the smelter exceeded the proposed LIFE-Lead Contamination Assessment Level of 600 $\mu g/ft^2$.

Proposed Remediation Goals:

LIFE-Lead proposed a remediation goals of 1,100 µg/gm for lead, 434 µg/gm for antimony, 69,000 µg/gm for copper, and 506,000 µg/gm for zinc. These remediation goals are based on the current land use, current exposure assumptions and the media and chemicals of potential concern.

Remediation Alternatives under Consideration

Several remediation alternatives were selected for further analysis through the initial screening process. The No Action alternative will be assessed in the Environmental Assessment for all of the sites. All of the alternatives, except the No Action, are capable of meeting the health based clean-up goals of the project. The No Action alternative is not a viable alternative for addressing the problem. However, it does provide a baseline against which the impacts and costs of the other alternatives will be evaluated.

Following the selection of the recommended remediation alternatives, an assessment of these alternatives is provided using the three primary evaluation criteria recommended by the USEPA. The USEPA primary evaluation criteria include the following:

- Effectiveness
- Implementability
- Cost

Table 6 provides three remediation alternatives that were developed for the Sayed Hussein Copper Smelter. Alternative 3 is the recommended alternative and consists of the following major activities:

- Controlled dry cleaning using HEPA vacuum cleaner followed by wet-cleaning of the interior and exterior walls of the Smelter. The cleaning process will achieve the required clean-up levels.

- Contaminated soil inside and in the front area of the smelter will be excavated within practical site constraints and excavated soil will be disposed offsite as hazardous waste

in a regulated facility; excavation will be backfilled with structural backfill, and sealed with an impermeable cap.

- Structure surfaces will be encapsulated (e.g., coated).
- Decontamination fluids will be controlled and handled appropriately.
- A long-term site management plan will be developed and implemented.
- Conventional site management practices, such as basic hygiene is recommended to minimize exposure.

The main characteristics of this Alternative 3 include the following:

- Effectiveness: Short and long-term effectiveness is excellent.
- Implementability: Technically achievable with low risk from potential exposure to the public during remediation with proper engineering controls.
- Cost: The cost is medium.

Table 6: Remediation Alternatives for Copper Smelter

CRITERIA	Alternative 1: No Action	Alternative 2: Controlled dry cleaning followed by wet-cleaning of the building structure, testing of cleaning residuals and disposal, excavating contaminated soil and placing a layer of compacted sand to be used as a soft cap, and conventional site management practices.	Alternative 3: Controlled dry cleaning followed by wet-cleaning of the interior and exterior walls of the building, contaminated soil will be excavated within practical site constraints and will be disposed offsite as hazardous waste; excavation will be backfilled and sealed with an impermeable cap, structure surfaces will be encapsulated, decontamination fluids will be controlled and handled appropriately, a long-term site management plan will be implemented, and conventional site management practices.
Effectiveness	Poor-to-fair. Awareness of exposure risks.	Fair to good. Soft cap effectiveness is poor for the long run. Dust and offsite source controls important.	Excellent. Dust controls must be maintained to eliminate impact on the surrounding.
Implementability	Not Applicable	Technically simple to implement. Work scheduling required.	Technically achievable. Work scheduling required.
Cost	None	Low	Medium

SCOPING ACTIVITIES

LIFE-Lead was initiated on August 18, 2004 and has been extended through a contract modification that allows additional remediation activities until December 31, 2007. The project consists of two primary activities which are subsequently divided into tasks and subtasks that further define the work to be accomplished. Activity 1 includes the technical work required to complete site remediation activities. Activity 2 provides community awareness and communications support for the technical activities and is intended to raise the awareness of the community pertaining to environmental issues and concerns from industrial facilities.

Previous studies funded by the USAID have helped understand industrial pollution in Shoubra El Kheima. Background data collection activities associated with Activity 1 started in January 2006 to provide data relative to the present status of heavy metals contamination in the study area. Meetings and coordination with governmental agencies, NGO's, community representatives, smelter owners and others were held to facilitate the sampling and site characterization phase of the project and to collect primary data for the Environmental Assessment.

A Scoping Session was held in the Transportation Officer's Club-Shoubra El Kheima on July 18, 2007 in preparation for environmental assessment. The session focused on environmental issues related to the remediation activities at the Sayed Hussein Copper Smelter

This section summarizes scoping activities related to the Copper Smelter.

Scoping Meeting

The scoping meeting was held on July 18, 2007 in the Transportation Officer's Club-Shoubra El Kheima. The agenda and list of consulted organizations during the Scoping Phase is provided in Appendix A. Presentations and comments at the meeting were in Arabic. Comments and statements by the participants were recorded. A scoping comments form was provided to allow participants an opportunity to comment in writing if they were reluctant to provide verbal comments.

The participants were given until July 22, 2007 to provide their written comments if not delivered during the Scoping Session. A detailed summary of the participants' remarks and scoping statement responses is provided in Appendix B.

Forty-nine (49) invitations to stakeholders and individuals outside EEAA and the project team were circulated one week prior to the meeting. The List of Invitees is provided in Appendix C. An announcement of the meeting was posted on the public announcements board at the Shoubra El Kheima City Council, Shoubra El Kheima East District five days before the meeting. Twenty-one (21) participants registered at the meeting. The List of Attendees is provided in Appendix D. A breakdown of the attendees is provided in the following:

- Two (2) from the GOQ and Central Government Departments.
- Seven (7) representatives from EEAA.
- Three (3) representatives of the Shoubra El Kheima East District.

- Two (2) representatives from the smelters.
- Four (4) representatives from universities, contractors, and consultancies.
- Three (3) representatives from the local media, NGOs, and library.

In addition, 5 members of the LIFE-Lead project team participated in the meeting.

Opening remarks were given by Dr. Khaled Abdel Aziz, Deputy Chief of Party, Life-Lead. This was followed by statements from General Fawzy El Shamy, East District Head of Shoubra El Kheima.

Comments Received--

The comments session was moderated by Dr. Khaled Abdel Aziz. Participants outside the project team made verbal statements and remarks. In addition, Dr. Fatheya Soliman, Dr. Tamer El Kady, and Dr. Heba Wafa from the project team provided informational responses to comments. A detailed summary of the participants' verbal remarks is provided in Appendix B.

Written Statements Received--

During the meeting, participants were encouraged to provide written comments on scoping response sheets provided at the beginning of the Scoping Session. A response period ending on July 22, 2007 was announced as a deadline for the submittal of written comments. No comments were received by the end of the response period

SIGNIFICANT ISSUES TO BE ADDRESSED IN THE ENVIRONMENTAL ASSESSMENT

Impact identification was based on the analysis of project specifications and baseline information collected in the field, literature review and internet search of similar projects, interviews with governmental and non-governmental stakeholders as well as information received from stakeholders during the Scoping Meeting.

This section is divided into two subsections. The first subsection identifies issues viewed by participants as related to the Scope of Work of the project, followed by significant issues that will be addressed in the EA.

Issues Identified by Participants in the Scoping Session

The purpose of the Scoping Meeting was to disseminate information about the project to the stakeholders and to receive their comments. The meeting also introduced them to the potential environmental issues that would be handled in the EA. During the meeting, a number of issues were raised that will be incorporated into the environmental assessment and some issues that need to be addressed in the baseline studies.

Future Use of Remediated Sites--

The future use of the remediated sites was discussed by the participants and the project team. It was concluded that it is not possible to return to smelting activities since the Governorate of Qalyoubia is planning to stop all smelting activities in Shoubra El Kheima and is planning to relocate all smelters to the Safa Industrial Zone in Abu Zaabal.

Remediation Alternatives--

Participants commented on the selected remediation alternatives and requested information on whether selection was based only on cost. It was explained by the project team that remediation alternatives for each media were set by international guidelines and the best alternative was selected based on future use of the remediated site, cost, effectiveness, Implementability, and environmental performance.

Significant Issues to be addressed in the Environmental Assessment

The following issues have been determined to be significant issues that will be addressed in the EA. The issues raised are not uncommon for remediation projects.

Air Quality--

Air quality at the project site may be impacted by equipment emissions and fugitive dust from remediation activities. The main sources of emissions that have been identified include the following:

- Re-entrainment of particulate matter by vehicular traffic on haul roads and exposed surfaces.
- Emissions released by transportation and construction vehicles.
- Emissions released by remediation techniques due to energy combustion.
- Dust caused by construction and demolition activities.

Noise--

Ambient noise levels will be increased due to the use of the construction and the operation of vehicles on site and during transportation.

Surface Water Quality--

The Ismailia Canal is located approximately 1 km south of the site and is the only water body in the vicinity. Surface water runoff should not pose a problem due to the limited amount of rainfall in the area as well as the distance between the site and the canal.

During transportation of the debris, the Ismailia Canal could be impacted from spillage of contaminated debris caused by a vehicular accident.

Soil--

The soil quality in the smelter will improve since the contaminated soil will be excavated and transported to the Alexandria Hazardous Waste Landfill in Nasreya, Governorate of Alexandria for disposal. The site will be backfilled with clean soil and then capped.

Public Health and Safety--

Remediation activities could also disturb neighboring residents, affect their lifestyle, and jeopardize their daily activities. In addition, health impacts could be caused either by the

inhalation of released emissions or dust or through oral intake if the contaminant reaches the food chain.

Workplace Health and Safety--

Inadequate safety practices during any of the remediation activities could lead to exposure of workers to contamination and potentially hazardous materials through inhalation, dermal absorption, or oral intake.

Traffic--

Minor disruption of traffic during remediation is expected, especially in the area around the project site. In addition, there is the potential for road congestion at intersections with the main road parallel to Ismailia Canal during transportation to disposal/treatment sites.

SCHEDULE FOR PREPARING THE ENVIRONMENTAL ANALYSIS

The Environmental Assessment will be completed for USAID review by the middle of August 2007. Review will be in accordance with USAID policies and procedures for project environmental review.

Table 7 provides a detailed schedule for the EA. Remediation activities will not begin prior to receiving approval of the EA from USAID. The remediation is targeted to start by mid October 2007 and will require 40 to 60 days to complete.

The Egyptian Environmental Affairs Agency requires an Environmental Impact Assessment (EIA) for remediation projects. The schedule for submittal and approval of the EIA are included in Table 7 and should not be confused with the USAID required EA.

PROPOSED APPROACH TO ADDRESS SIGNIFICANT ISSUES

Identified impacts will be subject to a process of impact evaluation. Impact evaluation will be based on pre-set criteria including, inter alia, impact magnitude, duration, zone of effect, availability of mitigation measures, regulatory standards, and sensitivity/importance of environmental receptors.

Impact quantification will be carried out for those impacts for which there are sufficient data to allow prediction, mainly through risk assessment. Significant environmental impacts will be subject to further analysis after consideration of alternative mitigation measures, while insignificant impacts will not be considered further. Mitigation measures will be either incorporated as an integral part of the design or through management measures. An Environmental Management and Monitoring Plan (EMP) will be formulated to ensure that project performance is meeting the set standards and that the mitigation measures are working to achieve the desired level of impact minimization.

Measures to Address Significant Issues

Based on the preliminary environmental analysis of the identified issues, the following issues will require further assessment. The issues to be addressed and the approach to addressing those issues are described in the following.

Air Quality--

Ambient air quality data are available for the project area through monitoring stations operated by EEAA. Potential incremental air quality consequences that might result from remediation activities will then be assessed qualitatively. Ambient air quality data in the vicinity of the remediation site will be collected prior to the start of remediation activities. These data will be used to monitor air quality during remediation. Mitigation measures to control fugitive dust and vehicles emissions will be included in the EA.

Noise--

The location of the remediation site is in an industrial area of Shoubra El Kheima. The noise associated with the site remediation will be similar to the noise already present in the area. The noise levels will be measured at the project site and nearby receptors prior to the start of construction. The measurements will be taken at different times of the day that will be consistent with anticipated work times at the sites.

The noise levels measured prior to the start of remediation activities will form the baseline for the project. The noise levels will then be measured at the same points during remediation activities to assess the impact of noise on workers and local residents. Noise mitigation measures will be defined in the EA.

Soil--

Following the completion of the remediation activities, clearance samples will be collected from landscaped areas to verify that risk based remediation goals (RBRGs) are being met. The soil RBRGs have been set and are based on the outputs of the Health Risk Assessment.

Public Health and Safety--

Social and health impacts on the community residing in the project neighborhood are of concern. Proper management of the remediation activities to minimize dust, vehicular emissions, and noise from exiting the boundaries of the remediation area will reduce impacts on the surrounding community. A management plan will be developed to minimize the impacts on the community.

Workers Health and Safety--

Construction workers will be exposed to risks during remediation due to exposure to contaminated dust (through inhalation, ingestion, and dermal contact), and due to accidents and physical injuries. The contractors working on the site will have completed an extensive Health and Safety Training Program prior to the initiation of any remediation activities. The training will include the use of proper personal protective equipment as well as the safe operation of construction equipment.

The contractors will be required to provide project specific Health and Safety Plans. These plans will be self monitored by the contractor with oversight from the project team pertaining to the health and safety requirements of the contract.

Transportation Risks--

Soil and debris requiring off-site disposal will be hauled to either the Abu Zabaal Landfill or the Alexandra Hazardous Waste Facility based on the waste classification. A specific hauling route will be defined for all contractors to the disposal facility to minimize the risk of accidents. Emergency Action Plans will be developed to manage accidents that may occur that would result in spillage.

Traffic--

Traffic plans at the sites will need to be coordinated with the job superintendent and the project staff. Special areas will need to be set aside for equipment parking and maintenance that will minimize the impact on the community. Specific ingress and egress routes to the site will be identified and coordinated with the local traffic officials.

Landfill Disposal--

Wastes associated with project activities will be both hazardous and non-hazardous in nature. Landfilling of the contaminated debris is one of the disposal options that will be considered.

The Alexandria Hazardous Waste Landfill has a groundwater monitoring system in place. Records will be requested from the landfill operator for inclusion in the EA.

Non-hazardous waste will be disposed in the Abu Zabaal Landfill. Demolition debris samples will be collected from the site and analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) as defined by USEPA Method No. 1311 followed by Method No. 6010 B. Any soil or waste material that has not been decontaminated must pass the TCLP analysis for disposal in the Abu Zabaal Landfill.

Variations in Format of the Environmental Assessment

No variations from the format of the Environmental Assessment will be necessary.

Disciplines Involved in Preparing the Environmental Assessment

It is anticipated that the EA team will include the following disciplines:

- Health Risk Assessment Specialists
- Environmental Scientists
- Environmental Engineers
- Biological and Physical Scientists
- Remediation Specialists
- Social, Economic, and Financial Specialists

Table 7: Planning and Decision Making Schedule

Activities	2007																							
	July				August				September				October				November				December			
Prepare for the Scoping Meeting		■																						
Conduct Scoping Meeting			■																					
Complete Scoping Statement and submit to USAID				■																				
Prepare EA for USAID					■	■																		
Receive approval of Scoping Statement							■																	
Submit EA to USAID								X																
Prepare EIA for the Smelter					■	■																		
Submit EIA for the Smelter							X																	
Receive approval of Smelter EA from USAID											X													
Receive approval of EIA from EEAA											X													
Issue tender documents for the Smelter remediation								■	■	■														
Initiate Smelter remediation activities															■	■	■	■	■	■	■	■		

X = Milestones

Table 8: Schedule of Environmental Analyses

Media to be Analyzed	Dates for Analyses		
	Inclusion in the EA	**Prior to Remediation**	**Completion of Remediation**
Air Quality	Baseline information obtained from the literature.	June 2007	Monitoring will be continuous during the remediation process using data provided by EEAA.
Noise	Baseline Monitoring in the Project Area was carried out.	2006	Monitoring will be continuous, if needed, during the remediation process.
Soil	Site characterization information will be included in the EA for the smelter.		Clearance sampling will be conducted following the completion of remediation activities. December 2007

APPENDIX A

AGENDA AND LIST OF AGENCIES, INSTITUTIONS AND NGOs ATTENDING THE SCOPING MEETING

LIFE-Lead Pollution Clean-Up in Qalyoubia
Scoping Session
Environmental Assessment- Copper Smelter East District
Wednesday July 18, 2007
Transportation Officer's Club-Shoubra el Kheima
Governorate of Qalyoubia
10:30 – 13:00

10:30 – 11:00	Registration	
Opening		
11:00 – 11:30	Introductory Speech (LIFE-Lead) General Mohamed Seif El Deen, Mayor, Shoubra El Kheima City Eng. Ahmed Abou El Seoud, EEAA General Fawzy El Shamy, East District Head.	
11:30 – 12:30	Presentation: Site Characterization and Proposed Remediation Alternatives for Copper Smelter	Life Lead Team Environics
	Presentation: EA/EIA for the Proposed Remediation Alternatives	
12:30 – 13:00	Open Session for Discussions and Recommendations	
End of Session		

LIST OF AGENCIES, INSTIUTIONS AND NGOS CONSULTED BY THE ENVIRONMENTAL TEAM DURING SCOPING

Governmental Agencies

- EEAA
  - Environmental Management Sector
  - Environmental Quality Sector
- Governorate Of Qalyoubia (GOQ)
  - Central Level (Governor Office, Governorate Departments, and Shoubra El Kheima City)
  - Local Level (East Shoubra El Kheima District, Environmental Management Unit- EMU)

Community Representatives and NGO's

- Heads and members of local councils
- Religious figures
- Shoubra El Kheima Association
- Local NGOs

APPENDIX B

DETAILED SUMMARY OF COMMENTS AND SCOPING MEETING RESPONSES

The LIFE-Lead Pollution Clean-up in Qalyoubia Scoping Session for the Sayed Hussein Copper Smelter was held on Wednesday July 18, 2007 in the Transportation Officer's Club-Shoubra el Kheima, Governorate of Qalyoubia. The session was attended by 21 participants from local government, executive agencies, smelter owners and community representatives in addition to the project team. The following is a summary of comments made by the participants during the session.

The session was headed by General Fawzy El Shamy, Head of Shoubra El Kheima East District and Dr. Khaled Abdel Aziz, Deputy Chief of Party, LIFE-Lead Project.

Summary of Comments Made during the Session[4]

Ahmed Ismail, Construction Contractor

Eng. Ismail wondered why were copper and zinc considered pollutants and their risk investigated.

Heba Wafa, Health Risk Assessment Specialist, LIFE Lead Project

Dr. Wafa responded to the saying that these metals are beneficial but under certain levels. Above these levels they will have health impacts.

Hussain Sayed Hussein, Copper Smelter

Eng. Hussain asked about the future use of the remediated smelter and if there are alternative options for reuse.

Fatheya Soliman, Technical Design Manager, LIFE Lead Project

Dr. Soliman said that the design of the remediation activities depends on the intended future use of the smelter as agreed with the smelter owner. She added that in all cases, the smelter cannot be used as a smelter after remediation. It can be used for any other industrial purpose.

Sayed Hussein, Owner of Cooper Smelter

Mr. Sayed commented that smelting is their family profession and he cannot give it up.

Khaled Abdel Aziz, Deputy Chief of Party, Life Lead Project

Dr. Adbel Aziz responded that the existing smelter in Shoubra El Kheima has been shut down for years and that Mr. Sayed is practicing smelting operations elsewhere. He also added that the policy of the Shoubra El Kheima District is to cease all smelting activities next to the residential areas and that these smelters should be relocated to operate in the Al Safa Industrial Area in Abu Zaabal as planned by the Governorate of Qalyoubia.

Ashour Abdel Rasik, Awkaf Shoubra El Kheima

Mr. Abdel Rasik proposed to compensate the owners of the smelters of Shoubra El Kheima with other smelters else where.

[4] Recorded in sequence of speaking during the session

Khaled Abdel Aziz, Deputy Chief of Party, Life Lead Project

Dr. Adbel Aziz commented that the smelters' owners should contact the Chamber of Smelting Industries to reserve land for smelters in Al Safa Industrial Zone in Abu Zaabal. They have been negotiating with the Governorate of Qualybia and have reduced the price of the lands and agreed on payment by installments. The only requirement for receipt of the land in Al Safa is the closure of the smelter in Shoubra El Kheima.

It is planned by EEAA and the Governorate of Qalyoubia to relocate all smelters of Shoubra El Kheima to A Safa within a period of 3 years. They have been studying the economic, legal, and technical sustainability of this plan.

Hanaa El Sheltawy, Central Laboratory, EEAA
Mrs. Hanaa asked about the method of assessment of the remediation alternatives for the soil.

Tamer ElKady, Environmental Specialist, Life Lead Project
Dr. El Kady responded that the choice was based on the long term effectiveness of the selected alternative.

Fatheya Soliman, Technical Design Manager, LIFE Lead Project
Dr. Soliman added that for each polluted media there is a number of internationally proven remediation technologies that could be used (for soil, walls, equipment, waste piles, etc.) and the option selected depends on the factors discussed which are effectiveness, cost, and implementability.

APPENDIX C

LIST OF INVITEES TO SCOPING SESSION

Qalyoubia Governorate

- Gen. Mohamed Seif El Din

Shoubra El Kheima City Council

- Essam Eddin Zaki
- Gen. Farouk Khater
- Gen. Fawzi El Shami
- Mrs. Mervat Hassan

Education Directorate

- Ayman Salama Taha
- Mr. Mansour El-Husseiny

El Delta Lel Solb School

- Ezzat Abdel Hamid Gadu

El Kablat Medical Center Health Department

- Gamal Moawwad

Awkaf Shoubra El Kheima

- Sheikh/ Ashour Abdel Razek

Keddis Boulos El Rasool Church

- Pastor/Youssab Aziz

El Amir Tadross El Mashreky Church

- Pastor/Domadius Makkar

Head of Gameiet Tanmiet El Mogtama3 Belkablat

- Haasan Mekki Hassan

Head of Gameiet El Ketab Wa Al Sonna BelBakri Wel Gammal

- Abdel Hamid Mohamed Reda

Gameiet Tanmiet Ibrahim Bek

- Abdel Hamid Sayed Abdel Hamid

Head of Gameiet Tanmiet Ibrahim Bek

- Abdel Hamid Rashed Ali

Hayaty

- Mahmoud El Naggar

EEAA

- Dr. Fatma Abou Shouk
- Dr. Mawaheb Abou El Azm
- Mr. Mahmoud Allam
- Dr. Adel El Shafei
- Dr. Ahlam Farouk
- Dr. Ahmed Abou El Seoud
- Gen. Ahmed Hegazy
- Gen. Yehia Abdel Kader
- Atwa Hussein Atwa
- Ahmed Abd El Hakim
- Sayed Mohamed Abd Rabu
- Dalia Mohamed Taha
- Helmy Kamal
- Hanna EL Shishtawy
- Amal Taha
- Mona Habib
- Aklas Gamal El Din
- Ataf Yaoub
- Elham Raffat
- Hassan Moawad
- Kawthar Hefny Abou El Seoud

Owner Of Copper Smelter

- Said Hussein
- Hussen Hussein

Environics

- Yasser Sherif
- Dalia Nakhla
- Dr. Adham Ramadan
- Ms. Ragia Affifi

Media

- Mahmoud Bakr

- Khaled Moubark
- Fawzy Abdel Hakim
- Suzan Zaki
- Olfat Saad
- Ahmed Abdel kerim
- Hossam Eazzat
- Saeed Naguib
- Olfat Saad
- Heba Wagih
- Abdel Hakim El Gindy
- Riham Abdel Gawad
- Hanan Badawy
- Ali Sobhy
- Abo Seria Amam
- Salah El Wakeil
- Zaky Mahmoud
- Abel Hakim El Gindy

EAMIC

- Tarek Zahran
- Hisham Wahba

AMA Arab

- Mohamed Hasan Mohamed
- Ahmed NouNou
- Nagwa El Karawy

Arab Contactors

- Emad
- Mamdouh

Madina

- Mohamed Rashad

AL Eman

Ahmed Asmail

APPENDIX D

LIST OF PARTICIPANTS AT SCOPING SESSION

Shoubra El Kheima City Council

- Gen. Fawzi El Shami

Education Directorate

- Ayman Salama Taha

El Delta Lel Solb School

- Ezzat Abdel Hamid Gadu

El Kablat Medical Center Health Dept

- Gamal Moawwad

Awkaf Shoubra El Kheima

- Sheikh/ Ashour Abdel Razek

Head of Gameiet Tanmiet El Mogtama3 Belkablat

- Haasan Mekki Hassan

Shoubra El Kheima Library

- Rania Mohamed Reda

EEAA

- Mrs. Mervat Hassan
- Sayed Mohamed Abd Rabu
- Dalia Mohamed Taha
- Helmy Kamal
- Hanna EL Shishtawy
- Mahmoud Monsat Alam

Owner of Copper Smelter

- Sayed Hussein
- Hussen Hussein

Environics

- Dalia Nakhla

Media

- Abel Hakim El Gindy

AMA Arab

- Mohamed Hasan Mohamed

Arab Contactors

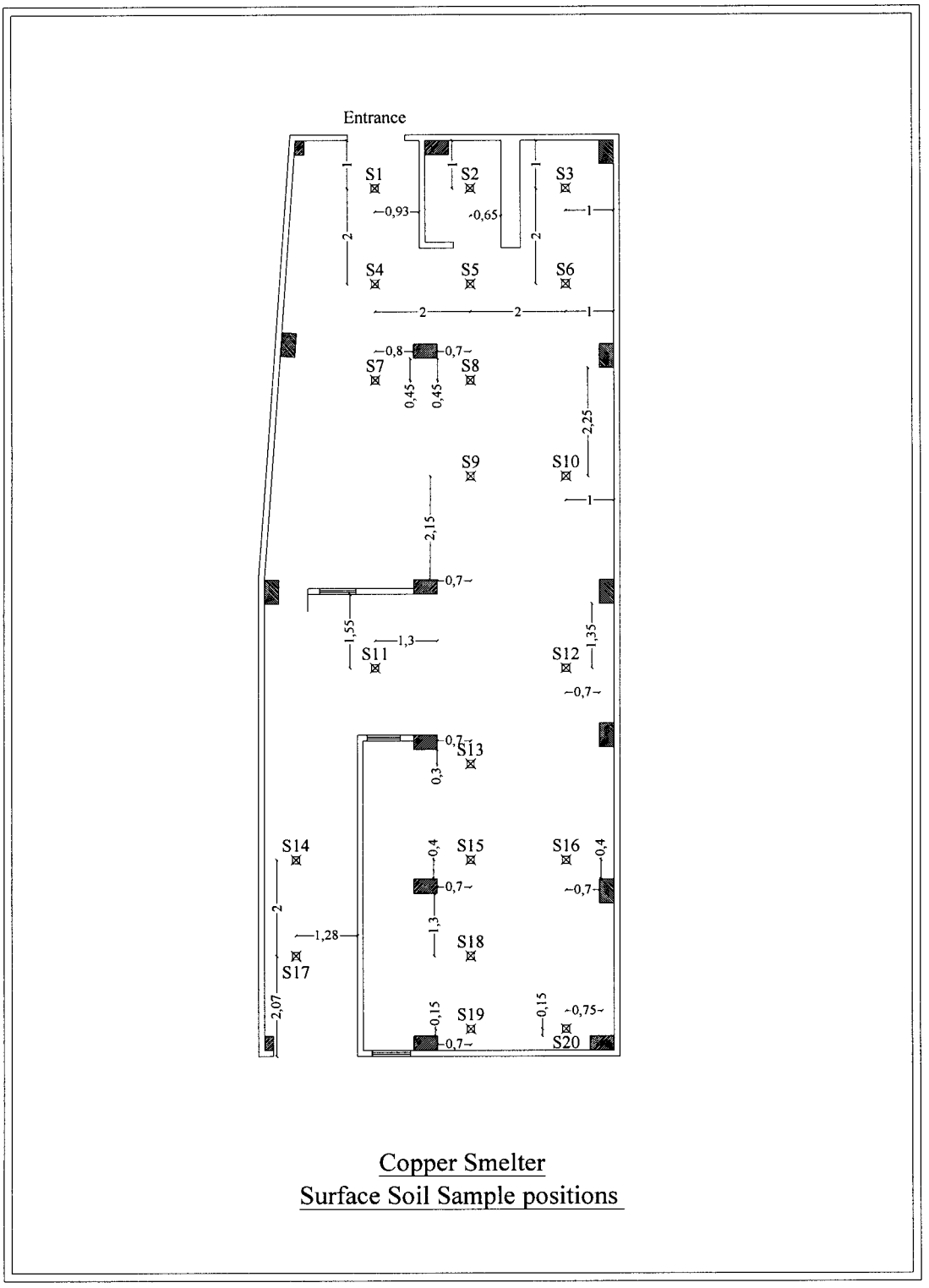
- Hossam Talat

EL Eman

- Ahmed Asmail
- Gamila Adel El Morshady

APPENDIX E

EXHIBIT 1: Surface Soil Sample Locations



Copper Smelter
Surface Soil Sample positions

EXHIBIT 2 Front Yard and Backyard Surface Soil Locations

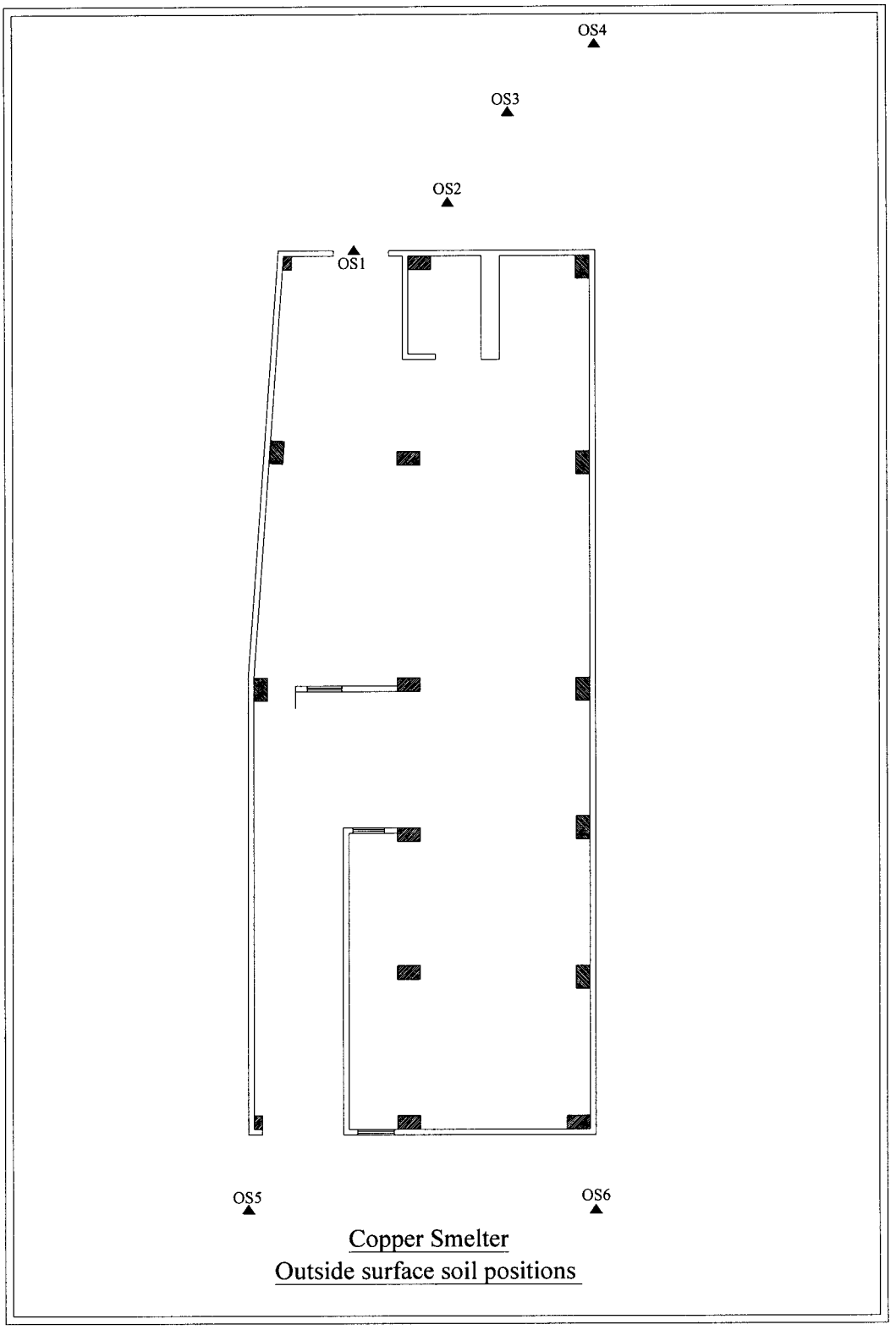


EXHIBIT 3: Borehole Sample Locations

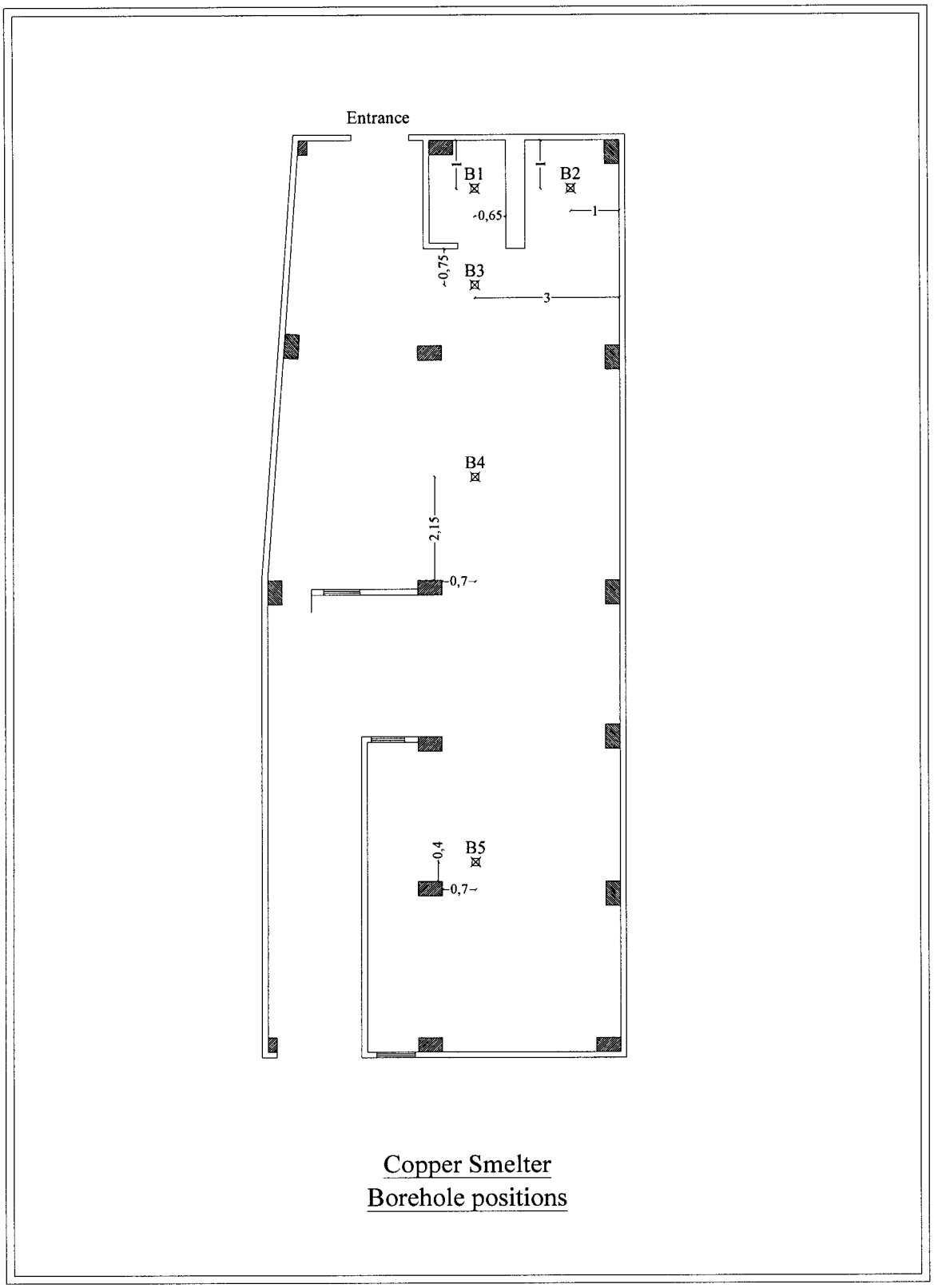


EXHIBIT 4: Wipe Sampling Positions inside the Smelter (Ground Floor)

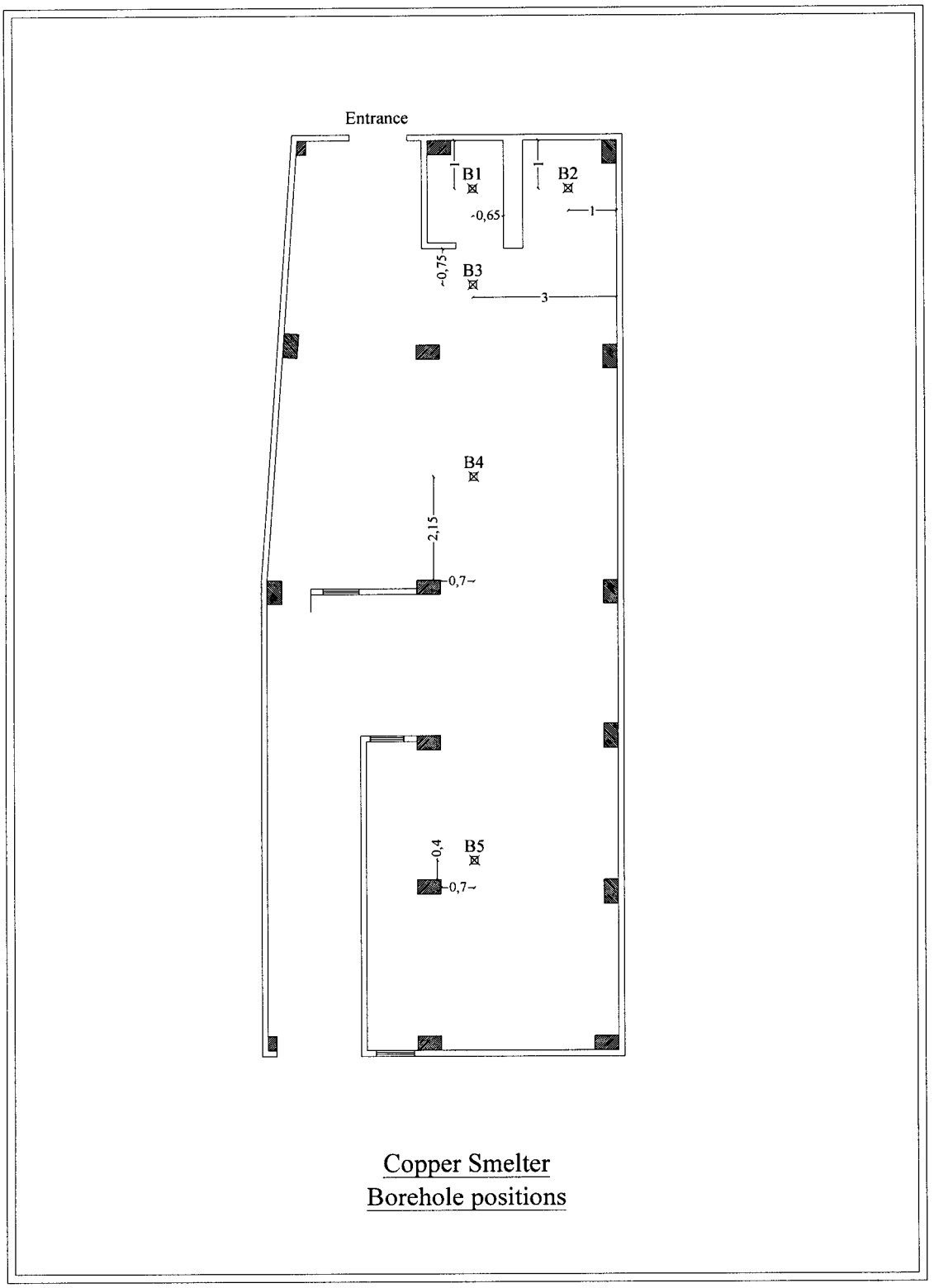
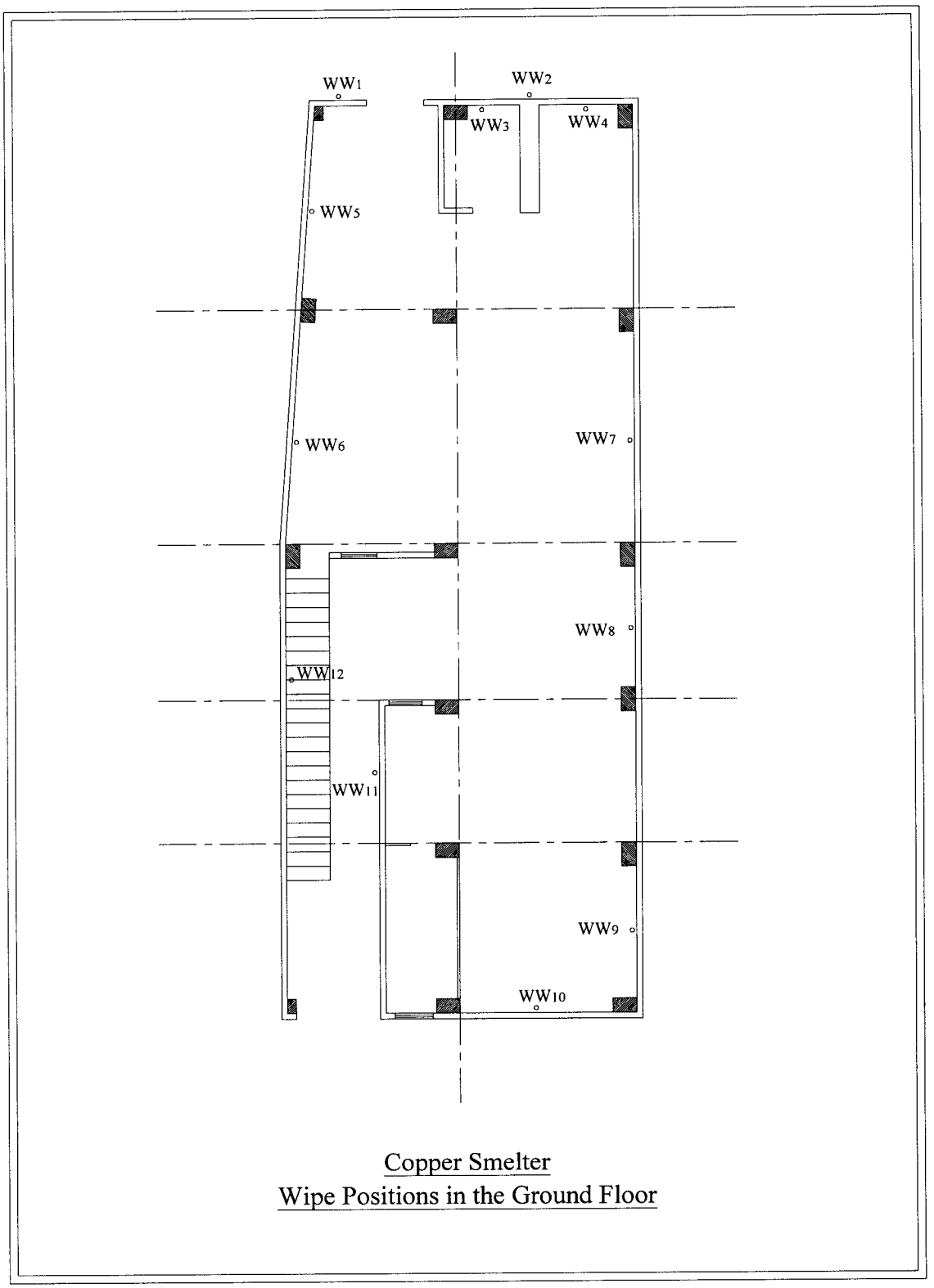


EXHIBIT 5: Wipe Sampling Positions inside the Smelter (First Floor)



Gadbois, Millie (Cairo/PSD/ACE)

From: Rousseau, Richard (Cairo/PSD)
Sent: Thursday, August 23, 2007 5:56 PM
To: Gadbois, Millie (Cairo/PSD/ACE)
Cc: Gustafson, Jeremy; Youannis, Moenes (Cairo/PSD/WW); Elsawi, Gharib Ibrahim (Cairo/PSD/WW); Abdel Sayed, Atef (Cairo/PSD/WW); Atalla, Sylvia (Cairo/PSD/E); Lin, Gene (Cairo/PSD/WW); Sedki, Hussein (Cairo/PSD/E)
Subject: RE: Harvard Student Requests Information

Millie,

If she has not done so already, Alicia should look at USAID websites, including the link to the Mission's website and the Development Experience Clearinghouse (DEC) website (www.dec.org), which is supposed to have documents produced by USAID/Egypt consultants.

The recent evaluation of the infrastructure program would give her lot of information on water and wastewater. However, I don't think it's available yet through DEC. Check with Jeremy on that.

We should discuss in our next staff meeting how we as an office make sure that documents get submitted to DEC.

Richard

From: Gadbois, Millie (Cairo/PSD/ACE)
Sent: Thursday, August 23, 2007 3:56 PM
To: Gustafson, Jeremy; Youannis, Moenes (Cairo/PSD/WW); Elsawi, Gharib Ibrahim (Cairo/PSD/WW); Abdel Sayed, Atef (Cairo/PSD/WW); Lin, Gene (Cairo/PSD/WW); Atalla, Sylvia (Cairo/PSD/E); Sedki, Hussein (Cairo/PSD/E)
Cc: Rousseau, Richard (Cairo/PSD)
Subject: Harvard Student Requests Information

A student at Harvard University, Alicia Harley, telephoned the office, requesting information for her senior thesis about Egypt. She is interested in several topics:

1. Urban upgrading of sewage and water facilities
2. Loss of agricultural land due to housing growth
3. Urban growth.

What information could we give her, particularly re no.1? I don't know whether USAID has done anything on the topic of the loss of ag. land to urbanization, do you?

If you have any ideas, pls. let me know, as she will be telephoning back Sunday PM.

Thanks,

Millie