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**TRIP REPORT**

**TO**

**SOFIA, BULGARIA**

**REVIEW OF SANITATION OPERATIONS**

**BY: Frank Landers  
Ralph Uzzi**

**MAY 17 - 24, 1992**

**WORLD ENVIRONMENT CENTER  
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## DISCLAIMER

The opinions expressed herein are the professional opinions of the authors and do not represent the official position of the Government of the United States or the World Environment Center.

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## I. INTRODUCTION

Between May 17 through May 24, 1992, members of the New York City Department of Sanitation (DOS) visited the City of Sofia in Bulgaria, on a activity sponsored by the World Environment Center. The DOS team members were Mr. Frank Landers, Chief Bureau of Operations and Mr. Ralph Uzzi, Director of Administration for Waste Management and Facilities Development. The purpose of the trip was to assess and make recommendations for improvements on the municipal solid waste facilities and management practices in the City of Sofia.

Sponsorship of technical activities, which is funded through the United States Agency for International Development, is one of many activities carried out by the World Environment Center within the framework of its Technical Assistance Program for Central and Eastern Europe.

The World Environment Center acknowledges Mr. Frank Landers and Mr. Ralph Uzzi who freely gave their time and expertise in assisting us in this activity in Sofia, Bulgaria.

## **II. EXECUTIVE SUMMARY**

Our review of sanitation operations in Sofia, Bulgaria was enlightening and informative. The municipality is organized quite differently than New York City. Our review and perspectives focused on segments needing improvements, identifying areas of obsolescence, streamlining where possible, and highlighting environmentally unacceptable conditions/operations. Naturally, on-site review engenders on-site comments and recommendations. Accordingly, many of the field observations and ensuing dialogue are not contained in this report. Also, statistics and other numerical data have been omitted. Such information is readily available and does not align with the purpose of our visit. However, major issues were identified, recorded, and are contained in this report.

We found that the municipality was anxious to improve and modernize its operations on a wide scale. They displayed an eagerness to be environmentally responsive and desirous of any and all assistance to be so. Further, they sought both monetary and professional assistance in achieving a modern waste disposal system which included waste-to-energy incineration and recycling. Additionally, they requested legislation, rules, guidelines, procedures, etc. relative to sanitation and health issues. The municipality believes that these items are needed as the foundation and framework from which to build their modern, up-to-date waste disposal system. With limitation we agree, but also counsel that over-legislation may lead to onerous regulations and result in barriers to goal attainment.

We recognize the municipality's urgent need for assistance in obtaining long-term funding and technical support. Short-term visits by volunteer experts addressing specific areas of operation will help with the glaring and obvious issues. Also, technical, legal, planning and administrative resources need to be pooled, improved, and set in place for the long-term.

### III. MEETINGS

The municipality of Sofia addresses sanitation practices quite differently than the City of New York (NYC). In Sofia, municipal solid waste (msw) is collected and disposed of by 24 quasi-public "private firms". In NYC, those tasks are performed by one City government agency. Similarly, the other parts of sanitation, i.e., street cleaning and snow removal, are handled by the private firms. These private firms are responsible for districts of the municipality and are in competition with one another. One firm also has the ownership and control of the municipality's largest msw landfill. It also provides repair and rental of trucks and equipment to the other firms as needed.

Adding to the dissimilarity between NYC and Sofia, these firms also provide other municipal services within their districts. For instance, they maintain green areas (parks and street greenery) and street/highway repair. In NYC, these responsibilities are performed by two, sizable City government departments, not part of the Sanitation Department.

Initially, we believed that the municipal hierarchy and the private firm structure were inefficient, cumbersome, and disorganized. However, upon closer review, analysis, discussions, and first-hand observations, it became apparent to us that the system actually operated coherently and performed well. When asked if we would recommend changes to their method of operations, we replied that they must use what works for them and not try to adopt changes for the sake of changing.

Our field visits to the offices of some of the private firms showed that they were organized but lacked support operations. Some of the vehicles and equipment were newer and maintained, but the repair shops tended to be small and ill-equipped with old diagnostic and repair tools. While maintenance function appeared to be "remove and replace", the fact remains that the fleet was operating, mobile, and performing their required functions.

We toured the district and found that its streets were clean and the refuse was collected. Mechanical broom activity was observed along with manual street cleaning. The streets were also periodically flushed to enhance their clean appearance. During our stay, we expanded our tour to other districts and witnessed the same care to clean the streets. Sofia is kept exceptionally clean, even though the firms perform the other municipal services cited above.

The all-inclusive district services approach was found to be capable and successful. The managerial abilities of the firm's Directors, together with the strong sense of pride demonstrated by the citizens, is a contributing factor to their success. Additionally, the cooperative atmosphere and the open dialogue

maintained between the Municipal government and the firms, greatly contributed to the overall success of the firms.

The firm of "Liubex, Ltd." of the Liulin District was far and away the leading entrepreneurial enterprise we encountered. This firm, not only performed the previously cited municipal services, but was branching off to recycling and manufacturing. In fact, some of the recycled items were used in the production of saleable goods, such as, pocket and desk calendars, plastic items, and the like. The firm was also involved with glass, metal, and furniture goods, even manufacturing its own metal waste basket. This firm demonstrated that creativity, which is in its infant stages nationally, and profit motivation will eventually result in the prosperous expansion and economic upgrade of these firms. We recommend that such ingenuity and initiative be encouraged and supported however possible. Especially since integrating a meaningful recycling program with msw collection has such a multitude of tremendous benefits: reduction of the waste stream, additional employment, new markets, and possible export products for the economy. The only caution would be that the firm's ventures into these areas not allow any disruption, impairment, or diminishment of the municipal services they are currently providing.

We also examined and observed landfilling operations at the Sukohol Landfill. It was an efficient and clean operation that only accepted Sofia's msw. It reflected the green and clean aspects of the municipality as a whole, with daily cover and seeding. Odors were obviously absent and, though a small operation, it appeared to be environmentally sound. The landfill is without a containment system for gasses and leachate, but grading plans ensured natural run-off into a drainage system. We were informed that hazardous and toxic wastes were disposed at different location(s) but, unfortunately, we were unable to visit the site(s) due to the tight schedule. We recommend that succeeding volunteer experts visit and assess the operation of these site(s).

We were further informed that nationally, approximately 3,000 villages do their own dumping locally and that those activities do not parallel the Sukohol Landfill operations. This disclosure can only indicate that the local villages have garbage "dumps" and not sanitary landfills. Normally, this would be a major area of concern. However, given the nature and condition of the countryside economy, we believe that this situation is not that damaging nor dangerous. This belief assumes that the dumping excludes industrial and commercial wastes. Nonetheless, we recommend an immediate survey and fact-finding mission determine precisely who is dumping what and where.

During our discussions, we were told that the operating steel mills are a major contributor to pollution. One option we recommend is that the closed mills, or any similar type facility, be closely examined for rehabilitation and conversion

to waste-to-energy facilities. Adding recycling and composting operations to the front end of the facility would provide a completed waste disposal system with many benefits. Our hosts were very receptive to the recommendation.

During the closing meeting with Mayor Yanchonlev and Deputy Mayor Kuzmanov, as well as other officials, we presented our comments, findings, and recommendations. They were receptive to our overall presentation and very appreciative for our visit. They requested additional visits by us and other volunteer experts. They stressed their need for assistance, and in particular, asked for computers, with an assortment of software, to facilitate their plans.

Lastly, they sought an agreement of cooperation with New York City. This would encompass a flow of ideas, professional and technical assistance, continued dialogue, and to be a source of reference as they proceed towards their goal of environmental acceptance. We recommend that the WEC pursue this agreement request with the proper NYC officials and seek to have it in place as soon as possible. Further, our belief is that NYC, along with the federal government et. al., might be able to provide used computers and other equipment which are currently available as surplus materials.

Our Bulgarian hosts were most warm and most gracious. We believe that the recommendations contained herein will be implemented within a reasonable time.



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