

Scrap Metal Management in American Samoa

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Summary

This case study describes a scrap metal removal project implemented by the American Samoa Power Authority (ASPA). ASPA has the mandate for providing national solid waste management services (collection, recycling, treatment, disposal) in American Samoa. The project was implemented through an international tender, and resulted in the removal of well over 6,000 tons of scrap metal from American Samoa. This case study is useful for any waste management agency or government department seeking solutions to managing large quantities of legacy scrap metal and derelict equipment.

Introduction

For several decades, the 2.5 hectare Tafuna Scrap Metal Yard (TSMY) on the island of Tutuila, American Samoa, served as a central depository for scrap metal waste from the Territory's agencies, local businesses, and the general public. Other waste commodities, such as tires, machinery, batteries, and ammonia cylinders had also accumulated, posing a significant threat to human health and the environment. The TSMY property is located within the boundary of the Pago Pago International Airport and has been leased to the Department of Port Administration from the American Samoan Government [USEPA, 2012]. Plans for the expansion of the airport facilities, together with public health and environmental fears, the lack of on-island recycling companies, and the rapid growth in scrap metal quantities, prompted ASPA to launch an international tender for the removal of the scrap metal and other waste commodities at the TSMY. At the time of the launch, the site was estimated to contain 47,000 cubic metres of scrap metal with a monthly influx of 280 cubic metres (ASPA, 2007a).



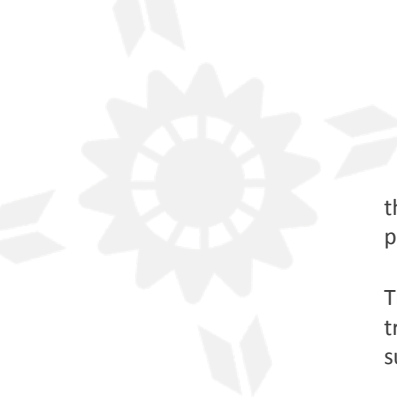
Aerial view of scrap metal yard
(Aerial view, n.d)

The Approach Taken

ASPA determined that outsourcing the scrap metal removal was more cost effective than doing the work in-house, therefore an international Request for Proposals was launched in June 2007. The specifications included the requirement for off-island bidders to partner with local contractors. ASPA assisted with this process by providing a list of contractors and contact details, and facilitating meetings between off-island bidders and on-island contractors.

It should be noted that ASPA was approached by 15 companies before it decided to launch a request for proposals. By using a competitive tender process, ASPA was assured of securing the best deal. Furthermore, by outsourcing the operation, ASPA did not have the administrative burden of hiring additional staff, nor did they have the dilemma of having to terminate those jobs at the end of the project, which is a sensitive issue in small islands.

The successful bidder (Good Year Corporation (GYC) based in Hong Kong) was selected in September 2007, based on a combination of factors including the proposed methodology, the technical experience of the bidder, the proposed completion timeframe, local staff involvement, and a one-time upfront payment from



the bidder to ASPA, which was based on the bidder's assessment of the scrap metal's value. In this case, GYC proposed to pay ASPA US\$300,000 upfront.

The contract stipulated that contingencies be made for hazardous materials (e.g., batteries, PCB transformers, compressed gas cylinders) (ORRT, 2011), and that a performance bond of US\$750,000 be submitted to guarantee completion of the work.

Results and Lessons Learnt

In excess of 6,000 tons of scrap metal were exported to China for recycling, and the associated environmental and public health threats from the large scrap metal stockpile were eliminated. Four (4) local contractors were involved in the project and increased their capacity in the area of scrap metal management. This in-country capacity will be useful for on-going operations.

In April 2012, ASPA filed a lawsuit against Good Year Corporation alleging that the company buried extensive amounts of scrap metal, gas cylinders and scrap wire at the Tafuna Scrap Metal Yard prior to completion of the 2-year contract term (Sagapolutele, 2012). Rigorous monitoring is therefore essential to ensure compliance with the terms of the contract. If possible a staff member should be assigned to monitor the operation on a full-time basis. Furthermore, the working days and should be specified in the contract times (e.g., Mondays - Saturdays, 8am-4pm). Any night-time work should be minimized, to make monitoring easier.

During the initial stages of operation, a cylinder (most likely containing anhydrous ammonia) was crushed by heavy equipment. About 12 site workers were exposed to the ammonia gas and had to be sent to the hospital for observation (ORRT, 2011). To minimize these risks, contractors must be required to provide proof of personnel safety certifications, personal protective equipment, a Health and Safety Plan, and a procedure for identifying and managing unknown wastes such as gas cylinders with illegible labels. In this case study, the contents of some cylinders were identified by matching legible serial numbers against the gas supply company's sale records. A multi-stakeholder team (waste authority, environmental regulatory agency, permit/licensing authority, public safety department, hazardous materials authority, etc) should also be established to provide advice and guidance in such situations.

Any equipment imported for scrap metal processing should meet all applicable regulations and standards for the country (e.g. age limits, emission standards, etc). The contractor should provide (as part of the required contract documents) a plan for disposal/removal/management of imported equipment at the end of the contract period.

Sustainability

Freed of the burden of managing the tremendous legacy of scrap metal, ASPA commenced an on-going recycling operation in March 2011 to prevent future stockpiles (as of February 2013, this operation was on hold, while a more convenient operational base is being sought). Scrap metal collected under this new operation was shipped to CMA Recycling New Zealand (www.cmarecycling.co.nz). As shipping costs can be prohibitively high, the most cost-effective shipping company was selected through a request for proposals, and a long-term contract entered into.

References

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