

6.0 WASTE MANAGEMENT

6.1 Introduction

US Capital is cognizant that the company will produce waste as a result of its proposed activities. In order to mitigate the potential impacts associated with the activities, the waste generated on site must be classified into categories utilizing a differentiating system. This system will incorporate a disposal option that is best suited for the operation stage along with appropriate waste management procedures. These will cover both solid and liquid waste produced on site along with other miscellaneous waste such as hydrocarbon spills.

6.2 Waste Profile

US Capital Energy will deal with waste in accordance with the local regulations. The company will be producing waste as a result of its proposed seismic activities which will basically include field waste and some construction waste coming from the installation and operation of the temporary housing accommodations.

In the management of the waste, it is important to utilize the proper mechanism to classify the waste produced. US Capital Energy will create a waste differential system, assigning each class of waste to a different treatment category thereby facilitating the disposal process. It is anticipated that the categorization will be as follows:

- Field waste (Waste Category I)
- Domestic and Liquid Waste (Waste Category II)
- Other waste

The above waste categories are by no means limited and therefore can be modified to encompass other wastes being produced by the operational activities. These wastes will be categorized according to the above nomenclature and will consist of further sub categories. This and other disposal alternatives will be discussed further in this chapter.

6.3 Waste Category

6.3.1 Waste Category I - Field Waste

It is difficult to predict how much field waste will be produced as a result of the seismic phase. Suffice to say that during this stage little field waste will be produced as a result of the seismic activity. It is anticipated that some field waste will also come from the installation of a small mobile campsite or worker's quarters.

A typical by-product of seismic work is "Pin Flags", little metal spikes with a small brightly colored plastic flag. The company in question does not use these flags and as a result, there will be no discarded pin flags remaining after the seismic activities have ended.

6.3.2 Waste Category II – Domestic and Liquid Waste

US Capital Energy will be producing some domestic and liquid waste during the seismic activity which will mainly be coming from the camp site and offices. According to the Belize Solid Waste Management Project (Stantec, 2000) and the Statistical Institute of Belize, 2000, it is estimated that domestic waste is comprised of organic (60%), while the remaining consists of metals, plastics, glass, other waste (5%) and paper 20%.

(i) Domestic Waste

The waste produced in this phase will be largely domestic and associated with the main office and temporary camps. It is uncertain how many workers will be contracted for this phase; nevertheless, it is important to 'run the numbers' using the national district average for environmental purposes. Disposal of these wastes will be either through the respective village solid waste dump site or collected and sent to a municipal dumpsite.

(ii) Liquid Waste

Little domestic waste will be produced in this phase. Domestic liquid waste in this section is simply characterized as typical wastewater produced by a household and which includes personal hygiene and other uses. It is uncertain to calculate the daily wastewater volume, but

needless to say US Capital Energy will utilize dug pit latrines for this purpose because the production is very localized and short in duration.

Indirect liquid waste associated with the phase could include storm water runoffs and the miscellaneous water use such as washing and rinsing of equipment.

6.3.3 Other Waste

The vehicles and equipments used will produce a small amount of waste oil. Of all the waste produced, this will be the most “hazardous”. This waste engine oil will be stored on site until a disposal procedure has been approved by DoE. In cases of spills, US Capital Energy will implement a set of mitigative measures to deal with this issue if it occurs.

In this category, decommissioning waste will be applied to only the camp site removal since no infrastructure or its ancillaries will be constructed.

6.4 Disposal Options

US Capital Energy will explore and evaluate disposal alternatives and options in order to address this important issue. Being an environmentally oriented company, it will seek to address each issue according to the best available technology in Belize such as those previously mentioned in the different categories. Since the quantities, types and impacts of the wastes produced are very small, there are not better alternatives for disposal than the ones proposed.

6.5 Waste Management Procedures

The proponent will develop a waste management plan that will entail solid waste, liquid waste and hazardous waste for the entire operation once exploration and production has started. These management tools will be a part of the company’s environmental management system. The following are future points that must be incorporated and made part of the waste management program.

6.5.1 Collection Overview

The collection of waste produced on site will be divided and varied at times to best suit the waste generation process. Nevertheless, collection of these wastes will be carried out. In the case of solid waste, all the waste will be transported to an appropriate dumpsite for disposal. Carting out of the solid waste will be done whenever possible or when a complete load has been accumulated.

Liquid waste will be dealt with in the same way and will be disposed of under more strict conditions. An oil water separator as well as a water settlement pond may be used to treat any water that may be contaminated with oil residue, the water quality of which will be monitored to meet the required standards.

6.5.2 Educational Programs

An educational program will also be included in the waste management tool. This program will inform and educate the staff and management as to the collection, handling and disposal of the waste generated as a result of operation. This educational program will be expanded to encompass new employees as well as visitors and contractors to the site. It is important to reach out and communicate with everyone associated with the company to ensure that they understand the importance of the waste management program.

6.5.3 Reporting Requirements and Compliance Monitoring

All relevant information will be made available to the pertinent authorities such as the Department of the Environment (DoE), Public Health Department (PHD), Statistical Institute of Belize (CSO) and the Geology and Petroleum Department (GPD) to name a few. US Capital Energy Limited will ensure that all contractual obligations, if any, are fulfilled at all times, and any guidelines and the monitoring of these guidelines and practices will be done internally, wherever possible. Any gross violations requiring notification to the enforcement authorities will be done as soon as possible.

6.6 Impacts and Mitigation of Waste Management

The anticipated impacts along with the proposed mitigation measures are summarized in the following sections.

Table 6.1: Anticipated Impacts and Recommended Mitigation Measures

Category of Project	Project Activity	Direct and Indirect Impacts Associated with the Project Activity	Recommended Mitigation Measures	Residual Impacts Mag/Dir/Dur/Scope
Waste Management	Domestic Waste	Waste can harbor feral animals and diseases	Temporary storage of waste will be allowed	Low/dec/short/local
		Impact on new site could contaminate water and soil	Proper containment of the waste on site. Bins will be used to store the waste	Low/dec/short/local
			Frequent disposal of waste to approved disposal site	Low/dec/short/local
	Liquid Waste	Localized contamination of water and soil	Volumes of waste will be minimal to produce any significant impact.	Low/dec/short/local
		Foul smell can have an indirect impact to human health	Proper use of the pit latrine.	Low/dec/short/local
			Use of soil to minimize odors	Low/dec/short/local
	Other	Possible soil and water contamination	Appropriate containment, collection and disposal of Hazmat waste	High/Inc/medium/local