TETRA TECH

MEMO

PRIVILEGED AND CONFIDENTIAL

To:	William Tiggert Town of Ingersoll	**Date:**	May 25, 2017
c:	Jack Coop and Joel Farber Fogler, Rubinoff LLP	**Memo No.:**	
From:	Peter Klaassen, MBA, P.Eng.	**File:**	
Subject:	Financial Review of Walker Environmental Group Southwestern Landfill Environmental Assessment Submissions		

1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the Town of Ingersoll (the Town) to provide technical peer review services of the submissions made by Walker Environmental Group (WEG) for its Environmental Assessment Act approval of its Southwestern Landfill development.

The scope of work as outlined in our proposal for this work is the technical review of submissions made by WEG for its proposed development of a landfill site at the Carmeuse Lime site in Zorra Township, directly adjacent to the eastern boundary of the Town.

This review is limited to findings from reviewing the following document relating to the Ontario Environmental Assessment Act approval process for the WEG Southwestern landfill proposal:

- Economic/Financial Assessment Workplan, Kier Corp, January 5, 2017

2.0 BACKGROUND

The primary purpose of this review is to provide comments on the Economic and Financial work plan as it relates to the Town, its residents and its respective stakeholders. The work plan and subsequent study should include four areas of impacts: the pre-construction phase, the time of construction, the operational phase, and the post operational phase. Each of these phases will have inherent unique aspects that may impact the Town.

3.0 GENERAL OBSERVATIONS AND COMMENTS

Comments regarding the overall approach and information that has not been included in the report are provided in the following sections.

3.1 Study Area

There are several references within the work plan to specific areas of impact. While physical impacts such as air and noise decrease as distance from the source increases, financial and economic impact may not be solely predicated on distance from the source.

The work plan focuses on three impact areas: On Site and in the Site Vicinity, Along the Haul Routes, and Wider Area. The Town has expressed concern with the proximity of the landfill to town. As such the entire town should be included in the area denoted as Site Vicinity since residents may travel and use services throughout the town including close proximity to the proposed site.

Tetra Tech Canada Inc.
6835A Century Avenue
Mississauga, ON L5N 7K2
Tel 905.369.3000 Fax 905.369.3200

Similarly, WEG has designated a band of 500 m around the Haul Routes which excludes the potential increased traffic on the emergency haul routes. The haul routes would be used in times of weather issues or accidents along Hwy 401 and should be included in the same category.

3.2 Future Development

Future development plans may be impacted by the proximity of either a future or ongoing landfill site. Resultantly, the location of current development may not be reflective of how the Town expands.

The work plan should include a comprehensive study of how anticipated and constructed waste facilities, including landfills and haulage routes (including emergency routes) have impacted development around the respective locations.

3.3 Regulatory Impacts

There are two recently enacted regulatory initiatives Bill 151 (Waste Free Ontario Act, 2016) and the Cap and Trade Program Regulation and Quantification, Reporting and Verification of Greenhouse Gas Emissions Regulation that may have significant impact on the viability of the proposed WEG landfill. Accompanying Bill 151 the government of Ontario has also outlined its strategy with initiatives with a goal to reduce waste generation, increase diversion (from landfills) and reduce the amount of greenhouse gas generation from waste.

The Financial/Economic work plan should include a comprehensive review of the impact of these two regulations, as there may be both regulatory and strategic initiatives to discourage the use of landfills in Ontario.

4.0 PROPERTY VALUE

Property value may change in different periods of time as the impact of development moves forward. As the Municipal Property Assessment Corporation does evaluations every four years, the actual information related to properties may be out of date in relation to the perception of value in the four different stages of the potential WEG project.

In lieu of this, the Financial/Economic Work Plan should incorporate both historic impacts of similar projects and consult with independent real estate agents who understand and can assess the impact within the Town.

5.0 COST TO CUSTOMER

There are several elements that impact the value and cost of disposal within the region. These elements include the cost of diversion, the long term environmental cost of landfilling, the cost of disposal to competitive landfill sites (including the US), the cost of transportation, and the potential loss of revenue to surrounding municipal landfill sites. All these aspects should be considered in the overall value to both regional and surrounding customers to the site.

6.0 COMPENSATION

One-time and ongoing financial compensation has been given to neighbours of other waste processing and disposal sites. The Economic/Financial Assessment should include formulas and examples that have been used in past in both Ontario and outside Ontario. All impacted residents of Ingersoll must be satisfied with an agreed upon formula for compensation prior to an approval under the Environmental Assessment.

Review of "Economic/Financial Assessment Work Plan"

Section 3 Environmental Assessment Criteria – (Page 6)

- Two periods are contemplated (Operational Period, Post-Closure Period) and should be expanded to four and should now include pre-construction phase, and construction phase.

Section 4 Study Areas (Pages 7 and 8)

- On Site Vicinity should now include the Town of Ingersoll.
- Hauls Routes should include 500 m around Emergency Routes.

Section 6.2.2 – (Page 15)

- Should include potential that the Town will expand into surrounding townships and the work plan should examine the possibility that eastward expansion will be discouraged.

Section 7.1 Ontario Ministry of Environment and Climate Change – (Page 18)

- Background data should include Bill 151, supportive MOECC strategy and legislation and potential ban to specific materials to disposal.

Section 7.2 Field Data Collection – (Page 19)

- Key Stakeholder Interviews should include residents in Site Vicinity and along Haul Routes.

Section 8 Data Analysis – Property Value Impact Assessment – (Page 20 – 22)

- Paragraph 1 – property value should be expanded to include all of the Town of Ingersoll.
- Paragraph 2 – revised assessment should include annual updates to ensure most recent values are used.
- Paragraph 3 – the relationship between the term “zones” and Site Vicinity should be clarified.

List of Recommendations to mitigate and or otherwise manage potential … add bullet:

- Review of Compensation mechanisms at other waste landfill/processing sites.

7.0 CONCLUSION

Please note that the comments denoted in this review reflect the most recent information provided to date and may be modified to reflect changes made to the Workplan.

Respectfully submitted,
Tetra Tech Canada Inc.

Peter Klaassen, P.Eng.
Vice President – Ontario Division
Solid Waste Management Practice
Direct Line: 226.203.5209
Peter.Klaassen@tetratech.com

Enclosure: Curriculum Vitae – Peter Klaassen

TETRA TECH

Peter Klaassen, B.Eng., MBA, P.Eng.
Vice President, Ontario – Waste Management

EXPERIENCE SUMMARY

Mr. Klaassen is a Vice President for the Waste Management Group in Ontario. He is a senior environmental professional, with more than 26 years of solid waste experience undertaking projects in Canada, US, Caribbean, North Africa, Middle East and Central Asia.

Mr. Klaassen has a variety of experience in many aspects of waste management, including system design, waste management planning, environmental planning, environmental assessment, waste management engineering, financial and proforma analysis (capital, operational and cash flow projections), assembly of terms of reference, tenders, contracts and negotiations for both private and government clients.

RELEVANT EXPERIENCE

WASTE MANAGEMENT

Due Diligence of Target Acquisitions and Start-ups ~ Client: Various

- In the purchase of businesses throughout both Canada and the US, Mr. Klaassen has provided both environmental and fiscal advice to clients trying to determine the expansion and risks to their respective businesses. Typically, these have been Phase 1 for the environmental assessment, and detailed cash flow/capital investment analysis through proformas. Research for some clients has included an overview of the business opportunities and options for any geographic area. (One study included the potential for waste management opportunities throughout Canada for a French owned waste management company)

EPR Strategies ~ Client: various

- Mr. Klaassen is currently engaged on several projects related to the implementation of EPR/IPR waste regulations. One project included the design and subsequent waste ECA application for a tire recycler located in Ontario. Processing ¼ of the waste tires generated in Ontario, the project included numerous stakeholder meetings and discussions with the current steward, OTS. The ECA was granted and the client is currently getting financing for the operation. The second project was a comprehensive study of processing and recycling efficiency rates for a battery steward organization. The result of the work was presented over a series of committee meetings hosted by Waste Diversion Ontario. The work then led to participation of a RFP team to attain bids for collection, sorting and processing of all waste battery types throughout North America. This work is ongoing. Finally, Mr. Klaassen most recently led an RWDI team for a proposal to undertake a financial and operational audit of Stewardship Ontario`s Blue Box and MHSW programs. The client, WDO selected the RWDI team and work is ongoing. The work is expected to provide Best Practice strategies for the regulations derived from MOECC`s Bill 151 in Ontario.

Biomedical Waste Strategy ~ Client: Manitoba Health

- Mr. Klaassen led the project to close 16 hospital incinerators located throughout Manitoba, and operate one facility to be located in Brandon. The work included a comprehensive study of waste generation rates, potential locations of the new treatment facility, selection of technologies, and a financial review of the respective options. Manitoba Health chose to have Mr. Klaassen lead an RWDI team to continue work with a detailed Environmental Assessment tied to a license

EDUCATION

1986 - B. Eng., (Engineering Physics), McMaster University, Hamilton, ON, Canada

1994 - M.B.A., (Finance & International. Business), McMaster University, Hamilton, ON, Canada

AREA OF EXPERTISE

Technical Oversight on Waste issues

Client Liaison

Project Leadership/Management

REGISTRATIONS/ AFFILIATIONS

APEO (association of Professional Engineers of Ontario), designated professional engineer

Member of AWMA (Air Waste Management Association)

Member of OWMA (Ontario Waste Management Association)

Member of ONEIA (Ontario Environment Industry Association)

TRAINING/CERTIFICATIONS

First Aid

CPR

OFFICE

Ontario

YEARS OF EXPERIENCE

26+

YEARS WITHIN FIRM

<1

CONTACT

Peter.Klaassen@tetratech.com

application. This phase included a review of transportation requirement to bring biomedical waste from 66 remote clinics and hospitals to Brandon. The work has now progressed to detailed design and Terms of Reference for the building construction and equipment purchase. The facility is expected to be operational in 2017.

Collection Strategies and Contracts ~ Client: City of Hamilton

- Mr. Klaassen provided several facets of consultation for the City of Hamilton over a period of 6 years in their collection of garbage, recyclable waste and green waste. The work included the splitting of the city into 2 similar areas with 3 distinct waste generation zones, for the purpose of determining a comparison between city (municipal) workers, and private contract workers. The City of Hamilton has a population of 500,000 people and includes large industrial entities within the City. Further work for the City involved a review of collection routes, the use of multi-chamber collection vehicles (co-collection), organic and MRF facilities, the writing of Terms of Reference for various collection, construction and operating contracts, the issuance of RFPs, their respective evaluation matrix, selection of the winning contractors and negotiations with the respective contractors. The work included presentations to stakeholders, City Council, and required in-depth financial analysis to allow the City to understand the financial impact of various options.

MRF (Material Recycling Facility) Options for the City of Hamilton ~ Client: City of Hamilton

- Mr. Klaassen was requested to review the different options for processing of recyclable materials collected in the blue box program for the city of Hamilton. The analysis included the issuance of Terms of Reference and subsequent RFP for a 60,000 tpy facility, its respective evaluation and the selection of a preferred candidate. Against this, the City also requested an analysis of upgrading the then existing MRF to modern standards with the existing contractor. Through extensive technical and financial analysis, it was determined that the most viable option was the retention of the existing facility.

Organic (Compost) Facility Study and Selection ~ Client: Various

- Mr. Klaassen has provided consultation for several municipal (City of Hamilton, City of Toronto, several private companies in Canada, and the GCC, on the feasibility, assessment and design of compost facilities. For the City of Hamilton, Mr. Klaassen led a team that assembled the TOR, subsequent RFP, evaluation, selection of a winning candidate and subsequent negotiations with the successful proponent. The final facility was one of the most successful compost facilities built in Canada. Mr. Klaassen assisted the City of Toronto with the assessment of private compost proposals for the disposition of compost waste in the Region of Durham. A range of aerobic and anaerobic (technology) options were presented by private companies, these being evaluation for technical and financial merit, and a recommendation made to the municipal authorities. Mr. Klaassen has reviewed several private operation combined sorting and compost facilities throughout the Middle East, in most cases using European technologies. The analysis involved rigorous proforma review of the respective options.

EFW (Incineration) Study and Recommendations ~ Client: Various

- Mr. Klaassen has provided consultation and reviews of several municipal and hazardous waste operations throughout Canada. These studies have ranged from preliminary studies of potential scenarios, to modifications of existing facilities to re-engineering of existing facilities and providing operating principles to enhance the existing facilities (including bringing incinerators to within the regulatory requirements set out in their respective permits). The work has involved engineering assessment, engineering design and detailed financial analysis of the respective options. He is currently providing both financial and engineering consulting services to Veresen for the WTE and District Energy facility located in PEI.

Hazardous Waste Studies throughout Canada (and the GCC) ~ Client: Various

- Mr. Klaassen has provided studies for both municipal and private clients throughout Canada, on the flow, handling and disposition of hazardous waste. In one study, the client requested an understanding of then hazardous waste flow between Canada and the US over a 10 year period. The primary determinant from this study was that the exchange rate between the currencies, and the respective cost to dispose waste in either Canada or the US was the primary driver for the direction and quantity of waste going across the borders. Mr. Klaassen also undertook an extensive study of used oil generated and processed throughout the province of Ontario.

Waste Management Master Planning ~ Client: Various

- Project managed the development of Waste Management Master Plans for various municipalities, including Istanbul Turkey, Baku Azerbaijan, Ras Laffan City (Qatar). The studies included waste flow and characterization, siting, collection study and recommendations, waste processing study and recommendations. Some studies included social, cultural and religious parameters. Average value of each respective plan was approximately $250,000.

Mediouna Landfill Site Remediation ~ Client: JECO / Casablanca Municipality

- The project involved the study of the existing Casablanca City Municipal landfill located south of the city in the community of Mediouna. This is an open 60 ha site located on an old quarry, primary filled with garbage in an uncontrolled manner. Mr. Klaassen was the project manager leading a team of hydrogeologists and landfill designers through a landfill characterization, waste characterization, site assessment, hydrogeology assessment, closing plan and siting for a new landfill. The study also included recommendations on cultural and health impacts (the area was saturated with leachate).

Abu Dhabi Municipal Waste Management System ~ Client: Kharafi National / Abu Dhabi Municipality

- Mr. Klaassen was the project director for various components of the replacement of the existing waste processing system for all waste (except Al Ain) regions of the Emirate of Abu Dhabi. The work included a base line environmental assessment of all facilities including the new sorting plant, two new organic landfills, one C&D landfill, three composting facilities and 5 transfer stations. The team was also responsible for the design of the landfills, and oversight on the technologies used for the sorting plant, the compost facilities and the transfer stations. This project represented leading edge North American/European technologies in first of the kind applications in the GCC area.

Ras Laffan City Waste Management Master Plan ~ Client: Qatar Petroleum / Ras Laffan City HSE department)

- Mr. Klaassen led a team of waste management experts in the development of a waste management plan for the industrial complex of Ras Laffan City. This 106 sq km site houses some of the largest LNG and GTL facilities in the world, with such companies as Shell, ExxonMobil, Total and Dolphin. The City currently has a temporary waste management system that has addressed the past needs, but the plan devised by the team utilizes state of the art solutions combining both technology and management systems. The study included preliminary financial analysis for the purpose of selecting the best value options going forward.

Construction and Demolition Waste Management Plans ~ Client: Various

- Several clients in the UAE have required business and technical plans for the treatment of Construction and Construction and Demolition waste. In all cases the analysis consisted of a review of current generation rates, their respective composition, treatment alternatives and financial scenarios for the respective options. In all cases, the primary goal was to reduce amount of waste transported to the landfill, and to reuse as much of this material in new construction as possible.

Other Practice Areas

Qatar Greenhouse Gas Study ~ Client: Qatar Petroleum

- Mr. Klaassen led on one of the first comprehensive greenhouse has studies in the Middle East, providing information on the current GHG impacts on the State of Qatar, information on the GHG footprint of the Qatar Petroleum facility, and potential remedial measures for the facility to reduce its carbon footprint.

District Energy ~ Client: Envida (Guelph Hydro)

- Mr. Klaassen led an RWDI and subcontract team in a project in downtown Guelph for the installation of heating and cooling pipes. The work included a review of heating and cooling loads for various end customers, pipe layout and included design of ETS units in the respective end customer sites.