

## MATEO OCEJO; P.ENG. PROJECT DIRECTOR

Mr. Ocejo has over 14 years of project management experience in heavy industrial and environmental projects. He has managed engineering efforts in excess of 20 personnel and on-site construction efforts up to \$10 million (USD) in contract value and 100,000 direct labor man-hours. Over the past seven years Mr. Ocejo has focused his efforts on developments in the solid waste industry; specifically as they relate to composting. He has on-site experience with all principal composting technologies on the market and has consulted with multiple clients on potential process and operational improvements. A focus has been placed on the Gore Cover Technology which is new to North America as Mr. Ocejo has been recognized as an expert in the design and construction of this process technology.

### Relevant Project Experience

#### ENVIRONMENTAL

##### **Salish Soils – Fish waste composting facility, Sechelt, BC**

Developed in partnership with the Sechelt Nation, NZW trained staff; developed feedstock mixes and provided project engineering and support for project start-up and expansion. A design which places the gore cover system inside of a building allows the facility to be located close to town without negative environmental impacts. This project is processing high concentration fish waste mixtures so as to develop a boutique high grade growing amendment for bagged distribution [\$2 million, 09/2010 - Present]

##### **Hawaiian Earth Recycling – Food Waste and Biosolid Composting Facility, Honolulu, Hawaii**

Net Zero Waste worked as the *design lead* for an engineering consortium led by AECOM and supported by design firms local to the island. 40,000 TPA of Biosolids and 80,000 TPA of food waste processing capacity will meet the needs of the island for the next two decades. Downstream farming models exist for this unique market with “up scaling” of compost value to reach boutique markets from sod production to food growth on this 100+ Acre site. [\$20 million, 09/2010 - Present]

##### **Los Angeles County Sanitation Districts, Westlake Farms Bio-solids Composting Facility, Kings County, California**

Consulting services consisting of front end design and planning was completed for the District's on the largest composting facility in the world with the potential to handle up to 1,000,000 tpa of waste. Involvement included a review of the partially completed internal designs so as to ensure conformance with the Gore Cover Process Model as well as cost optimization for facility construction based on recently completed Gore Projects. Scope included: Site Review and Discussion, Staffing Plan Review, Facility Layout Design Options, Operation and Maintenance Considerations, Equipment Recommendations / Pricing and a Construction Information Package (including detailed installation photos). NZW involvement has saved millions of project costs through design optimization. [\$80 million, 02/2009 - Present]

#### **Education**

BSc, Civil Engineering  
(Environmental Option),  
Queen's University, 1997

#### **Professional Registrations**

Certified Gore Cover Systems  
Operator

Certified Compost Facility  
Operator, WORC

LEED (Leadership in Energy  
and Environmental Design)  
Accredited Professional, 2004

SWANA Certified Professional  
– Composting Systems  
Technical Associate,  
01/26/2005 until 01/26/2008

#### **Professional Memberships**

Recycling Council of British  
Columbia

Composting Council of  
Canada

Solid Waste Association of  
North America (SWANA)

US Composting Council

Association of Professional  
Engineers, Geologists and  
Geophysicists of Alberta

Association of Professional  
Engineers and Geoscientists  
of BC

Association of Professional  
Engineers of Ontario

#### **Employment History**

12/2006 – Present, Net Zero  
Waste Inc., Director

01/2004 – 03/2007, Earth  
Tech, Project Management /  
National Composting Lead

2002 - 2004, Tracer Tyco  
Thermal Controls, Project  
Manager / Business  
Development Manager

1997 - 2001, Lockerbie & Hole  
Contracting Ltd., Project  
Manager, Scheduler, Cost  
Analyst

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**Peninsula Composting – Full Scale Gore Cover Installation Training and Commissioning, *Wilmington, Delaware***

Expected to be the first of many Gore Cover Systems located on the US East Coast, Peninsula Composting is already planning a biogas expansion in 2011. Scope included installation of the aeration system, programming of the control units and commissioning of the communication systems. Quality control on the existing construction was also provided resulting in design improvements to the 160,000 tpa operation. [\$30 million, 06/2009 - Present]

**Chemainus - Biosolids Gore Cover Project, *Island Hwy, British Columbia***

Acted as the plant operator and technology consultant for a 6 month demonstration of the Gore Cover System which included a series of test batches. Following the trial, Coast Environmental and NZW constructed a small indoor 8,000 tpa facility with small covers and a single aeration trench. A small scale winder was developed to be used in combination with the loader to place and remove the covers. The system successfully provides Class A compost without odour issues despite being surrounded by industrial clients & a 200m buffer until the Island Hwy.

**Metro Vancouver - Gore Cover Demonstration Project, *Vancouver Landfill / Langley WWTP, British Columbia***

Acted as the plant operator and technology consultant for a 6 month demonstration of the Gore Cover System which included a full odour study of a 45% food waste mixture. The project verified that the system was able to reduce VOC's and Ammonia concentrations by greater than 95% while significantly reducing both odour intensity and the hedonic rating (degree of pleasantness) all while producing "Class A" compost [11/2007 – 5/2008]

**Resort Municipality of Whistler Compost Facility Project, *Whistler, British Columbia***

The development of a technical specification for the relocation, refurbishment and design improvement of the Wright Composting System previously operated by Carney's Waste Management in Squamish has been completed. This facility was closed in Squamish due to odors produced by immature compost leaving the stainless steel vessels. Once validation of the technology and operational costs of the system have been proven, construction will commence. [\$10 million, 04/2007 – 12/2007]

**Norterra Organics Gore Cover Composting Facility, *Kingston, Ontario***

Technical expert for the design and construction of a 40,000 tpa Gore Cover Facility. This site incorporates a unique pre-cast (portable) design which will allow the facility to relocate should odour concerns with local residents present an issue in the future. [\$8 million, 09/2007]

**City of Oceanside, "El Corazon" Centralized Compost Facility Design / Build Project, *Oceanside, California***

An engineering site investigation and an evaluation of limiting project constraints was completed so as to obtain an accurate construction cost estimate for which to take the project to city council. Site layout and detailed design for a Gore™ Cover facility was completed as part of the first phase of this work. [\$100,000 01/2007 – 06/2007]

**Cape Breton Regional Municipality, Development of an Organic Waste Management Facility, *Sydney, Nova Scotia***

Dynamic compaction site densification was completed on this decommissioned landfill site prior to the construction of a 10,000 tones/year Christiaens Controls Compost Facility. Acted as the Engineering Project Manager for this facility which is designed to receive mixed organic waste including SSO. Seismic and thermal load case considerations were the focus of this design. [\$12 million, 02/2006 - 10/2006]

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**Correctional Services Canada, Rockwood Institution Leachate Remediation and Containment, Winnipeg, Manitoba**

Project manager with the aim to optimize facility layout and processing alternatives while minimizing capital costs. Site investigation consisting of a borehole drilling program an electromagnetic survey and groundwater sampling was required to determine the extent of on-site contamination. A remediation plan and assessment of contaminant presence and migration from the compost area was provided. Detailed design and cost estimates for infrastructure upgrades were provided resulting in improved throughput and process control [03/2006]

**Integrated Municipal Services, Niagara, Ontario**

Engineering project manager for the development and implementation of a new Gore Cover facility. Key considerations were made for year round (winter) operations along with new design improvements which serve to reduce the cost of construction. Phase I of this facility will handle 40,000 tpa however stormwater and leachate design takes into expansion provisions for the facility to grow to at least 80,000 tpa. [\$10 million, 05/2005 – 11/2008]

**City of Spruce Grove, Solid Waste Program Evaluation and Preliminary Facility Design, Spruce Grove, Alberta**

Reviewed existing operations at the city, and developed a cost model which incorporated all aspects of the cities solid waste management program. This analysis provided the city with the data necessary to evaluate the cost impact of the design, construction and operation of their own composting facility. [01/2006 – 04/2006]

**Region of Peel, Engineering Services for the development of an Organic Waste Management Facility, Peel, Ontario**

This project involved working closely with our construction project partners in a design build effort focused on controlling capital costs while maintaining the performance specifications. Implemented a Christiaens Controls bunker style process technology as a centralized composting facility capable of processing (primary phase only) up to 60,000 tones/year of organics. [\$8 million, 05/2005 – 03/2006]

**City of Abbotsford, Consultant Services for the development of an Organic Waste Management Facility, Abbotsford, British Columbia**

Engineering Project Manager and Construction Manager for the development and implementation of an Organic Waste Management Facility. Phases of work include pre-design analysis, public consultation, design, tendering, construction management and commissioning services. [\$5 million, 05/2005 – 05/2007]

**City of Vancouver, Consultant Services for Infrastructure Review – Vancouver South Transfer Station, Vancouver, British Columbia**

Engineering Project Manager for a solid waste management, transfer station design and operation and traffic management and modeling. Due to heavy increases in traffic at the site this modeling and site review were required to determine whether upgrades to the facility or new development would provide the best option moving forward [Total Project Value \$12 million, 05/2005 – 11/2007]

**Saipan Waste Management Pacific Drilling J.V., Marpi Landfill Gore Cover MSW Densification Project, Saipan, Northern Mariana Islands**

Engineering Project Manager and Site Engineer for preliminary design, layout and planning of a 40,000 ton/year Municipal Solid Waste densification composting facility. Unique site challenges such as the remote location of the island, extreme weather events (rainfall & wind), a fractured limestone sub grade and a cliff constraining one side of the site resulted in the development of unique design features. [\$8 million USD, 04/2005 – 2006 Project cancelled prior to construction]

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**Cedar Grove Principal Operations Composting Facility Expansion, Maple Valley, Washington**

Engineering Project Manager and Site Engineer for the design, procurement and construction of an 80,000 ton/year Gore cover expansion to an existing 120,000 ton/year composting facility. Managed all aspects of design including site surveying, grading, stormwater, utilities, civil, site layout, structural, electrical, and leachate design. This expansion included the removal / decommissioning of the existing facility and design optimization of the Gore cover technology. [\$10 million USD, 10/2004]

**Cedar Grove Composting Ltd., Gore Cover Composting Facility Expansion Phase II, Everett, Washington**

Engineering Project Manager and Site Engineer for the design, procurement and construction of an 80,000 ton/year expansion to an existing composting facility. Once completed the new facility was capable of processing more than 200,000 tones/year making it the largest of its kind in North America. Design optimization across all areas was focused on cost reduction and improved operating efficiency. Concrete surfaces were replaced with asphalt where possible, mix designs improved and electrical distribution was optimized with wall mounted multiplex cabinets. Refined installation procedures incorporating previous experiences drastically reducing construction schedule while allowing a reduction in concrete thicknesses and reinforcing steel quantities. [\$8 million USD, 02/2005 - 06/2005]

**Cedar Grove Composting Ltd., Gore Cover Composting Facility, Everett, Washington**

Engineering Project Manager and Site Engineer for the design, procurement and construction of an 80,000 ton/year composting facility (the largest of its kind in North America), which is composed of multiple stormwater collection ponds an independent leachate collection and distribution system and included the installation of over 10,000 yards of concrete. [\$12 million USD, 02/2004 - 10/2004]

**Beaver Foods, Accommodation Complex, Alberta**

Project Manager for a design-build SBR wastewater treatment plant including the design and construction of a pump house and reservoir. Project controls manager for a 1500-man accommodation complex. Completed project ahead of schedule and under budget. [\$13 million CAD, 1999-2000]

**On Site Facility Review and Operational Investigation, Multiple Locations**

Preformed field review and investigation into the following sites so as to understand the options available to prospective clients seeking composting expertise. The relevant technology used at each site is shown in brackets (). Edmonton Co-composter (Bedminster) and Biosolids (Gore Cover) Facility, Carney's Waste Systems and UBC In-Vessel Composter (Wright Environmental), Chilliwack Avian Flu Chicken Composting (Ag-Bag International), International Composting Corporation (Orca Drum), A-1 Substratum and Cedarwall Farms (Transform Compost System), Hamilton SSO Composting Facility (Christiaens Controls), Banff WWTP (Christiaens Controls / Biosolids), Cedar Grove Maple Valley (CH<sub>2</sub>MHill – Aerated Piles), IPS NYC Facility (Siemens), GSI Environment (Self Managed Static Pile) [2002-Present]

**Various Small Scale Projects, Studies and Technology Reviews**

*Technology Review for the island of Jersey (England) on the use of the Transform Compost System (2006).* Investigation into turning equipment, mixers, and aeration systems was completed including site investigation at numerous operating facilities (Guelph Wet / Dry facility, Cedarwal Compost Facility, A-1 Substratum Mushroom Composting facility, and the Artex Fabrication Yard).

*Detailed Cost Estimate for the Gore Cover Technology, Belcorp, Vancouver (2006).* Completed a multilevel engineering estimate for the Gore Cover technology including quantity take offs and the application of unit installation rates based on current construction data for the Vancouver Lower Mainland.

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*Transfer Station Technology Review.* Completed a review of a wide range of transfer station technologies including but not limited to the City of Hamilton Community Recycling Centers and Transfer Stations, The City of Guelph Transfer Station, The City of Halton Transfer Station, Airport Recycling and Transfer Station (Snohomish Country), and the Snohomish County's SW Transfer Station in Mountlake Terrace.

## INDUSTRIAL

### **Shell Oil, Puget Sound Refinery Low Sulfur Gas Project, Washington**

Project manager assigned to the execution of all EPC scope associated with site thermal management systems (electric and ferromagnetic skin effect heat tracing, controls, instrumentation, and insulation. [\$10 million USD, 2003-2004]

### **Interquisa Canada, Purified Terephthalic Acid (PTA) Plant, Quebec**

Project manager for the engineering and procurement of approximately 2000 traced lines. Responsible for the coordination and implementation of engineering scope for a 20-person design team. [\$5 million CAD, 2002-2003]

### **Suncor / Transalta, Poplar Creek Power Station, Alberta**

Project planner and cost analyst for the erection of twin heat recovery steam generation units (130,000 man-hours). Developed project budget, progress reporting, and productivity analysis. [\$12 million, 2000]

### **Irving Oil, Refinery Upgrade, New Brunswick**

Project manager for dual co-generation units. Project controls manager for the residual fuel catalytic cracker unit. Built schedule extension and claim avoidance packages through accurate reporting. [\$38 million CAD, 1999-2000]

### **Lafarge, Kiln 3 Construction, British Columbia**

Project planner for a cement kiln upgrade. Developed project controls package to resolve contract disputes due to cost over-runs, broken schedule logic, suspended activities and other delays beyond contractor control. [\$2.2 million CAD, 1998-1999]

## COMMERCIAL

### **Burnaby and Port Coquitlam Bus Wash Replacements, Vancouver**

Project manager, site engineer and client representative for the design procurement and execution of approximately \$1 million CAD worth of facility improvements. [02/2004-12/2004]

### **Sun Life, Mechanical Systems Upgrade, Edmonton**

Project manager, for the replacement of chillers, condenser water pumps, heat exchangers and all associated piping. [\$300,000 CAD, 1997-1998]

## TRAINING AND CERTIFICATIONS

Washington Organic Recycling Council, Compost Facility Operator Training, 2010

Certified Gore Cover System Operator, 2006

USCC Compost Training Course, 2005

ISO 5 Easy Steps for Project Managers, 2005

ISO New Staff Orientation, 2005

Project Manager Training – Professional Development, 2004

UBC Sauder School of Business – Executive Education Coursework, 2004

Alberta Construction Safety Association (Modules #1-#14), 1999

Primavera Project Planner Training Course – CPM Solutions, 1998

Advanced Microsoft Access and Visual Basic Computer Programming, 1998

Various Site Safety Training (Syncrude, Suncor, Irving Oil, Nova Chemicals, Shell Oil, etc.)

### **CONFERENCE PRESENTATIONS**

"Design Optimization of Large Scale Facilities" City of Los Angeles, Gore Partner Forum, June 2010

"Cost Effective In-Vessel Composting for Small-Scale Facilities" Composting Council of Canada, 19<sup>th</sup> Annual National Conference, Vancouver October 2009

"From Project Feasibility to Operations" International Trade Delegation sponsored by the IDC, Globe Conference, Vancouver March 2006

"Engineering Optimization of the Gore Cover System" Gore Partner Forum, Elora, Ontario, June 2005.

"Composting: Program Evaluation and Technology Selection" Recycling Council of British Columbia (RCBC's) 31<sup>st</sup> Annual Conference, Harrison Hot Springs, B.C., June 2005.

"Composting Solutions: A Technology Review for Municipal Applications," Northwest Regional Solid Waste Association of North America (SWANA) Symposium, Troutdale, Oregon, April 2005.

"Innovative Composting Solutions," BC Institute of Technology, March 2005.

BCWWA Annual Conference, Whistler, 2004.

North America Tyco Thermal Controls Team Leaders Sales Conference, Cancun Mexico, 2003.

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