

CITY OF WALLA WALLA  
Public Works/Landfill Division

REQUEST FOR PROPOSALS (RFP)  
Sudbury Road Landfill – Landfill Carbon Credit Verification

The City of Walla Walla is seeking proposals from qualified companies with experience in verifying landfill carbon credits and experience completing a Climate Action Reserve, Verification Report. Proposals are due by 4:00 p.m., Tuesday, June 14, 2016, at the office of the City Engineer, Attn: Frank Nicholson, 55 E. Moore Street, Walla Walla, Washington 99362. Proposals shall be in a sealed envelope and clearly marked “Landfill Carbon Credit Verification.”

The City of Walla Walla installed a soil cap on Sudbury Road Landfill Area 6, a gas collection system, gas meter, and gas flare. The project became operational in January of 2011. The City registered the project with the Climate Action Reserve (“CAR”) offsets program. The CAR issues tradable carbon offset units called Climate Reserve Tonnes or “CRTs”. The landfill has 11 vertical gas collection wells and the average rate of flow is about 160 SCFM at 50% methane, or about 18,000 CRTs per year.

The selected company will verify landfill gas destruction and carbon credits for the period covering 10/1/2014 to 9/30/2015 and the future period of 10/1/2015 to 9/30/2016.

The RFP can be viewed at the City’s website at <http://www.wallawallawa.gov/bids-rfps>. Project information can be obtained by contacting Frank Nicholson, P.E., City of Walla Walla, 55 E. Moore Street, Walla Walla, WA 99362, or by phone at 509-524-4510, or e-mail to [fnicholson@wallawallawa.gov](mailto:fnicholson@wallawallawa.gov).

Advertised Seattle DJC, Portland DJC

**CITY OF WALLA WALLA**  
**Public Works/Landfill Division**  
**May 19, 2016**

**REQUEST FOR PROPOSALS (RFP)**  
Sudbury Road Landfill – Carbon Credit Verification

**PROJECT DESCRIPTION AND HISTORY**

The City of Walla Walla is seeking proposals from qualified companies with experience in verifying landfill carbon credits and experience completing a Climate Action Reserve, Verification Report. The City of Walla Walla installed a soil cap on Sudbury Road Landfill Area 6, a gas collection system, gas meter, and gas flare. The project became operational in January 2011. The Department of Ecology issued an Air Permit and the City registered the project with the Climate Action Reserve (“CAR”) offsets program. The CAR issues tradable carbon offset units called Climate Reserve Tonnes or “CRTs.” The landfill Area 6 has 11 vertical gas collection wells and the average rate of flow is about 160 SCFM at 50% methane, or about 18,000 CRTs. See attached monitoring plan for additional details.

**TERM OF CONTRACT**

The term of the contract would be one year.

**SCOPE AND BUDGET**

The selected company will verify landfill gas destruction and carbon credits for the period covering 10/1/2014 to 9/30/2015 and the future period of 10/1/2015 to 9/30/2016.

**QUALIFICATIONS**

Required minimum qualifications for firms submitting proposals:

1. Proven experience with similar work on at least three other projects.
2. Sufficient dedicated and qualified staff to deliver the project in a professional manner.

**PROPOSAL SUBMITTAL**

The following information is to be submitted as part of the proposal. Submit five (5) copies of the letter. The letter shall be graded on the following categories: introduction letter (10 points), scope of work and budget (40 points), relevant experience and three references (25 points), resumes of people assigned to the project (25 points). Letter is limited to 5 single sided pages.

The following additional information is required:

1. Project cost and Rate Schedule;
2. Insurance General Instructions:
  - a. “General liability insurance of at least \$5,000,000 aggregate, Combined Single Limit (CSL); and Automobile liability of at least \$1,000,000 per accident CSL”;
  - b. Name the City as additionally insured.

# Sudbury Road Landfill Gas Destruction Project Monitoring Plan

City of Walla Walla

**February 2, 2016**

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## **1 Project Overview**

Sudbury Road Landfill is an active landfill in Walla Walla, Washington, which accepts approximately 50,000 tonnes of municipal solid waste per year. There are approximately 1,754,004 tonnes of waste in place as of September 2011. Construction of the GCCS began in 2010 and was completed on January 19, 2011. The GCCS includes 10 vertical extraction wells, no horizontal wells, and a 4 foot diameter John Zink enclosed ZTOP Biogas Flare.

The project was Listed with the Climate Action Reserve under the ID: CAR844. The baseline and monitoring methodology for this project is the CAR Landfill Project Protocol, Version 3.0 (December 2009). The first CAR verification period is planned to be from January 19, 2011 to October 31, 2011.

\*This document was updated for the reporting period on 10/1/2013 to 9/30/2014 zero credit report.

## 2 Roles & Responsibilities

### 2.1 Interested Parties

Project Developer: City of Walla Walla

Original Technical Consultants: OneEnergy Renewables

### 2.2 Project Personnel

#### **Sudbury Road Landfill**

David Jensen

CB&I

Phone: (509)524-4591

E-mail: drakestraw@ci.walla-walla.wa.us

#### **CB&I Environmental & Infrastructure, Inc.**

Erik C. Korsmo

Project Manager

Solid Waste Services

Tel: 503.939.3688

erik.korsmo@CBI.com

#### **City of Walla Walla**

Frank Nicholson, P.E.

Utility Engineer

Phone: (509)524-4510

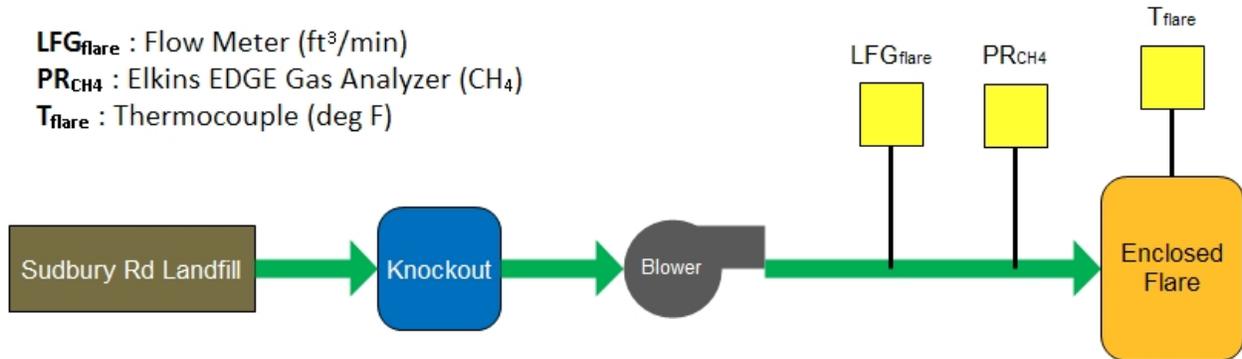
E-mail: fnicholson@ci.walla-walla.wa.us

### 3 Monitoring Equipment

Project monitoring equipment are installed within the gas collection and combustion system to ensure proper monitoring of emission reductions according to the requirements of CAR Landfill Project Protocol version 3.0 (December, 2009). Equipment measure the flow of landfill gas ( $LFG_{flare}$ ), the fraction of methane content in the gas ( $PR_{CH_4}$ ), and temperature within the enclosed flare ( $T_{flare}$ ) with a recording interval of ten [10] minutes.

#### 3.1 Monitoring System Line Diagram

The figure below contains a simplified representation of the Project's gas collection and combustion system, including the location of relevant monitoring equipment in relation to other system components.



### 3.2 Monitoring Equipment Summary Table

The table below summarizes the monitoring equipment currently installed at the project site, how they are maintained, and by whom.

Parameter	Equipment Specs	Units	Frequency	Personnel	Calibration/Maintenance	Records
$LFG_{flare,t}$	<b>Thermal Mass Flow Meter</b> Thermal Instrument Company Model 62-9/9500 Serial No: 2010372	ft <sup>3</sup> /min (60°F and 1 atm)	(every 10 min)	<b>Erik Korsmo</b> CB&I  Third Party Calibration performed by: CB&I Inc.	Third-party calibrations/accuracy checks are performed on an annual basis; quarterly cleaning and inspections are performed by CB&I; in the event of error, maintenance is performed by CB&I, Inc.	Data is recorded continuously by Elkins unit and sent to Elkins every 10 minutes server corporate via modem; logbooks, inspection, and maintenance records are kept CB&I in the landfill office.
$PR_{CH_4,t}$	<b>NDIR Gas Analyzer</b> Elkins Earthworks E.D.G.E Greenhouse Gas Monitoring Package Model: EDGE10002 Serial No.: 2111850	%	Continuous (every 10 min)	<b>Erik Korsmo</b> CB&I  Third Party Calibration performed by: CB&I Inc.	The unit self calibrates every 23 hours; monthly cleaning and inspections are performed by CB&I; in the event of error, maintenance is performed by CB&I, Inc.	Data is recorded by Elkins unit and sent to Elkins corporate server via modem every 10 minutes; logbooks, inspection, and maintenance records are kept CB&I in the landfill office.
$T_{flare}$	<b>Type K Thermocouple</b> Thermo Sensors	°F	Continuous	<b>Erik Korsmo</b> CB&I  Third Party Calibration performed by: CB&I Inc.	The performance of the 4 thermocouples is monitored by CB&I; in the event of error in one of the units, maintenance or replacement is performed by CB&I, Inc.	Data is recorded by Elkins unit and sent to Elkins corporate server via modem every 10 minutes; logbooks, inspection, and maintenance records are kept CB&I in the landfill office.
$EL_{PR}$	Utility invoice from CREA Meter No: 17395825	kWh	Monthly	Erin McCabe, landfill secretary collects invoices	CREA is responsible for maintenance of this meter.	Invoices are kept at the landfill office.

EF <sub>EL</sub>	eGRID subregion: NWPP	858.79 lb/MWh (0.3895 t/MWh)		EPA / CAR	Updated by EPA eGRID staff; use of data enforced by CAR via published Errata and/or memos to Project Developers	CAR Policy Memorandum “Re: USE OF eGRID ELECTRICITY EMISSION FACTORS FOR ALL PROJECT PROTOCOLS” dated May 3, 2011
FF <sub>PR</sub>	Propane fuel invoices for flare pilot light	Volume/mass	As needed	Erin McCabe, landfill secretary collects invoices	-	Invoices are kept at the landfill office.
Regulation	-	-	-	<b>Frank Nicholson</b> Utility Engineer	Annual review of state, local, and federal LFG regulatory requirements; compliance will be maintained with all requirements. If review confirms that project continues being conducted voluntarily and in compliance with all regulation, City to sign CAR Regulatory Attestation and Voluntary Implementation Attestation forms.	All relevant solid waste, air, water, and land use permits, Notices of Violations (NOVs), and any administrative or legal consent orders.

## **4 Data Management**

### **4.1 Data Retrieval**

#### **4.1.1 Continuous Data**

1. Elkins unit records and compiles 10 minute data set, including: Methane Level Corrected, gas flow, gas temperature at meter, percent oxygen and other environmental variables.
2. Elkins unit transmits data to Elkins corporate server via cellular modem every ten minutes.
3. Data is downloaded from the internet by Erik Korsmo three (3) times per week and reviewed in Excel.
4. Erik Korsmo incorporates quality checked data into emission reduction spreadsheet workbook. Data is stored on the CB& Server as a backup.
5. Landfill personal will take daily emission data using an Elkins portable landfill gas unit if the continuous data collection system is down.

#### **4.1.2 Logbooks, Maintenance, and Invoices**

1. Erik Korsmo maintains a project logbook to record significant events at the facility, including shutdown periods or equipment problems. The logbook is stored on site.
2. Erik Korsmo retains records of any maintenance performed on system, particularly monitoring equipment, and keep data in a water proof field book. Copies of maintenance invoices from outside vendors are kept by Erin McCabe, landfill secretary.
3. Invoices for electricity and propane consumption are maintained by Erin McCabe, landfill secretary.

### **4.2 Quality Assurance / Quality Control**

1. Continuous data (from section 4.1.1, above) is reviewed by Erik Korsmo in Excel to check for anomalous or erroneous data. If problems are found, the data is annotated in the workbook and, depending on the nature of the problem, either data substitution is applied or emission reductions are not included during the period in question.
2. Monitoring equipment calibrations are performed by a third party calibration company (CB&I, Inc.) on an annual basis. Quarterly inspections are performed by the CB&I.

### **4.3 GHG Emission Reduction Calculations**

The landfill gas spread sheet contains all the required calculations and reductions

### **4.4 Legal Requirement**

The landfill is keeping a complaint log as outlined in the landfill air permit (none to date).

### **4.5 Record Keeping**

Landfill staff is responsible for keeping all records mentioned above.