

## Member's inquiry – alternative daily covers

*On September 6, 2012 we asked:*

“Our good friends at the City of Kawartha Lakes are investigating the use of various alternative daily covers (ADC) at their landfill sites and would like to know if there are other municipalities using daily cover other than sand/soil. If so:

1. What types of ADC are you using?
2. How long have you been using ADC?
3. What are the pros and cons for the type of ADC you are using?
4. Are you able to provide a copy of the C of A condition(s) for the use of the ADC?
5. And finally, are you able to provide an estimate of the financial savings (if any) and landfill capacity you are able to save by using the ADC?”

Replies:

**Mark Pringle, Municipality of Muskoka- [mpringle@muskoka.on.ca](mailto:mpringle@muskoka.on.ca)**

Muskoka has been using Alternative Daily Cover (ADC) for around 6 years. We're using both MRF residue and woodchips. Works very well, no downside really and we're saving the landfill space of having to bury clean wood (this does not include brush and leaves) and MRF residue plus not mining and hauling in cover, that's the really big advantage. I will share details of the conditions if Kawartha Lakes wishes to contact me directly, this is approved at 3 of Muskoka's Landfills.

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**Mukesh Pokharel, City of Kenora- [mpokharel@kenora.ca](mailto:mpokharel@kenora.ca)**

1. What types of ADC are you using?

We are not using any tarp, foam as an ADC till now. We are getting Hog fuel free of cost from local Wooden Manufacturing Company. Hog fuel is a waste from the wooden industry which needs to be disposed. It is a mixture of trees, branches, barks, leaves and other wood materials. The particle size of the hog fuel usually 6 inch and down.

The hog fuel is hauled almost daily in weekdays (depending upon our requirements) from the Wooden Manufacture Company (15 Km One way) by city of Kenora's truck to the landfill area. This Hog fuel is generally used to cover the garbage.

2. How long have you been using ADC?

We are using this hog fuel from last one and half years.

3. What are the pros and cons for the type of ADC you are using?

The main advantage of using Hog fuel as follows

- a) Locally available waste materials working fine as daily cover materials.
- b) Hog fuel is always available when needed free of cost till now.
- c) Local wooden company has save money to dispose it, so both of us are benefited.

4. Are you able to provide a copy of the C of A conditions for the use of ADC ?

I have attached a page which mentioned that Alternative MOE approve ADC can be used provided that which should be approved by Regional Director.

5. Are you able to provide an estimate of the financial savings? And landfill capacity you are able to save by using the ADC.

No, not now

The following was sent in FYI:



Ontario

Ministry  
of the  
Environment l'Environnement

Ministore  
de

PROVISIONAL CERTIFICATE OF APPROVAL  
FOR A WASTE DISPOSAL SITE  
NO. A 612018

- barrels, drums or other similar containers which have been contaminated by hazardous substances.

20. The City shall use the weigh scale to be installed at the central public drop-off depot to monitor and record all incoming wastes. Such a depot shall be established in a central location in the Tri-Municipal Area. If this off-site scale malfunctions, alternative methods for weight determinations shall be implemented as soon as possible but not later than in 3 days. These could include the use of alternate weigh scales, estimation of load weights from historical records for specific haulers, or waste generation areas.
21. The City shall ensure that all vehicles entering the Landfill shall be identified by a licence number on the weigh scale billing notice.

Waste Cover Requirements

22. The City shall ensure that waste is deposited in a manner that minimizes the area of exposed

waste at the Landfill working face and shall be compacted before cover material is applied.

23. The City shall ensure that from May 15 till September 15 at the end of each working day, and within two hours of the entrance gate closure, cover material is applied to all exposed waste material. Cover material shall be applied on a weekly basis during the rest of the year. The average depth of this material when soil is used shall be 15 cm.
24. Alternative MOE approved materials such as tarps, foams or processed sewage sludge can be used for daily cover subject to the Regional Director's approval.
25. The City shall provide a contingency supply of cover material equal to two working days worth to ensure that adequate cover is always available for application pursuant to Condition 23.
26. The City shall ensure that in areas where landfilling is not to be carried out for the period of 90 days or more, at least 20 cm of compacted clean earth cover will be applied over the wastes. If necessary, these areas may be hydroseeded during the earliest spring or fall planting season to stabilize the surface against erosion.
27. The City shall ensure that in areas where landfilling has been completed to the approved final contours, a minimum 750 mm thickness of clean earth cover will be placed over the compacted wastes. The lower 600 mm will consist of previously excavated and compacted tills, and the top 150 mm will consist of locally derived topsoil mixed with peat. These areas shall be hydroseeded during the earliest spring or fall planting season to provide protection against erosion.

#### **Base Contours**

28. The City shall ensure that extent of excavation shall be limited to base grades shown on Drawing S1-3 of Item 1, Schedule "A".
29. The City shall ensure that no excavation shall occur for those portions of the landfilling area situated over

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**Linda Churchill, Region of Waterloo- [LChurchill@regionofwaterloo.ca](mailto:LChurchill@regionofwaterloo.ca)**

1. Tarp and bio-mulch
2. Trial period began in 2005. Permanent approval from Nov 2007.
3. Pros – saves landfill space, increase life of heavy equipment, savings on fuel and manpower

Cons – cost of consumable cover (bio-mulch & tarp), potential export of excess soil material, less control of odours

4. The CofA condition states “The Region shall, on a daily basis, cover all waste received at the Landfill with a minimum of 15 cm of organic wood chips and/or soil. Daily cover soil includes onsite clean earth fill and other soil accepted at the Site for daily cover use where concentrations of contaminants in the soil do not exceed the concentrations for industrial land use as specified in the MOE’s Guideline for Use at Contaminated Sites in Ontario, June 1996, and according to Regulation 347 are not classified as hazardous waste. Alternative materials to be used as daily cover must be approved, in writing, by the District Manager, prior to application.”

The Region has correspondence from the District Manager allowing the use of the tarp and much as alternative daily cover. The Region must have soil available as a contingency.

5. Hard to do a comprehensive financial assessment. Calculations on the amount of landfill space saved have been done and approximately for every 5 years of ADC use, the Region saves one year of capacity. The use of tarp, mulch and soil is approximately 1/3 of each over the year.

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**Greg Preston, City of Orillia**

1. Two specially manufactured steel frames with a heavy-duty vinyl plastic liner for cover. We also use wood chips
2. Since 1999
3. Pros: Uses less cover; Cons: Both covers cost about \$1,000 per year (total) to maintain.
4. Yes, I can provide a copy of our CofA amendment for this upon request.
5. I cannot provide an estimate of savings. It means we use less fill and there’s less covering time.

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**Peter Filipowich, City of Ottawa- [peter.filipowich@ottawa.ca](mailto:peter.filipowich@ottawa.ca)**

The City of Ottawa owns and operates the active Trail Waste Facility under Ministry of the Environment Environmental Compliance Approval A461303.

The table below summarizes the response to the member questions:

Alternative Daily Cover	Length of Use (Years)	Advantages	Disadvantages
Auto Shredder Residue	10+	Absorbs moisture - creates all weather travel surface, tip fees collected generate revenue	Testing to ensure material is not considered a hazardous waste
Roll On Tarps	10+	No air space used - effective at deterring vectors	Removal complicated in wet weather, not useable in winter, Cost
BioCover™	5	No air space used - effective at deterring vectors	Difficult to apply in windy conditions and wet weather, Cost
Wood Chips	10+	Good drainage properties	Only small quantities available - uses air space
CofA conditions	Estimate of Financial Savings	Estimate of Landfill Capacity Savings	
Quarterly testing for inorganics and PCB's	Tip fees collected for the disposal of this material	NA	
Letter on file approving use	NA	NA	
Must be at least as effective as soil as a cover, does not cause an adverse environmental effect.	NA	NA	
Managed on Leaf and Yard Compost pad	Tip fees collected for the disposal of this material	NA	

**Michael Kearns, Iroquois Falls-** [kearnsm@iroquoisfalls.com](mailto:kearnsm@iroquoisfalls.com)

This is something I began looking into a couple of years ago and unfortunately with some changes to our operations have not had the time to follow through with. We still have intentions on exploring this option as it does seem effective.

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**Kimberly Pickett, County of Simcoe-** [kimberley.pickett@simcoe.ca](mailto:kimberley.pickett@simcoe.ca)

1. What types of ADC are you using? Wood chips, tarps, fines from screening projects
2. How long have you been using ADC? For 8 plus years

3. What are the pros and cons for the type of ADC you are using? *We are saving landfill air space and money.*
  4. Are you able to provide a copy of the C of A condition(s) for the use of the ADC? *Each CofA is different but the general wording is that we are permitted to use Alternative Daily Cover*
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**Bob Moore, Township of Drummond/North Elmsley:** [bmoore@dnetownship.ca](mailto:bmoore@dnetownship.ca)

AT the landfill our SOP requires daily cover. We are in the process of having this amended to once every 24 hrs. Being a small municipality and only dealing with 2600 tonnes of garbage a year and having our trucks dumping late in the afternoon is requiring some staff to work overtime for cover and compacting.

On average compacting takes 1 hr daily and cover operations 1.5 hrs daily.

In September and Oct. we developed sufficient cells to keep us operational for the winter and have changed the approach to handling refuse. I now have material being pushed into the cell walls toward the cover materials, instead of being dumped on top and spread down the side.

My intent is to improve on the 3 to 1 cover to garbage ratio that I discovered was being used once I implemented a tracking program two years ago. Change does take time and it is only since March 2013 that 50% of my responsibility was devoted to landfills.

Yesterday I issued an RFQ for winter cover to be delivered on a daily basis, previously it was being stockpiled and staff were complaining that it was frozen and hard to spread. During the spring, summer and fall months we draw from our own site.

I would be happy to speak with anyone who has questions about our operations or future directions.

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