



CITY OF BOZEMAN  
Bozeman, Montana  
Department of Public Works

September 18, 2015

COPY

Mr. Shawn Juers  
Environmental Engineer  
Air Quality Bureau  
Montana Department of Environmental Quality  
PO Box 200901  
Helena, MT 59620

Re: Bozeman Landfill Flare Replacement/Improvement Project  
Montana Air Quality Permit Application #2951-05

Dear Mr. Juers:

Per your letter of August 19, 2015 relative to the subject application, we have compiled additional information and data to address the requested information. Our responses reference the three numbered items in your letter.

**Item 1: Affidavit of Publication of Public Notice**

An affidavit was provided to you under separate cover on September 3, 2015.

**Item 2: Applicability**

Our discussion references the following regulations: 40 C.F.R. Part 60, Subpart Cc, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 40 C.F.R. Part 60, Subpart WWW Standards of Performance for Municipal Solid Waste Landfills, 40 C.F.R. Part 63, Subpart AAAA National Emission Standards for Hazardous Air Pollutants from Municipal Solid Waste Landfills, and 40 C.F.R. 60.18, General Control Device and Work Practice Requirements.

Subparts Cc, WWW and AAAA apply to municipal solid waste landfills, and applicability is based in part on the dates of initial landfill construction, waste acceptance and/or expansion. Therefore, while the City of Bozeman Landfill is categorically covered by these standards, the control requirements therein are triggered upon the occurrence of certain applicability criteria. [Footnote 1] The regulations each contain similar landfill gas collection and control requirements for affected facilities that, among other criteria, meet certain threshold design capacities. Under each regulation, the relevant design capacity threshold for applicability is 2.5 million megagrams and 2.5 million cubic meters. See 40 C.F.R. §§ 60.33c(a)(2), 60.752(a) and 63.1935(a). [Footnote 2] The City of Bozeman Landfill does not exceed these design capacity thresholds, and is therefore not subject to these regulatory standards. In particular, the landfill consists of two areas: the first is an unlined cell in which waste was first deposited in 1969 and

was closed in 1996; the second area is a lined cell in which waste was first deposited in 1997 and was closed in 2008. The calculated capacity of the unlined cell is 800,000 megagrams and Great West Engineering, who designed the newer lined cell, estimated its design capacity at approximately 400,000 megagrams, which together are less than 2.5 megagrams. Accordingly, Subparts Cc, WWW and AAAA do not apply to the Landfill.

Likewise, 40 C.F.R. §60.18 is not applicable. This regulation, set forth in the general provisions of Part 60, establishes certain requirements for control devices, including flares, used to comply with Part 60 categorical standards. As set forth in section 60.18(a)(1), the section applies only to facilities that are subject to Part 60 regulations that refer to section 60.18. As explained above, the City of Bozeman Landfill is not subject to either Subpart Cc or WWW under Part 60, and is not subject to any other Part 60 standard that refers to section 60.18. Accordingly, section 60.18 is not applicable to the proposed new flare.

**Item 3. Landfill Gas (LFG) Composition.** Please use AP-42 values to estimate concentrations for any compounds that are not part of our historic air monitoring program. The values presented in our original application for 21 compounds should still be used.

The H<sub>2</sub>S concentration should be changed to a median of 2.67 ppmv. Eight additional hydrogen sulfide data points that were collected from the Bozeman Landfill between 2000 and 2005 were used to generate this median value (Table 1). These are the only H<sub>2</sub>S data we could find in our files.

[Footnote 1] Coverage under Subpart Cc (existing sources) or WWW (new sources) would depend on the dates of construction and/or subsequent modification of the landfill. The City of Bozeman Landfill was modified after May 30, 1991, which would include it within the time period covered under Subpart WWW for new or modified sources. Nonetheless, as explained herein, the Landfill does not meet other applicability criteria thereunder.

[Footnote 2] Under Subparts Cc and WWW, landfills that do not meet these design capacity thresholds are not subject to the standards. Under Subpart AAAA, a landfill that does not meet the design capacity threshold can nonetheless be subject to Subpart AAAA if the landfill constitutes a major source of hazardous air pollutants ("HAP") or is collocated with a major source of HAP. Neither is the case for the City of Bozeman Landfill, at which potential emissions of each individual HAP is less than 10 tons per year and potential emissions of any combination of HAPs is less than 25 tons per year, as referenced in the existing permit and in the Application.

Sincerely,



Rick Hixson, P.E.  
City Engineer

**Table 1**  
**Hydrogen Sulfide Measurements**  
**Flare - Pre-Thermal Destruction**  
**Bozeman Landfill**  
**Bozeman, Montana**

Date	Data Source	Type of Sample	H <sub>2</sub> S Concentration	Units
2006-Present	NA	No further hydrogen sulfide analysis		
9/20/2005	Lab Report	Grab	3.96	ppmv
3/29/2005	Lab Report	Grab	1.22	ppmv
9/9/2004	Lab Report	Grab	5.65	ppmv
3/25/2004	Lab Report	Grab	2.66	ppmv
9/25/2003	Lab Report	Grab	1.71	ppmv
9/27/2000	Lab Report	Grab	1.16	ppmv
3/22/2000	Lab Report	Grab	1.46	ppmv
9/13/1999	Lab Report	Grab	4.08	ppmv
3/17/1999	Lab Report	Grab	6.14	ppmv
9/29/1998	Lab Report	Grab	0.73	ppmv
3/23/1998	Lab Report	Grab	0.55	ppmv
Count			9	
Min			1.16	ppmv
Max			6.14	ppmv
Median			2.66	ppmv
Average			3.12	ppmv

**Red text** - Not included in statistics since LFG system and landfill cap may not have been fully functional



CITY OF BOZEMAN  
Bozeman, Montana  
Department of Public Works

September 3, 2015

MT Department of Environmental Quality  
Air Quality Bureau, Air Permitting Services  
Shawn Juers  
P.O. Box 200901  
Helena, MT 59620-0901

Re: Air Quality Permit for Bozeman Sanitary Landfill

Dear Shawn:

Please find enclosed the original Affidavit of Publication for the Bozeman Sanitary Landfill's Air Quality Permit. A copy of page one of the application is included for reference.

Sincerely,

Katherine Maines  
Public Works Technician

339247 1334697

LEGAL#6731 CITY OF BOZEMAN

PO BOX 1230  
BOZEMAN MT 59771

**AFFIDAVIT OF PUBLICATION  
STATE OF MONTANA )**

County of Gallatin )

)SS.  
)

**Public Notice**

Notice of Application for a Montana Air Quality Permit (MAQP), pursuant to Sections 75-2-211 and 75-2-215, MCA, and the Air Quality Rules).

City of Bozeman will file on or about August 15, 2015 an application for a MAQP or a modification to an existing MAQP from the Montana Department of Environmental Quality. Applicant(s) seeks approval of its application for:  
Replacing an existing landfill gas candlestick flare with a new ground mounted landfill gas flare.

The legal description of the site is: Section 30, Township 1S, Range 6E in Gallatin County, Montana.

Within 40 days of the receipt of a completed application, the Department will make a preliminary determination whether the permit should be issued, issued with conditions, or denied. Any member of the public with questions or who wishes to receive notice of the preliminary determination, and the location where a copy of the application and the Department's analysis of it can be reviewed, or to submit comments on the preliminary determination, must contact the Department at Department of Environmental Quality, Air Resources Management Bureau, Air Permitting Section Supervisor at P.O. Box 200901, Helena, MT 59620-0901, telephone (406) 444-3490. Any comments on the preliminary determination must be submitted to the Department within the specified timeframe (within 15 or 30 days after the preliminary determination is issued).

Jill Hall

being duly sworn, deposes and says; that he/she is legal ad clerk of the Bozeman Daily Chronicle, a newspaper of general circulation, printed and published in Bozeman, Gallatin County, Montana; and that the notice here unto annexed PUBLIC NOTICE NOTICE OF A

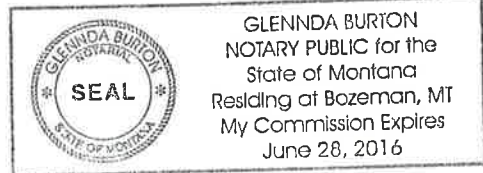
has been correctly published in the regular and entire issues of every number of said paper for 1 insertions.

Said notice was published on:  
08/21/2015

Jill Hall

Subscribed and sworn to before me this  
21st day of August, 2015

Glennnda Burton  
Notary Public for the State of Montana  
Residing at Bozeman, Montana



**BOZEMAN CHRONICLE**  
 BELGRADE NEWS/LONE PEAK/WYN  
 C/O ISJ PAYMENT PROCESSING CTR  
 P.O. BOX 1570  
 POCATELLO ID 83204-1570  
 (406) 582-2637  
 Fax(406) 587-7995

1  Memo Bill Period 08/2015		2  Advertiser/Client Name CITY OF BOZEMAN, LEGAL#6731	
23  Total Amount Due 33.00		*Unapplied Amount	3  Terms of Payment
21  Current Net Amount Due .00	22  30 Days .00	60 Days .00	Over 90 Days .00
4  Page Number 1	5  Memo Bill Date 08/21/15	6  Billed Account Number 339247	7  Advertiser/Client Number JILL . 339247

Advertising Memo Bill

8  Billed Account Name and Address LEGAL#6731 CITY OF BOZEMAN PO BOX 1230 BOZEMAN MT 59771		Amount Paid:  Comments:  Ad #: 1334697
---	--	--

Please Return Upper Portion With Payment

10  Date	11  Newspaper Reference	12 13 14  Description-Other Comments/Charges	15  SAU Size 16  Billed Units	17  Times Run 18  Rate	18  Gross Amount	20  Net Amount
08/21/15	1334697 STATL	PUBLIC NOTICE NOTICE O 08/21 WWW BDC PO# KATHERINE MAINES	1X 54.00 300.00	1 33.00	33.00	33.00

**Statement of Account - Aging of Past Due Amounts**

21  Current Net Amount Due 0.00	22  30 Days 0.00	60 Days 0.00	Over 90 Days 0.00	*Unapplied Amount	23  Total Amount Due 33.00
------------------------------------	---------------------	-----------------	----------------------	-------------------	-------------------------------

**BOZEMAN CHRONICLE**

(406) 582-2637

\* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24  Invoice						25  Advertiser Information			
1  Billing Period 1334697 08/2015		6  Billed Account Number 339247		7  Advertiser/Client Number 339247		2  Advertiser/Client Name CITY OF BOZEMAN, LEGAL#			