Karl Brooks/R7/USEPA/US
03/18/2011 04:23 PM

To Cecilia Tapia, William Rice
cc
bcc
Subject Fw: Recent Westlake Landfill information

5 attachments

C010502 MCC Bridgeton CO.pdf C010601 MCC Bridgeton CO.pdf BRIDGETON SLF haz map.pdf
10-12-29 BLF well shut down MAP.pdf St. Louis Press.doc

Anything new here?

----- Original Message -----
From: "Zlatic, Mike" [MZlatic@stlouisco.com]
Sent: 03/18/2011 04:10 PM EST
To: Karl Brooks
Cc: Rich Hood; "Mueth, Edward" <EMueth@stlouisco.com>; "Gunn, Dr. Dolores" <DGunn@stlouisco.com>; "Place, Arletta" <APlace@stlouisco.com>
Subject: Recent Westlake Landfill information

Mr. Brooks,

As we briefly discussed today, I have attached 4 e-mails (with attachments) related to the Westlake Landfill. Hopefully, these adequately explain the current situation at Westlake, the sanitary landfill portion of which is called the Bridgeton Sanitary Landfill (BSL).

Thank you again for the opportunity to participate today; the discussion was most interesting.

Mike

-----Original Message-----
From: Zlatic, Mike
Sent: Thursday, March 17, 2011 5:18 PM
To: 'Brooks.Karl@epamail.epa.gov'
Cc: Hood.Rich@epamail.epa.gov; Mueth, Edward; Gunn, Dr. Dolores; Place, Arletta; Shelton, John
Subject: RE: New EPA Toxics Air Standard: Help, Please

Mr. Brooks,

Ed Mueth will be representing the St. Louis County Health Department at tomorrow's press discussion. Mr. Mueth is the Division Director of Executive Administration of the St. Louis County Health Department.

Please forward location details as they become available.

Thanks again for the opportunity to participate.

Mike

-----Original Message-----
From: Brooks.Karl@epamail.epa.gov [mailto:Brooks.Karl@epamail.epa.gov]
Sent: Thursday, March 17, 2011 4:03 PM
To: Zlatic, Mike
Cc: Hood.Rich@epamail.epa.gov
Subject: RE: New EPA Toxics Air Standard: Help, Please

Mike,

This is tremendous news, and I thank you for the last-minute juggling act you're doing so well. Look forward to meeting you and delighted the County and City of St Louis will both be present and active at tomorrow's event.

Many thanks and I'll be sure to thank Katina Stewart personally for siccing me on you!

Cheers,

Karl Brooks
Regional Administrator
EPA Region 7
913.551.7006

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| From: |
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|"Zlatic, Mike" <MZlatic@stlouisco.com>
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| To: |
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|Karl Brooks/R7/USEPA/US@EPA
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| Cc: |
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|Rich Hood/R7/USEPA/US@EPA, "Place, Arletta" <APlace@stlouisco.com>, "Gunn, Dr. Dolores" <DGunn@stlouisco.com>, "Shelton, John" |
|<JShelton@stlouisco.com>
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| Date: |
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  |03/17/2011 03:55 PM
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| Subject: |
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  |RE: New EPA Toxics Air Standard: Help, Please
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Mr. Brooks,

The County definitely wants to participate & we are in the process of juggling our schedules to see who could be available. We have learned time & approximate location from Mr. Hood and we will get back with both of you with the name & title of the County representative.

Thank you for the opportunity!

Mike
Michael J. Zlatic, PE, CHMM, QEP, REHS
Environmental Administrator
Air Pollution, Healthy Homes/Lead, Noise, and Solid Waste Programs
Division of Environmental Protection
St. Louis County Health Department
111 S. Meramec Avenue - 2nd Floor
Clayton, MO 63105
314.615.8910 office
314.615.8951 fax

-----Original Message-----
From: Brooks.Karl@epamail.epa.gov [mailto:Brooks.Karl@epamail.epa.gov]
Sent: Thursday, March 17, 2011 12:46 PM
To: Zlatic, Mike
Cc: Hood.Rich@epamail.epa.gov
Subject: New EPA Toxics Air Standard: Help, Please

Hi Mike,

Katina Stewart at St Louis City Health suggested I contact you. Tried to call a few mns ago, but number I got from website not working (314.854.6698).

You may have seen EPA Admr Lisa Jackson yesterday announced an important new air-quality standard with great public health benefits for St Louisans. This air toxics standard is so significant that I'm coming tomorrow to St Louis to visit with the press, along with several of your counterparts active in air-quality issues in the area.

Would you consider joining us tomorrow for this public discussion? I've cc'd my Public Affairs director here at Reg 7, as he's working on logistics of this event.

Feel free to give me a call. For your info, I've attached the press release yesterday from EPA HQ.

Cheers,

Karl Brooks
Regional Administrator
EPA Region 7
913.551.7006

(See attached file: airstandardhg.docx)

----- Message from "Donegan, Kathrina" <KDonegan@stlouisco.com> on Tue, 11 Jan 2011 12:46:58 -0600 -----

To: "Zlatic, Mike" <MZlatic@stlouisco.com>, "Haasis, John" <JHaasis@stlouisco.com>, "Yates, Laura" <LYates@stlouisco.com>

Subject: FW:

FYI

From: Rogus, Jeremy
Sent: Tuesday, January 11, 2011 10:16 AM
To: Donegan, Kathrina; Froeschner, Tim
Subject: FW: Recent Bridgeton CO Sampling Results

From: Vasbinder, David [mailto:DVasbinder@republicservices.com]
Sent: Tuesday, January 11, 2011 9:14 AM
To: Heine, Robert; Rogus, Jeremy
Cc: Michele Boussad
Subject: Recent Bridgeton CO Sampling Results

Bob/Jeremy,

FYI, attached are the results from the recent summa canister CO sampling event at Bridgeton Landfill. Also, per a discussion with the DNR yesterday, we should all expect to see a general press release

(issued by the DNR) regarding the elevated temperatures and CO levels at Bridgeton Landfill. I wasn't sure if the state had let you all know about this so I wanted to supply a "heads-up".

Have a great day,

Dave Vasbinder
Environmental Manager
Republic Services, Inc.
314.744.8166 - Office
314.249.9404 - Cell
314.739.2588 - Fax

----- Message from "Zlatic, Mike" <MZlatic@stlouisco.com> on Mon, 24 Jan 2011 09:29:24 -0600 -----

To: "Gunn, Dr. Dolores" <DGunn@stlouisco.com>
cc: "Place,
Subject: FW:

Dr. Gunn,

Please feel free to review the below 'chain' of e-mails & the attached information related to the probable subsurface fire at the Bridgeton Sanitary Landfill (BSL), which adjoins the Superfund radioactive-contaminated Westlake Landfill on St. Charles Rock Road in the County.

Quick summary:

- Measured levels of O2, CO, and CO2 indicate the probability of a subsurface fire.
- The measured levels of O2, CO, and CO2 (that indicate the probability of a subsurface fire) are in that portion of the BSL that is farthest (1200' minimum) from the radioactive contamination.
- The measured levels of O2, CO, and CO2 in those portions of the BSL that are in closer proximity to the radioactive contamination do NOT show evidence of a subsurface fire.

I will keep you apprised if we learn anything additional.

Mike

From: Donegan, Kathrina
Sent: Friday, January 21, 2011 12:23 PM
To: Rogus, Jeremy; Zlatic, Mike
Cc: Yates, Laura; Haasis, John
Subject: FW: Bridgeton

Thank you Jeremy,
This is very nicely done and the information Mike Zlatic was looking for.
I appreciate it.
Kath

From: Rogus, Jeremy
Sent: Friday, January 21, 2011 12:18 PM
To: Donegan, Kathrina
Subject: Bridgeton

Kath,

The closest proximity of wells impacted by SSO event to haz.waste/radiological waste disposal area is 1200 feet. Specifically, from well GEW-38 to limit of uncontrolled hazardous waste disposal area #1 (OU-1) is 1200 feet. On December 27, 2010, the CO monitored at GEW-38 was >1500 ppm. The well was sampled again on January 5, 2011 using summa canister CO sampling (ASTM D1946). The results were 0.0094% v/v CO. The reporting limit for this type of test is 0.0030% v/v CO. The highest level found during summa canister CO sampling was 0.82% v/v CO at well GEW-60R, approximately 1750 feet from the limits of haz. waste area #1. I am not really sure how %v/v CO converts to ppm (or mg/L) CO, but the bottom line is that wells in the impacted area are experiencing >1500 ppm CO.

%v/v is an abbreviation for percentage volume of a substance of the total volume

The most recent methane, CO2, temperature, and pressure monitoring record at well GEW-38 is 1/14/2011. The methane, CO2, temperature and pressure reading were 46.9%,50.5%,87.8°F, and +0.97, respectively. The most recent methane, CO2, temperature, and pressure monitoring record at well GEW-60R is 1/14/2011. The methane, CO2, temperature, and pressure reading were 1.7%, 81%, 194.2°F, and +5.5, respectively.

It may be important to note that well GEW-67R is one of the wells impacted by the SSO and is also a well which is required to have quarterly CO monitoring done for alternative temperature limit (no more than 140° F, rather than 131° F). Well GEW-67R has been experiencing various exceedances, including CO, since at least December 22, 2009. All exceedances have been corrected and reported, as required by the NSPS and the Title V permit. The reading was 704 ppmv CO on Dec. 22, 2009, above the 500 ppmv action level. The reading was 1400 ppm CO on October 6, 2010. In third quarter 2010, the affected area of high CO concentration appeared to be concentrated around GEW-67R.

The total area impacted by high CO concentrations in wells is approximately 810,000 square feet (900' x 900').

Let me know if you need anything else. Maps are attached.

Jeremy Rogus, REHS
Saint Louis County Department of Health
Division of Environmental Health
Air Pollution Control Program
4562 Lemay Ferry Rd., Saint Louis MO 63129
P: 314.615.0926
F: 314.615.4008
http://www.stlouisco.com/doh/environ/airpollut.html

From: Heine, Robert
Sent: Friday, January 21, 2011 10:35 AM
To: Rogus, Jeremy
Subject:

fyi

Robert S. Heine, P.E.
Project Engineer
Solid Waste Management Program
St. Louis County Dept of Health
4562 Lemay Ferry Rd.
St. louis, MO 63129
314-615-4116
email: RHeine@stlouisco.com

----- Message from "Zlatic, Mike" <MZlatic@stlouisco.com> on Fri, 28 Jan 2011 16:01:43 -0600 -----

To: "Gunn, Dr. Dolores" <DGunn@stlouisco.com>
cc: "Diedrich,
Subject: FW:

FYI

Mike

p.s. Mike & Mark, I can discuss this at the 02/22/11 LEPC meeting if you're interested.

From: Yates, Laura
Sent: Friday, January 28, 2011 3:32 PM
To: Allen, Jill; Ayalew, Mihretu; Beard, Cornelia; Cohen, Gloria; Eschbach, Mallory; Franklin, Jamil; Heine, Robert; Kalter, Christopher; Moss, Andrea; Patterson, Mary; Viles, Michael
Cc: Haasis, John; Zlatic, Mike; Rogus, Jeremy; Donegan, Kathrina; LeFebvre, Craig
Subject: FW: Bridgeton SLF press release- just went out

Laura M. Yates
Field Services Supervisor
Solid Waste Management Program
St. Louis County Department of Health
4562 Lemay Ferry Rd, St. Louis 63129
314-615-4035

From: Nagel, Chris
Sent: Thursday, January 27, 2011 4:30 PM
To: Reinkemeyer, Alan; Struckhoff, Mike; Trunko, Joe; Allen, Brian
Cc: Lehman, Larry; Fitch, Charlene; Campbell, Cecilia
Subject: Bridgeton SLF press release- just went out
FYI

The press release on Bridgeton SLF just went out. It is possible that it could raise some questions. The press release is included in the below email string.

Let us know if you have any questions.

Thanks

Chris Nagel
Director
Solid Waste Management Program
Missouri Department of Natural Resources
(573) 526-3900
(573) 526-3902
chris.nagel@dnr.mo.gov

From: Bloomer, Susan
Sent: Thursday, January 27, 2011 4:07 PM
To: Nagel, Chris; Lehman, Larry; Fitch, Charlene
Subject: FW: Elevated carbon monoxide levels being monitored at closed landfill
This went out.

Susan Bloomer
Public Information Specialist
Missouri Department of Natural Resources
573-526-1825 or 800-361-4827

From: Archer, Larry
Sent: Thursday, January 27, 2011 4:06 PM
To: Bloomer, Susan
Subject: FW: Elevated carbon monoxide levels being monitored at closed landfill
This just went out about 20 minutes ago.

From: Rogers, Teresa
Sent: Thursday, January 27, 2011 3:49 PM
To: 'modnr-news@lists.mo.gov'
Subject: Elevated carbon monoxide levels being monitored at closed landfill

Keywords: St. Loius, St. Charles, Franklin, Jefferson

Volume 39 014 For more information
(For immediate release) 573-751-1010

Elevated carbon monoxide levels being monitored at closed landfill

JEFFERSON CITY, MO, JAN. 27, 2011— The Missouri Department of Natural Resources is working with Republic Services to investigate and address elevated carbon monoxide readings in the landfill gas at the company's inactive Bridgeton Sanitary Landfill located in St. Louis County.

Republic Services notified the Missouri Department of Natural Resources of data

obtained from portable gas monitoring equipment that is often indicative of a subsurface fire. Gas sampling results from Jan. 4 included high levels of carbon monoxide and carbon dioxide and low levels of methane and oxygen. No smoke or steam is visible at the landfill and the landfill surface appears unchanged.

The fire is believed to be located deep within the south central portion of the landfill, 100 to 150 feet below the surface.

Unlike surface fires, subsurface landfill fires occur with minimal oxygen and smolder for long periods of time within the waste mass where they slowly burn themselves out. As a safety measure, Republic Services turned off a section of the landfill gas extraction system to minimize the amount of oxygen made available.

While this area is the site of several different sanitary and demolition landfills, this activity does not involve any other landfills, including the areas being addressed under the West Lake Landfill Superfund Site. While there is no evidence that this activity is causing any health concerns, the landfill is being closely monitored. The department is in close contact with Republic Services and local officials to ensure appropriate safety precautions are taken.

The Bridgeton Sanitary Landfill was initially permitted in January 1979 and accepted municipal solid waste until the facility ceased operation in December 2004. The facility is currently working with the department to certify closure of the landfill.

For additional information, contact the Department of Natural Resources' Solid Waste Management Program at 800-361-4827 or 573-751-5401.

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----- Message from "Zlatic, Mike" <MZlatic@stlouisco.com> on Fri, 28 Jan 2011 16:18:30 -0600 -----

To: "Smiley, Michael" <MSmiley@stlouisco.com>, "Diedrich, Mark" <MDiedrich@stlouisco.com>

cc: "Singler,

Subject: FW:

More information.

Mike

From: Heine, Robert
Sent: Friday, January 28, 2011 4:15 PM
To: Yates, Laura; Ayalew, Mihretu
Cc: Zlatic, Mike; Haasis, John
Subject: FW: Bridgeton Landfill - Press Today
Importance: High

FYI

Robert S. Heine, P.E.
Project Engineer
Solid Waste Management Program
St. Louis County Dept of Health
4562 Lemay Ferry Rd.
St. louis, MO 63129
314-615-4116
email: RHeine@stlouisco.com

From: Vasbinder, David [mailto:DVasbinder@republicservices.com]
Sent: Friday, January 28, 2011 7:44 AM
To: Heine, Robert
Subject: FW: Bridgeton Landfill - Press Today
Importance: High

Bob,

Below is the copied text from our internal "Talking Points" memo regarding Bridgeton. Thank you for asking for them so that our information is cohesive.

Site Contact: Dave Vasbinder, environmental manager
314-739-5099 x4464 or 314-249-9404

Issue:
During our quarterly carbon monoxide (CO) sampling at nine of the site's gas wells, CO readings were recorded at levels higher than past samples at a number of the monitored locations. Following Republic's Standard Operating Procedures, we did further testing and found elevated levels of CO at a combination of 30 on-site gas extraction wells and leachate collection sumps. As a result we have increased the amount of monitoring that is performed on the landfill gas collection and control system.

Elevated CO levels are consistent with a sub-surface oxidation (SSO) event or fire, but data to date is not yet conclusive on a cause. In order to reduce the amount of oxygen drawn through the site, we have decommissioned 30% of our wells.

We also detected a distinct odor at the landfill which increased when we closed the wells (detectable on and off site). Beginning January 3, our gas contractor began reopening the valves on the decommissioned wells to begin relieving some of the positive pressure which has built up within the landfill. As of January 10, odors have lessened but are not completely abated. We have increased the frequency of our routine monitoring and wellfield adjustments in an effort to reduce the gas pressure in the landfill, reduce odors and minimize the potential for oxygen from the atmosphere to enter the landfill.

During the week of December 20, Dave Vasbinder alerted the state (director of solid waste), St. Louis Department of Health, and the chiefs at the two local fire departments that we were addressing odors due to taking some of our gas wells offline.

Bridgeton Landfill is adjacent to West Lake Landfill. Queries regarding West Lake should be treated completely separately and directed to Kate Whitby (outside counsel with Spencer Fane Britt & Browne LLP at 314-333-3929 or 314-808-2860).

Talking Points

- We are monitoring and addressing elevated carbon monoxide levels at a number of our

landfill gas wells.

- We cannot speculate as to the cause of the elevated readings at this time, but are doing additional testing and monitoring to determine the cause and solution.

- Because elevated carbon monoxide levels can be an indicator of a subsurface fire, we shut off a number of our gas extraction wells in order to prevent additional oxygen from being introduced.

    - Unfortunately, running our gas management system at less than full capacity resulted in some odors. It is important to note that they are in no way harmful.
    - We continue to monitor the situation and have been slowly bringing the gas wells back online, which is reducing the odor.

- We continue to do additional sampling to determine the source, depth and extent of what is going on.

- The Missouri Department of Natural Resources Solid Waste Management Program and the Saint Louis County Department of Health, Air Pollution Control Program regulate our operations and we have kept them abreast of the situation.

    - We also notified the local fire department of the odors.
    - We let our neighbors know about the recent odors as well and will continue to keep them informed.

Attached is a press article from STL business journal. It incorrectly documents the issue as an "underground fire"…we have no reason to believe it is a fire since there is no presence of smoke or flames. Of course we continue to monitor closely, implement corrective actions, and plan for future developments. Call me if you have any questions or additional complaints.

Have a great day,

Dave Vasbinder
Environmental Manager
Republic Services, Inc.
314.744.8166 - Office
314.249.9404 - Cell
314.739.2588 - Fax

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/05/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010502-01		C010502-02		C010502-03		C010502-04	
Client Sample I.D.:	Gas Well 83		Gas Well 66		Gas Well 61R		Gas Well 57R	
Date Sampled:	01/04/11		01/04/11		01/04/11		01/04/11	
Date Analyzed:	01/05/11		01/05/11		01/05/11		01/05/11	
QC Batch No.:	110105GC8A1		110105GC8A1		110105GC8A1		110105GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.059**	0.0030	**0.30**	0.0030	**0.76**	0.0030	**0.54**	0.0030

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ **Date** 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ◆ City of Industry, CA 91748 ◆ Ph: (626) 964-4032 ◆ Fx: (626) 964-5832

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/05/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010502-05		C010502-06		C010502-07		C010502-08	
Client Sample I.D.:	Gas Well 58		Gas Well 59R		Gas Well LCS-3C		Gas Well 33R	
Date Sampled:	01/04/11		01/04/11		01/04/11		01/04/11	
Date Analyzed:	01/05/11		01/05/11		01/05/11		01/05/11	
QC Batch No.:	110105GC8A1		110105GC8A1		110105GC8A1		110105GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		3.0		2.8		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.34**	0.0030	**0.23**	0.0030	**0.012**	0.0028	**0.54**	0.0032

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ◆ City of Industry, CA 91748 ◆ Ph: (626) 964-4032 ◆ Fx: (626) 964-5832

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/05/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010502-09		C010502-10					
Client Sample I.D.:	Gas Well 62R		Gas Well 60R					
Date Sampled:	01/04/11		01/04/11					
Date Analyzed:	01/05/11		01/05/11					
QC Batch No.:	110105GC8A1		110105GC8A1					
Analyst Initials:	ZK		ZK					
Dilution Factor:	3.0		3.1					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Carbon Monoxide	**0.30**	0.0030	**0.82**	0.0031				

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ **Date** 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 110105GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:		Method Blank		LCS		LCSD			
Date Analyzed:		01/05/11		01/04/11		01/04/11			
Analyst Initials:		ZK		ZK		ZK			
Datafile:		05jan001		04jan019		04jan020			
Dilution Factor:		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Monoxide	0.0010	0.0010	ND	92	70-130%	95	70-130%	3.0	<30

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 1/7/11
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-01		C010601-02		C010601-03		C010601-04	
Client Sample I.D.:	Gas Well 71		Gas Well 67		Gas Well 85		Gas Well 84	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A1		110106GC8A1		110106GC8A1		110106GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		2.8		2.8		2.7	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.046**	0.0030	**0.29**	0.0028	**0.055**	0.0028	**0.013**	0.0027

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ **Date** 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-05		C010601-06		C010601-07		C010601-08	
Client Sample I.D.:	Gas Well 69R		Gas Well 70R		Gas Well 35		Gas Well 34	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A1		110106GC8A1		110106GC8A1		110106GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	2.8		2.8		3.0		3.2	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.017**	0.0028	**0.035**	0.0028	**0.21**	0.0030	**0.22**	0.0032

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-09		C010601-10		C010601-11		C010601-12	
Client Sample I.D.:	Gas Well 72R		Gas Well 14A		Gas Well 64		Gas Well 68	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A1		110106GC8A1		110106GC8A1		110106GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	2.7		3.0		2.8		2.8	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.0061**	0.0027	**0.044**	0.0030	**0.17**	0.0028	**0.18**	0.0028

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ **Date** 1/7/11
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-13		C010601-14		C010601-15		C010601-16	
Client Sample I.D.:	Gas Well 65A		Gas Well 38		Gas Well 31R		Gas Well 32R	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A1		110106GC8A1		110106GC8A1		110106GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.54**	0.0030	**0.0094**	0.0030	**0.35**	0.0030	**0.47**	0.0030

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Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-17		C010601-18		C010601-19		C010601-20	
Client Sample I.D.:	Gas Well 37		Gas Well 36		Gas Well 30R		Gas Well 29	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A1		110106GC8A1		110106GC8A1		110106GC8A1	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.2		3.0		3.2		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.33**	0.0032	**0.41**	0.0030	**0.024**	0.0032	**0.0078**	0.0030

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Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-21		C010601-22		C010601-23		C010601-24	
Client Sample I.D.:	Gas Well 76R		Gas Well 75		Gas Well LCS-4B		Gas Well 74	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A2		110106GC8A2		110106GC8A2		110106GC8A2	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		3.0		3.0		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.0045**	0.0030	**0.0080**	0.0030	**0.038**	0.0030	**0.0065**	0.0030

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Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-25		C010601-26		C010601-27		C010601-28	
Client Sample I.D.:	Gas Well 13		Gas Well 11		Gas Well 15		Gas Well 16R	
Date Sampled:	01/05/11		01/05/11		01/05/11		01/05/11	
Date Analyzed:	01/06/11		01/06/11		01/06/11		01/06/11	
QC Batch No.:	110106GC8A2		110106GC8A2		110106GC8A2		110106GC8A2	
Analyst Initials:	ZK		ZK		ZK		ZK	
Dilution Factor:	3.0		3.0		2.8		3.0	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Carbon Monoxide	**0.22**	0.0030	**0.0067**	0.0030	**0.0040**	0.0028	**ND**	0.0030

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Mark Johnson
Operations Manager

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Client: Monitoring Control & Compliance
Attn: Jared Romaine
Project Name: Bridgeton Landfill
Project No.: NA
Date Received: 01/06/11
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	C010601-29		C010601-30					
Client Sample I.D.:	Gas Well 12A		Gas Well 63					
Date Sampled:	01/05/11		01/05/11					
Date Analyzed:	01/06/11		01/06/11					
QC Batch No.:	110106GC8A2		110106GC8A2					
Analyst Initials:	ZK		ZK					
Dilution Factor:	3.0		3.0					
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v				
Carbon Monoxide	**0.21**	0.0030	**0.27**	0.0030				

ND = Not Detected (below RL)
RL = Reporting Limit

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QC Batch No.: 110106GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:		Method Blank		LCS		LCSD			
Date Analyzed:		01/06/11		01/06/11		01/06/11			
Analyst Initials:		ZK		ZK		ZK			
Datafile:		06jan009		06jan007		06jan008			
Dilution Factor:		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Monoxide	0.0010	0.0010	ND	94	70-130%	89	70-130%	6.0	<30

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 1/7/11
Mark J. Johnson
Operations Manager

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QC Batch No.: 110106GC8A2
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:		Method Blank		LCS		LCSD			
Date Analyzed:		01/06/11		01/06/11		01/06/11			
Analyst Initials:		ZK		ZK		ZK			
Datafile:		06jan036		06jan034		06jan035			
Dilution Factor:		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Monoxide	0.0010	0.0010	ND	92	70-130%	93	70-130%	1.3	<30

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By: Mark J. Johnson
Operations Manager

Date: 1/7/11

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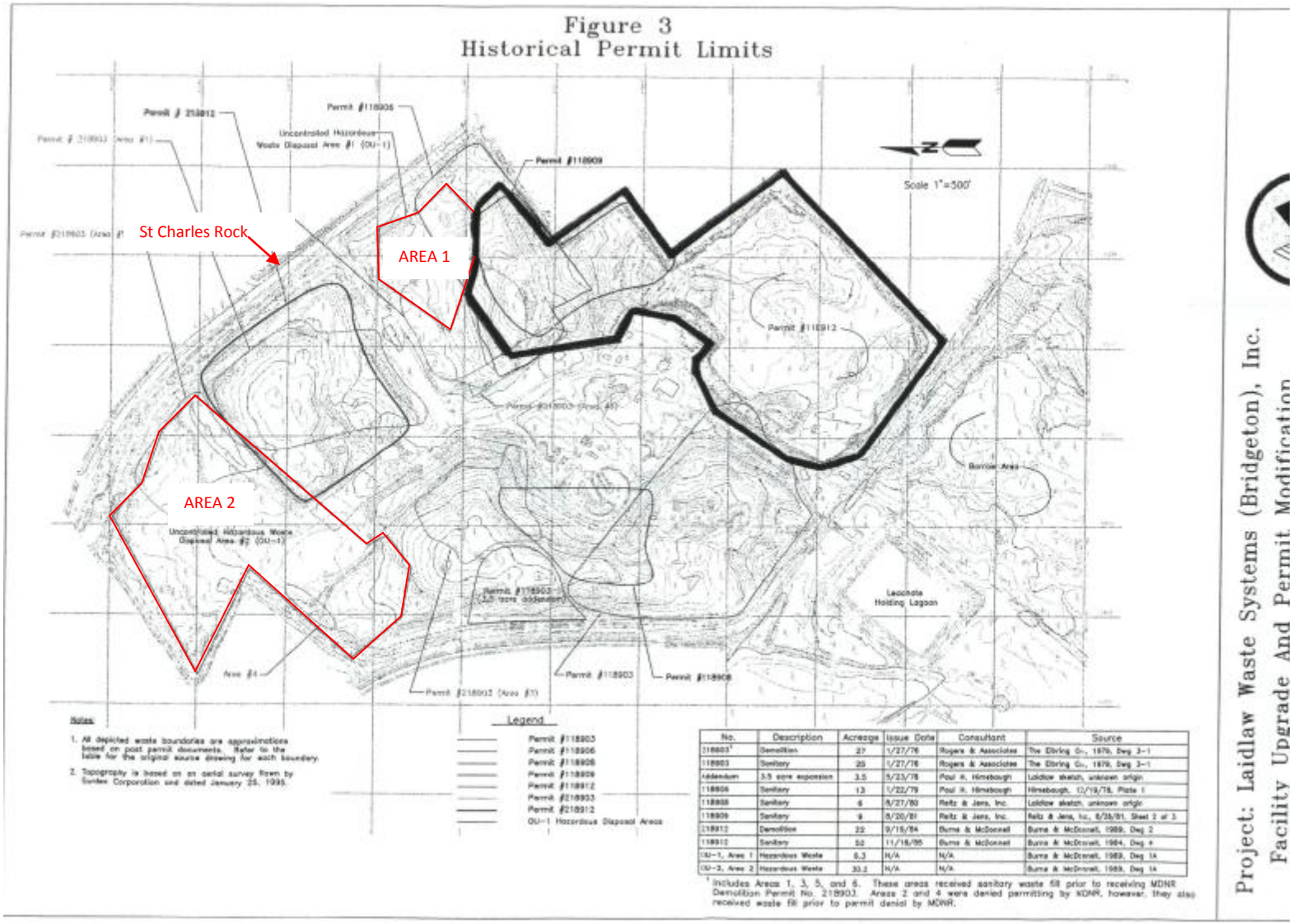
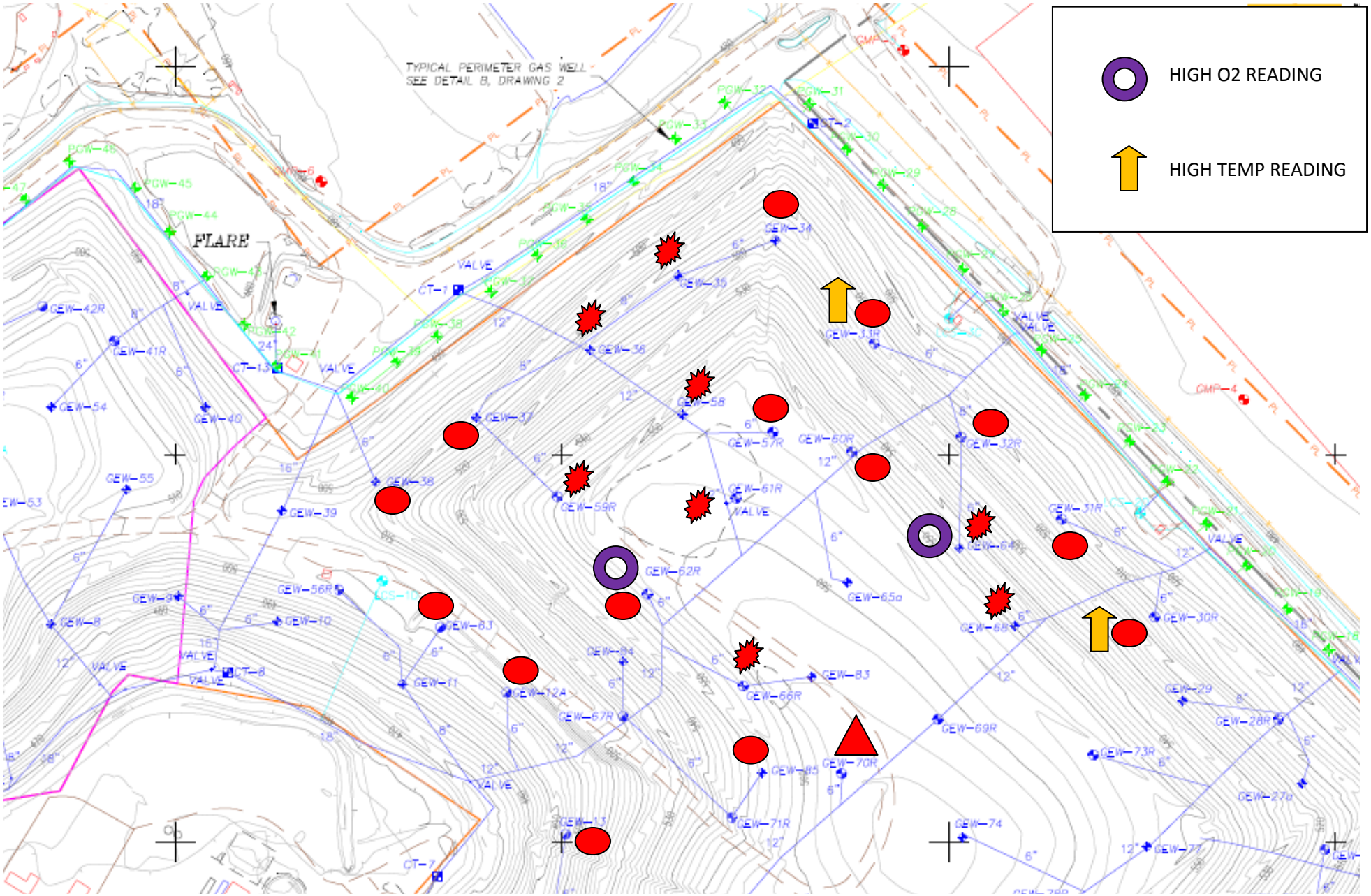


BRIDGETON SLF - HAZARDOUS WASTE AREAS (areas 1 and 2 shown in RED color)



Bridgeton SLF

Well shut down 12/21/10

Wells shut down 12/22/10

Shut down 12/23/10

St. Louis Business Journal – run at 4:11 on 1/27/11

Fire prompts landfill monitoring

Republic Services' inactive Bridgeton Sanitary Landfill in St. Louis County is being monitored by state regulators because an underground fire has boosted carbon monoxide readings.

Gas sampling results from Jan. 4 included high levels of carbon monoxide and carbon dioxide and low levels of methane and oxygen. The fire is believed to be located deep within the south central portion of the landfill, 100 to 150 feet below the surface.

Republic Services notified the Missouri Department of Natural Resources of data obtained from portable gas monitoring equipment.

Unlike surface fires, subsurface landfill fires occur with minimal oxygen and smolder for long periods of time within the waste mass where they slowly burn themselves out, DNC said.

As a safety measure, Republic Services said it turned off a section of the landfill gas extraction system to minimize the amount of oxygen made available.

The Bridgeton Sanitary Landfill was initially permitted in January 1979 and accepted municipal solid waste until the facility ceased operation in December 2004.

Read more: Fire prompts landfill monitoring | St. Louis Business Journal

Fox 2 Website (notes submitted by KTVI and KPLR)

Possible Underground Fire At Bridgeton Landfill

The Missouri Department of Natural Resources is working with Republic Services to investigate and address elevated carbon monoxide readings in the landfill gas at the company's inactive Bridgeton Sanitary Landfill located in St. Louis County.

Republic Services notified the Missouri Department of Natural Resources of data obtained from portable gas monitoring equipment that is often indicative of a subsurface fire. Gas sampling results from Jan. 4 included high levels of carbon monoxide and carbon dioxide and low levels of methane and oxygen. No smoke or steam is visible at the landfill and the landfill surface appears unchanged.

The fire is believed to be located deep within the south central portion of the landfill, 100 to 150 feet below the surface.

Unlike surface fires, subsurface landfill fires occur with minimal oxygen and smolder for long periods of time within the waste mass where they slowly burn themselves out. As a safety measure, Republic Services turned off a section of the landfill gas extraction system to minimize the amount of oxygen made available.

While this area is the site of several different sanitary and demolition landfills, this activity does not involve any other landfills, including the areas being addressed under the West Lake Landfill Superfund Site. While there is no evidence that this activity is causing any health concerns, the landfill is being closely monitored. The department is in close contact with Republic Services and local officials to ensure appropriate safety precautions are taken.

The Bridgeton Sanitary Landfill was initially permitted in January 1979 and accepted municipal solid waste until the facility ceased operation in December 2004. The facility is currently working with the department to certify closure of the landfill.

For additional information, contact the Department of Natural Resources' Solid Waste Management Program at 800-361-4827 or 573-751-5401