

Sanitary Disposal Project Name

20xx (Semi-)Annual Water Quality Report

MSWLF Unit Name

Permit #77-SDP-XX-16P

Site Owner

Site Location

Date

Prepared by:

Entity or Individual

Entity Address

City, Zip Code

Certification

Prepared by: _____ Date: _____

Typed: _____

Certification page (PE or ground water scientist signature) **113.10(1)d**

For the purposes of this rule, a “qualified groundwater scientist” means a scientist or an engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.

Period of Report Coverage

(Narrative listing monitoring event dates that this report addresses)

Report Priority

Provide narrative discussion on urgency or lack thereof for a DNR review based on conclusions, recommendations, demonstrations, proposals or requests. Include a review of impact on rules schedule that DNR review time may have. Identify any action or activity that is on hold due to completion of DNR review or comment.

Provide actions and/or permit amendments needed based on this year's results.
113.4(9) (Actions can either be requested by the permit holder or initiated by the DNR).
Requests for permit amendments must be submitted in writing to the DNR with supporting documentation and justification.

Site Status and Applicable Rules (see Figure 1-Site Plan)

(this narrative describes the site status as a solid waste landfill, i.e. closed areas, open areas, types of waste accepted, and applicable IAC rules)

Table of Contents

Acronyms/Abbreviations:

ACM = Assessment of Corrective Measures
CAMP = Corrective Action Monitoring Plan
CL = Control Limit - Mean plus Two Standard Deviations
DO = Dissolved Oxygen
DQR = Double Quantification Rule
GWPS = Groundwater Protection Standard
LEL = Lower Explosive Limit
LCL = Lower Confidence Limit
LN = Lognormal
MCL = EPA Maximum Contaminant Level
N = Normal
NC = No Change
NP = Non-Parametric
ORP = Oxidation Reduction Potential
P = Parametric
PL = Prediction Limit
RL = Reporting Limit
SS = DNR Statewide Standard for a protected groundwater source
SSI = Statistically Significant Increase above background
SSL = Statistically Significant Level above groundwater protection standard
UCL = Upper Confidence Limit

The worksheets contain a comment section for the user of this template to further explain results, evaluations, and conclusions. Use additional pages if necessary.

Also included on the bottom of some worksheets *in italics* is the DNR's intended purpose for these worksheets.

Site Background

Comments: Site background consists of a brief history of the site and hydrogeology.

Table 1
Monitoring Program Summary
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Monitoring Well	Formation	Current Monitoring Program	Change for next sampling event	Constituents w/ SSI	Constituents w/ SSL	Total # of Samples in each monitoring program since January 1, 2018		
						Detection	Assessment	Corrective Action
MW-1	Weathered Till	Background	NC	None	None	18	0	0
MW-2	Weathered Till	Corrective Action	NC	cis-1,2-DCE	Co, TCE, Vinyl Chloride	0	8	10
MW-3	Weathered Till	Corrective Action	Assessment	Co	None	2	8	8
MW-4	Weathered Till	Assessment	NC	Co, V	None	1	17	0
MW-5	Weathered Till	Detection	NC	None	None	18	0	0
MW-6	Weathered Till	Assessment	NC	Benzene, Vinyl Chloride	None	1	17	0
MW-7	Weathered Till	Detection	awaiting resample	None	None	18	0	0
MW-8	Weathered Till	Background	NC	None	None	18	0	0
MW-9	Weathered Till	Corrective Action	NC	Ba, bis(2-ethylhexyl)phthalate	As, Vinyl Chloride	1	3	14
MW-10	Upper Limestone	Detection	NC	None	None	18	0	0
GU-1	Underdrain - Weathered Till	Detection	NC	None	None	18	0	0
Other monitoring points								
MW 28	Weathered Till	Plume delineation						
MW 29	Weathered Till	Water Level						
MW 30	Weathered Till	Corrective Action						
MW 31	Upper Limestone	Water Level						

Comments: (insert clarifications, deviations to HMSP or notes as needed). Include a discussion on any new monitoring points added or deleted from HMSP and relevant DNR approval or approval status of such changes.

This worksheet;

- 1) Provides a summary of the monitoring points and in which phase of monitoring they are in,
- 2) Verifies conformance with the approved HMSP network,
- 3) Gives a summary of the monitored aquifer,
- 4) Provides the size of the dataset,
- 5) Provides a summary of current contaminants above background and whether they exceed a GWPS,
- 6) States the phase for the next sampling event,
- 7) Mentions additional site sampling that may be occurring on a temporary basis to achieve a delineation or clean up goal, and
- 8) Provides any deviations to current HMSP.

Site Figures

Comments: (Provide a figure for each monitored system [for example upper and lower hydrogeologic strata] within the report or in an appendix and identify them by a Figure #. All figures should contain a legend, scale bar, north arrow, date of topographic survey, limits of waste, permitted boundary and property or legal entitlement boundary).

(Map must contain ground water and leachate elevations (if applicable) for each sampling event and each monitored unit.)

Table 2
Monitoring Program Implementation Schedule
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Monitoring Well	Recent Sampling Dates and Constituents			Upcoming Sampling Dates and Constituents				Full Appendix II Sample Dates	
	5/13/2014	9/12/2014	4/1/2015	July 2015 (resample)	October 2015	March 2016	September 2016	Previously Collected	Next Event
MW-1	Appendix I, Appendix II	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	7/26/2008, 6/15/2009, 5/13/2014	Spring 2019
MW-2	Appendix I, Appendix II	Appendix I, TSS	Appendix I, TSS	As	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	7/26/2008, 6/15/2009, 5/13/2014	Spring 2019
MW-3	Appendix I	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	4/12/2011, 4/28/2012	Spring 2017
MW-4	Appendix I	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	4/12/2011, 4/28/2012, 12/1/14	Spring 2019
MW-5	N/A - Dry	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS		
MW-6	Appendix I, Appendix II	Appendix I, TSS	Appendix I, TSS	Toluene	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	7/26/2008, 6/15/2009, 5/13/2014	Spring 2019
MW-7	Appendix I	Appendix I, TSS	Appendix I, TSS	Co	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS		
MW-8	Appendix I, Appendix II	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	7/26/2008, 6/15/2009, 5/13/2014	Spring 2019
MW-9	Appendix I, bis(2-ethylhexyl)phthalate	Appendix I, TSS, bis(2-ethylhexyl)phthalate	Appendix I, TSS, bis(2-ethylhexyl)phthalate		Appendix I, TSS, bis(2-ethylhexyl)phthalate	Appendix I, TSS, bis(2-ethylhexyl)phthalate	Appendix I, TSS, bis(2-ethylhexyl)phthalate	1/16/2012, 5/24/2013	Spring 2018
MW-10	Appendix I	Appendix I, TSS	Appendix I, TSS		Appendix I, TSS	Appendix I, TSS	Appendix I, TSS		

Comments: (insert clarifications or notes as needed) Explain deviations from schedules listed in rules/permit and reason(s) for deviations.

This worksheet tracks compliance with permitted sampling frequencies and required parameters and to aid in scheduling.

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Compliance with:	Monitoring Calendar Years						
	2010	2011	2012	2013	2014	2015	2016
567 IAC 113.10(2)"f"(1) high and low water levels (add required frequency)	Completed		Completed		Completed		Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths	Completed		Completed		Completed		Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Completed	Completed	Completed	Completed	Scheduled
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry	Completed		Completed		Completed		Scheduled
Waste separation from ground water 113.6(2)"l"	Completed	Completed	Completed	Completed	Completed	Completed	Scheduled

Comments: (insert clarifications or notes as needed) Explain deviations from schedules listed in rules/permit and reason(s) for deviations

This worksheet;

- 1) Summarizes compliance, and*
- 2) Aids in scheduling future tasks.*

**Table 4
Monitoring Well Maintenance and Performance Summary
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P**

(includes all wells, underdrains etc.)

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth Discrepancy (ft)	Baseline Recharge (gpm)/date	Current Recharge Rate	
					3/25/2015	8/31/2015			3/25/2015	% Change
MW-1	1251.8	1234.7	22.1	Groundwater Level (ft)	5.35	8.34	1.3	0.044 1/28/2008	0.041	-7%
				Groundwater Elevation (Ft MSL)	1246.45	1243.46				
				Measured Well Depth (ft)	21.2	20.8				
				Submerged screen	Y	Y				
MW-2	1230.8	1218.9	16.9	Groundwater Level (ft)	2.95	4.2	1.7	0.102 1/28/2008	0.11	8%
				Groundwater Elevation (Ft MSL)	1227.85	1226.6				
				Measured Well Depth (ft)	15.4	15.2				
				Submerged screen	Y	Y				
MW-3	1231.2	1208.9	32.3	Groundwater Level (ft)	3.21	4.84	1.2	0.021 1/28/2008	0.02	-5%
				Groundwater Elevation (Ft MSL)	1227.99	1226.36				
				Measured Well Depth (ft)	31.3	31.1				
				Submerged screen	Y	Y				
MW-4	1238.2	1226.6	21.6	Groundwater Level (ft)	2.75	6.52	4.6	0.166 1/28/2008	0.102	-39%
				Groundwater Elevation (Ft MSL)	1235.45	1231.68				
				Measured Well Depth (ft)	18	17				
				Submerged screen	Y	Y				
MW-5	1239	1196.6	52.4	Groundwater Level (ft)	3.35	6.65	1.7	0.054 1/28/2008	0.058	7%
				Groundwater Elevation (Ft MSL)	1235.65	1232.35				
				Measured Well Depth (ft)	51.1	50.7				
				Submerged screen	Y	Y				
MW-6	1215.5	1203.7	21.8	Groundwater Level (ft)	17.1	19.4	4.6	0.081 1/28/2008	0.078	-4%
				Groundwater Elevation (Ft MSL)	1198.4	1196.1				
				Measured Well Depth (ft)	17.2	17.3				
				Submerged screen	N	N				
MW-7	1215.8	1174.7	51.2	Groundwater Level (ft)	5.15	4.29	0.3	0.061 1/28/2008	0.066	8%
				Groundwater Elevation (Ft MSL)	1210.65	1211.51				
				Measured Well Depth (ft)	50.9	51.1				
				Submerged screen	Y	Y				
MW-8	1220.2	1209.3	15.9	Groundwater Level (ft)	4.21	6.81	-0.1	0.078 1/28/2008	0.075	-4%
				Groundwater Elevation (Ft MSL)	1215.99	1213.39				
				Measured Well Depth (ft)	16	16				
				Submerged screen	Y	Y				
MW-9	1221.6	1204.8	26.8	Groundwater Level (ft)	5.25	6.98	2.4	0.152 1/28/2008	0.097	-36%
				Groundwater Elevation (Ft MSL)	1216.35	1214.62				
				Measured Well Depth (ft)	24.4	26.7				
				Submerged screen	Y	Y				
MW-10	1230.1	1263.7	33.6	Groundwater Level (ft)	3.48	4.94	0.2	0.846 1/28/2008	0.861	2%
				Groundwater Elevation (Ft MSL)	1226.62	1225.16				
				Measured Well Depth (ft)	33.4	33.5				
				Submerged screen	Y	Y				
MW-28	1230	1198	42	Groundwater Level (ft)	2.95	4.11	1.5	0.218 1/28/2008	0.204	-6%
				Groundwater Elevation (Ft MSL)	1227.05	1225.89				
				Measured Well Depth (ft)	41.3	40.5				
				Submerged screen	Y	Y				
MW-29	1274.5	1218.5	15.8	Groundwater Level (ft)	10.69	11.7	0.2	0.284 1/28/2008	0.275	-3%
				Groundwater Elevation (Ft MSL)	1263.81	1262.8				
				Measured Well Depth (ft)	16	15.6				
				Submerged screen	Y	Y				
MW-30	1274.2	1253.2	31.3	Groundwater Level (ft)	10.45	11.39	0.6	0.031 1/28/2008	0.033	6%
				Groundwater Elevation (Ft MSL)	1263.75	1262.81				
				Measured Well Depth (ft)	30.9	30.7				
				Submerged screen	Y	Y				
MW-31	1241.39	1275.8	34.41	Groundwater Level (ft)	12.25	12.84	0.21	0.787 1/28/2008	0.811	3%
				Groundwater Elevation (Ft MSL)	1229.14	1228.55				
				Measured Well Depth (ft)	34.5	34.2				
				Submerged screen	Y	Y				
PZ-PH-1	1248.76	1237.5	31.3	Groundwater Level (ft)	9.49	11.21	0	0.314 1/28/2008	0.325	4%
				Groundwater Elevation (Ft MSL)	1239.27	1237.55				
				Measured Well Depth (ft)	31.3	32.3				
				Submerged screen	Y	Y				

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		3/25/2015	8/31/2015
GPZ - 1	bottom of waste (feet MSL)	1074	
	Groundwater Elevation (feet MSL)	1072	1068
	Separation distance (feet)	2	6

Comments: (insert clarifications or notes as needed) Provide schedule for any repair, redevelopment, or replacement of monitoring points.

This worksheet;

- 1) Summarizes data used to evaluate Monitoring Well Maintenance and Performance, and
- 2) Identifies monitoring wells that have submerged screens.

**Table 5
Background and GWPS Summary
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P**

Interwell Background/GWPS (MW-1 and MW-8)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Inorganics										
Antimony (Sb)	µg/l	16	9	1.0 (1/2 RL)	4.3	1.79	5.2	PL(P-LN)	6	MCL
Arsenic (As)	µg/l	16	14	0.5 (1/2 RL)	18.3	12.8	15.2	PL(P-N)	15.2	PL
Barium (Ba)	µg/l	16	15	2.0 (1/2 RL)	1738	794	1571	PL(P-N)	2000	MCL
Beryllium (Be)	µg/l	16	4	0.3 J	1.7	1.14	1.7	PL(NP)	4	MCL
Cadmium (Cd)	µg/l	16	0				0.1	DQR	5	MCL
Chromium (Cr)	µg/l	16	0				2	DQR	100	MCL
Cobalt (Co)	µg/l	16	2	0.6 (1/2 RL)	2.45	0.8	2.45	PL(NP)	2.8	SS
Copper (Cu)	µg/l	16	0				2	DQR	1300	MCL
Lead (Pb)	µg/l	16	0				0.5	DQR	15	MCL
Mercury (Hg)	µg/l	3	0				0.2	DQR	2	MCL
Nickel (Ni)	µg/l	16	13	2.0 (1/2 RL)	37	12	51	PL(P-LN)	100	SS
Selenium (Se)	µg/l	16	0				0.7	DQR	50	MCL
Silver (Ag)	µg/l	16	0				0.5	DQR	100	SS
Thallium (Tl)	µg/l	16	1	1.0 (1/2 RL)	1.38	1.05	1.38	PL(NP)	2	MCL
Tin (Sn)	µg/l	3	0				10	DQR	4200	SS
Vanadium (V)	µg/l	16	0				0.5	DQR	35	SS
Zinc (Zn)	µg/l	16	13	4.0 (1/2 RL)	212	73.8	173.8	PL(P-N)	2000	SS
Organics - Appendix I										
Benzene	µg/l	16	0				0.1	DQR	5	MCL
cis-1,2-dichloroethene (cis-1,2-DCE)	µg/l	16	0				1	DQR	7	MCL
Toluene	µg/l	16	0				0.22	DQR	1000	MCL
Trichloroethene (TCE)	µg/l	16	0				0.22	DQR	5	MCL
Vinyl Chloride	µg/l	16	0				0.25	DQR	2	MCL
Organics - Appendix II										
bis(2-ethylhexyl)phthalate	µg/l	3	0				0.5	DQR	6	SS

Intrawell Background / GWPS - MW-10 (3/15/09 through 10/8/12 background data)

Contaminant	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Inorganics										
Antimony (Sb)	µg/l	8	3	1.0 (1/2 RL)	1.78	1.29	1.78	PL(NP)	6	MCL
Arsenic (As)	µg/l	8	8	1.2 J	8.3	5.36	7.38	PL(P-N)	10	MCL
Barium (Ba)	µg/l	8	5	2.0 (1/2 RL)	1811	1241	1738	PL(P-LN)	2000	MCL
Beryllium (Be)	µg/l	8	2	0.5 (1/2 RL)	1.7	1.14	1.7	PL(NP)	4	MCL
Cobalt (Co)	µg/l	8	5	0.6 (1/2 RL)	3.14	2.718	3.14	PL(NP)	3.14	PL
Nickel (Ni)	µg/l	8	6	2.0 (1/2 RL)	9.81	6.02	8.854	PL(P-N)	100	SS
Zinc (Zn)	µg/l	8	1	4.0 (1/2 RL)	8.314	4.51	81.7	PL(NP)	2000	SS

Comments: (insert clarifications or notes as needed) Provide a narrative of water quality results and effectiveness of the statistical data evaluation criteria. Include a summary, if applicable, of any changes to the previous statistical methods that were made in this reporting period, including notifications of changes to the Department and approval dates.

This worksheet;

- 1) Summarizes the size and quality of the data record of the background data,
- 2) Summarizes the current statistical method,
- 3) Examines how background levels were determined,
- 4) Examines whether background levels are reasonable,
- 5) Examines whether RLs are too high compared to GWPS or affecting the efficacy of the DQR,
- 6) Examines whether GWPS is health based or site based and if health based standard is correct, and
- 7) Identifies background water quality that is impacted.

Table 6
Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

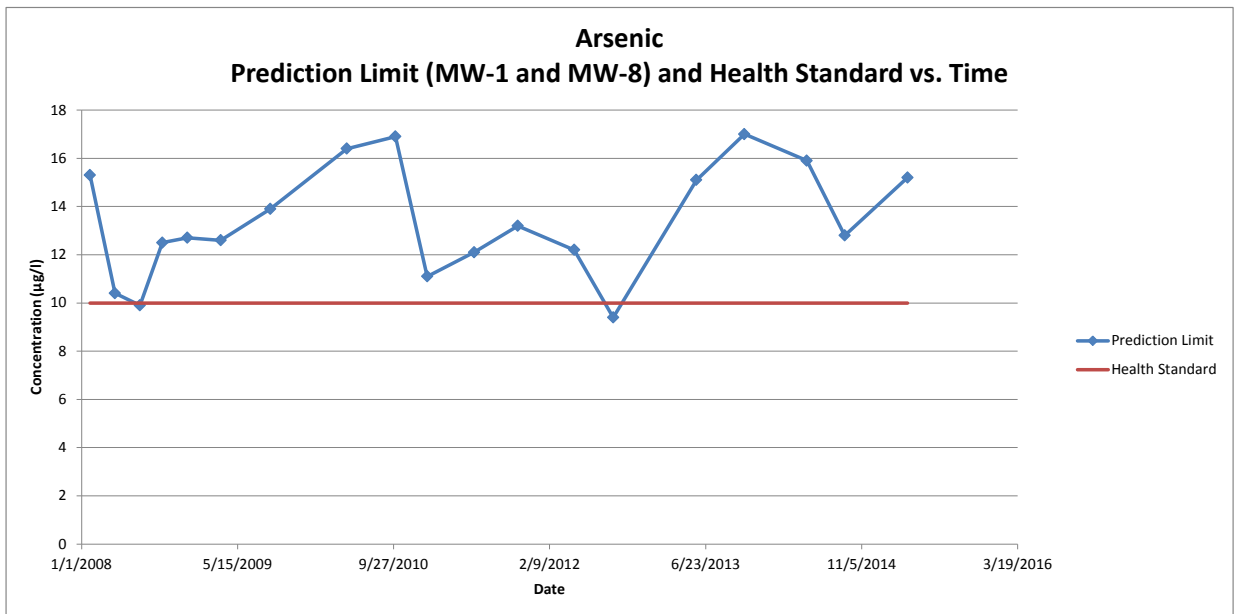
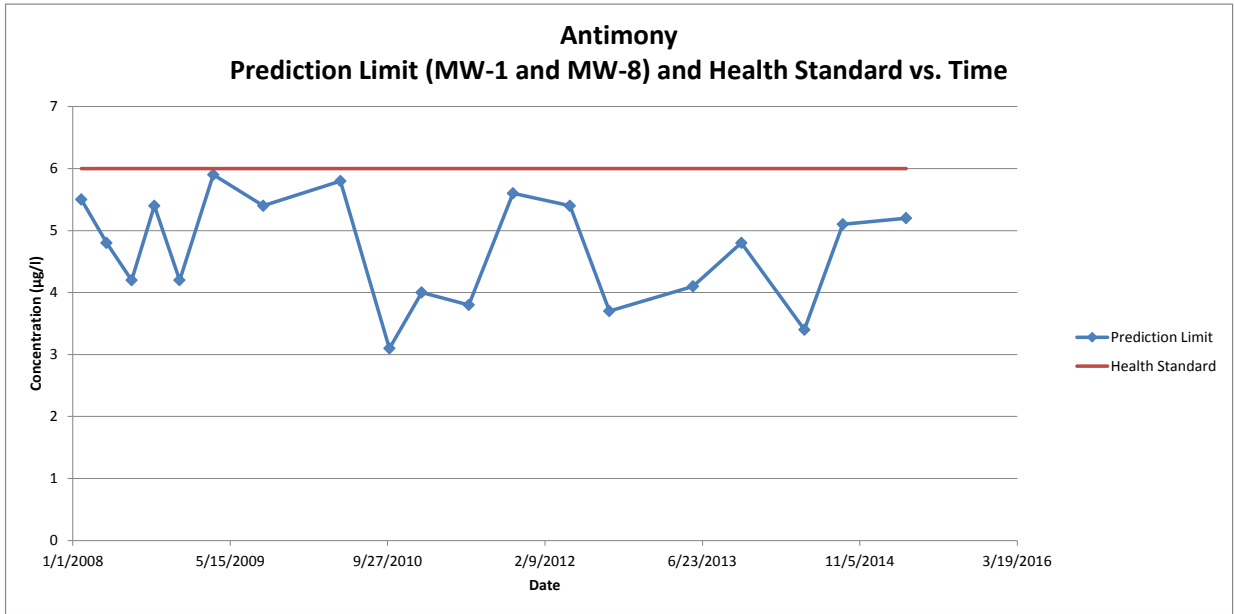
Well	Constituent	Units	Most recent result	Background Standard
MW-1	Barium	µg/l	561	1571
	Beryllium	µg/l	0.6	1.7
	Nickel	µg/l	6.3	51
	Zinc	µg/l	71	173.8
MW-2	Antimony	µg/l	2.8	5.2
	Arsenic	µg/l	20.7 *	15.2
	Barium	µg/l	378	1571
	Nickel	µg/l	7.9	51
MW-3	Barium	µg/l	121	1571
	Nickel	µg/l	17.6	51
	Zinc	µg/l	87.2	173.8
MW-4	Arsenic	µg/l	3.3	15.2
	Barium	µg/l	838	1571
	Nickel	µg/l	22	51
	Zinc	µg/l	48.6	173.8
MW-5	Arsenic	µg/l	2.6	15.2
	Barium	µg/l	153	1571
	Zinc	µg/l	42.1	173.8
MW-6	Antimony	µg/l	3.4	5.2
	Arsenic	µg/l	2.5	15.2
	Barium	µg/l	1125	1571
	Nickel	µg/l	10	51
	Zinc	µg/l	22.6	173.8
	Toluene	µg/l	6.8 *	0.22
MW-7	Arsenic	µg/l	4.1	15.2
	Barium	µg/l	316	1571
	Cobalt	µg/l	3.8 *	2.45
MW-8	Arsenic	µg/l	4.7	15.2
	Barium	µg/l	1468	1571
	Nickel	µg/l	37	51
	Zinc	µg/l	21.7	173.8
MW-9	Zinc	µg/l	27.7	173.8
MW-10	Arsenic	µg/l	2.2	7.38
	Barium	µg/l	671	1738
	Nickel	µg/l	11.2	8.854
	Zinc	µg/l	14.7	81.7
GU-1	Arsenic	µg/l	2.8	15.2
	Zinc	µg/l	13.9	173.8
MW-28	Arsenic	µg/l	2.8	15.2
MW-30	Arsenic	µg/l	3.3	15.2
	Cobalt	µg/l	1.7	2.45

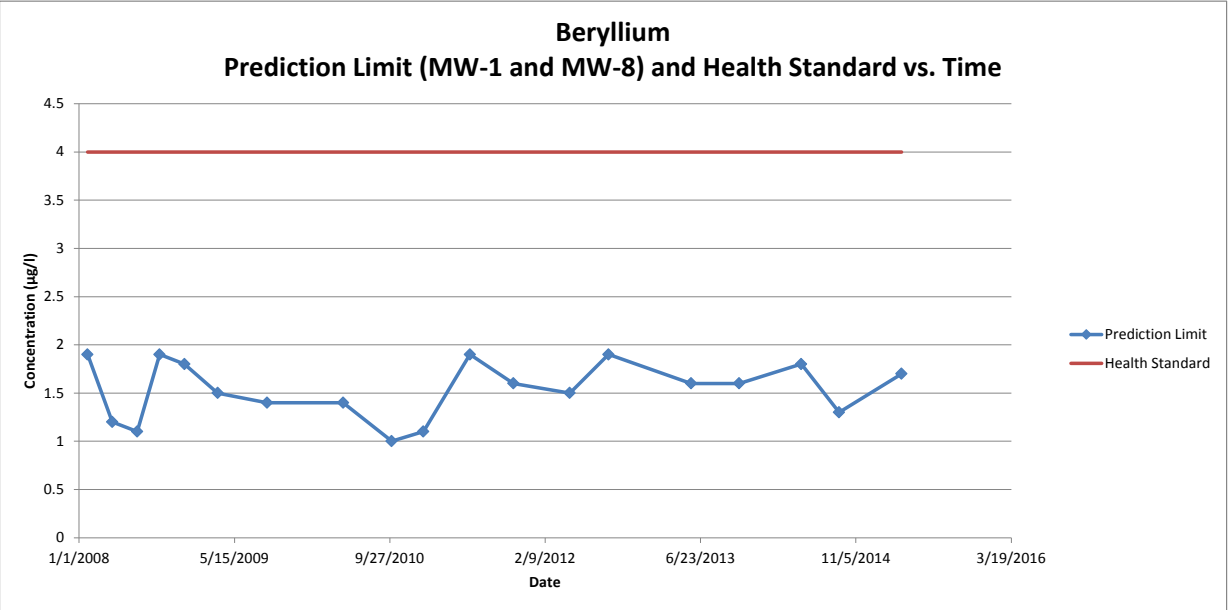
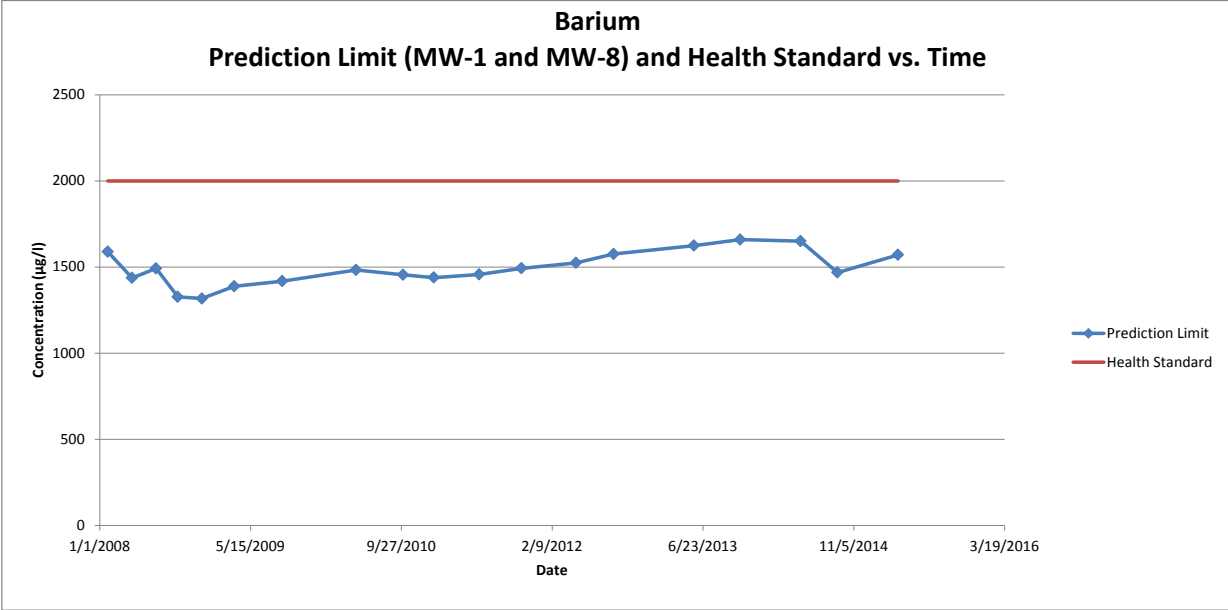
* Current result is above background, if confirmed by next sample an SSI will be identified

Comments: (insert clarifications or notes as needed) Provide a narrative discussion of any problems with the current detection network such as dry points, damaged or inaccessible points, laboratory issues, impact of problems on efficacy of HMSF, proposed remedies if necessary and schedule to implement remedies. Also describe if alternative constituent list or sample frequencies have been approved, or if the permit holder is requesting approval of an alternative source demonstration. Also describe the reasons for any significant recent changes to the calculated prediction limits based upon the graphs shown on the "Standards History" graph.) The resampling strategy (if applicable) needs to be listed and also justifications for excluding any data from evaluation (was it deemed unrepresentative of aquifer conditions, etc.).

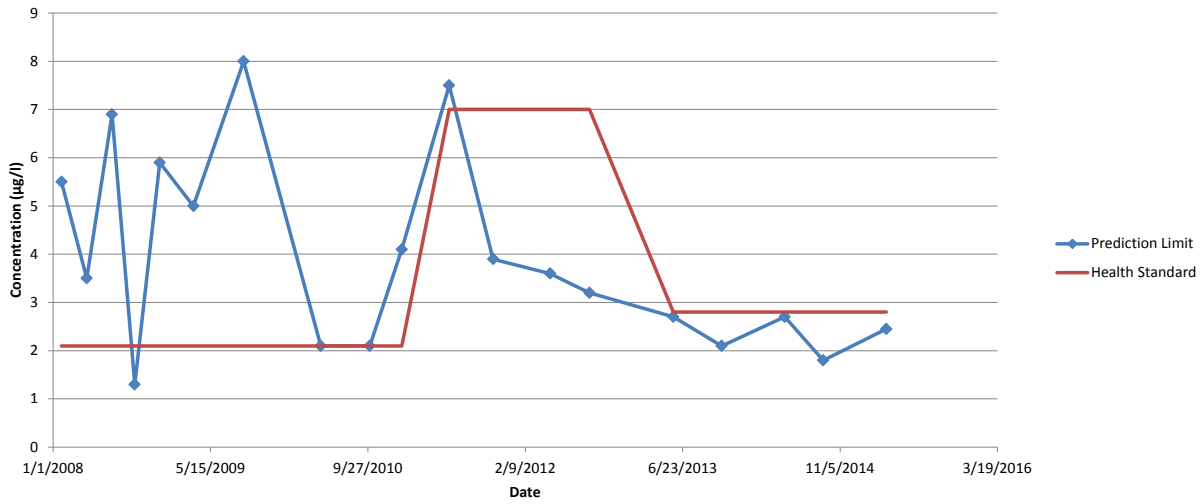
This worksheet presents a summary of background comparisons for well constituents pairs that are in the detection monitoring program. If exceedances are confirmed an investigation of a new release is necessary.

Standards History

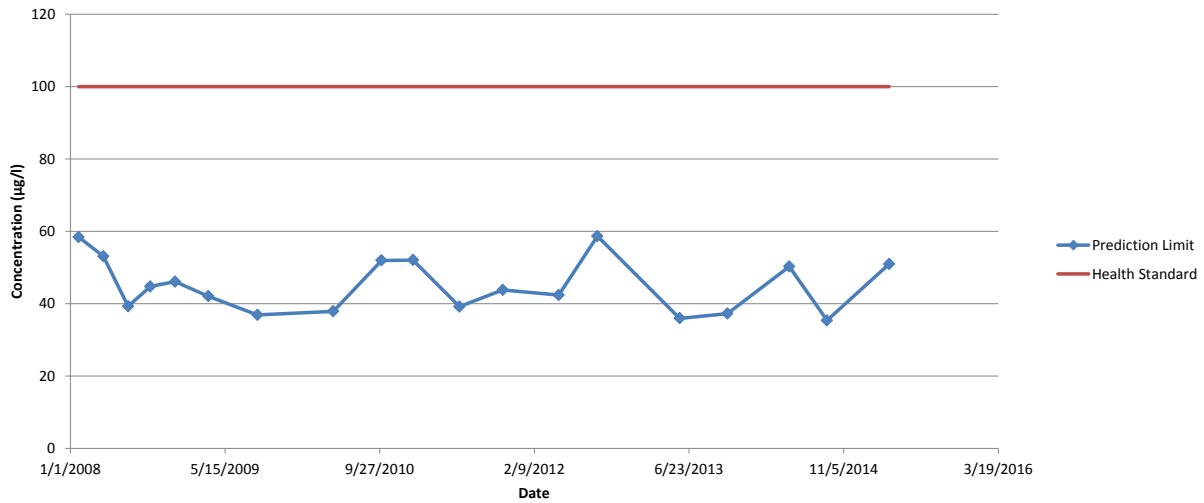




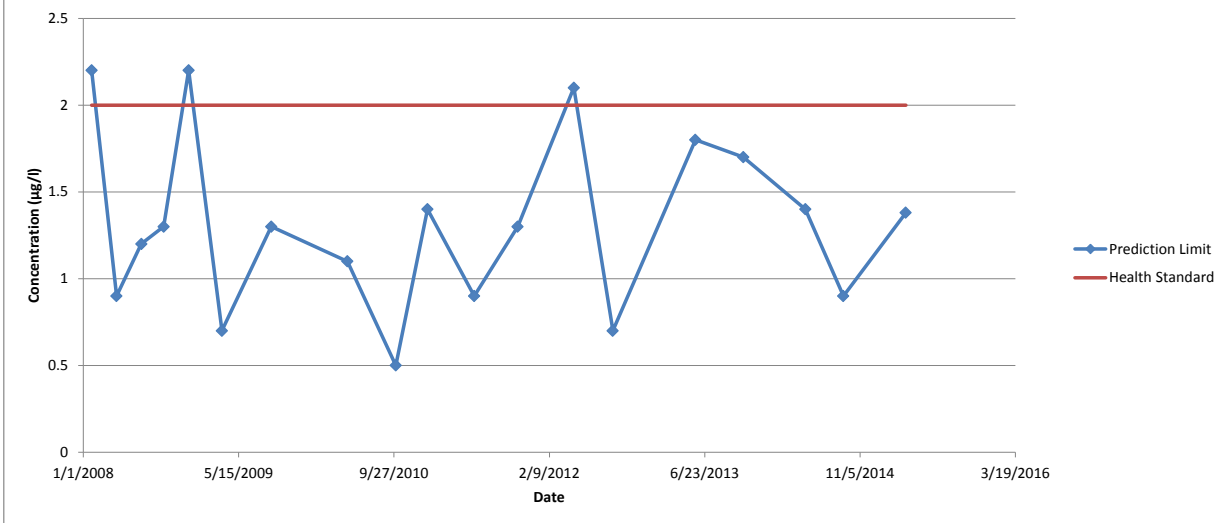
Cobalt
Prediction Limit (MW-1 and MW-8) and Health Standard vs. Time

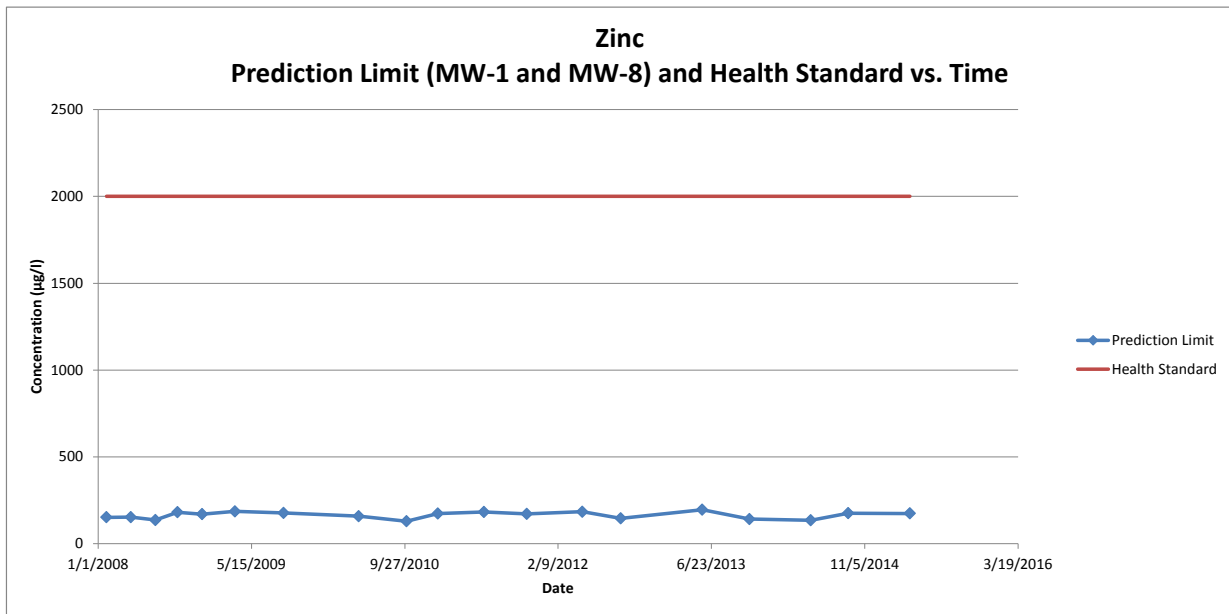


Nickel
Prediction Limit (MW-1 and MW-8) and Health Standard vs. Time



Thallium
Prediction Limit (MW-1 and MW-8) and Health Standard vs. Time





Comments: (insert clarifications or notes as needed) Explain any substantial prediction limit fluctuations.

This worksheet;

- 1) Summarizes changes to health based standards,
- 2) Highlights large changes or trends in PLs for further review,
- 3) Highlights when PLs are greater than GWPS for further review of cause, and
- 4) Potentially identifies that a monitoring program is the correct phase such as assessment or detection monitoring.

Table 7
Summary of Ongoing and Newly Identified SSIs
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Well	Constituent	Units	Most recent result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5th background sample
MW-2	Arsenic	µg/l	20.7 *	15.2	N/A - 2 sample test	15.2	4/1/2015	New SSI - by 8/1/15	12/5/2008
	cis-1,2-DCE	µg/l	3.4	1	0.09	7	1/28/2008	4/17/2008	12/5/2008
	TCE	µg/l	17.8	0.22	5.2 ***	5	1/28/2008	4/17/2008	12/5/2008
MW-3	Cobalt	µg/l	1.97 **	2.45	0.36	2.8	10/3/2010	1/13/2011	12/5/2008
MW-4	Cobalt	µg/l	8.97	2.45	2.57	2.8	10/3/2010	1/13/2011	12/5/2008
	Vanadium	µg/l	12	0.5	1.2	35	5/24/2013	8/11/2013	12/5/2008
MW-6	Benzene	µg/l	3.14	0.1	0.95	5	1/28/2008	4/17/2008	12/5/2008
	Toluene	µg/l	6.8	0.22	N/A -suspected SSI	1000	4/1/2015	New SSI - by 8/1/15	12/5/2008
	Vinyl Chloride	µg/l	5.4	0.25	1.98	2	1/28/2008	4/17/2008	12/5/2008
MW-7	Cobalt	µg/l	3.8	2.45	N/A - suspected SSI	2.8	4/1/2015	New SSI - by 8/1/15	12/5/2008
MW-9	Barium	µg/l	1974	1571	384	2000	4/28/2012	6/21/2012	12/5/2008
	cis-1,2-DCE	µg/l	1.5	1	1.21	7	8/31/2012	5/24/2013	12/5/2008
	bis(2-ethylhexyl)phthalate	µg/l	6.98	0.5	2.09	6	1/16/2012	4/28/2012	1/8/2013

* Current result is above GWPS, if confirmed by next sample an SSL will be identified

** Current result is below background, if confirmed by next sample SSI will be terminated

*** LCL has exceeded the GWPS, this well/constituent pair is now identified as an SSL

**** Non-MSWLF Unit source of the SSI identified

Comments: (insert clarifications or notes as needed) Provide a narrative discussion of any problems with the current assessment network such as dry points, damaged or inaccessible points, laboratory issues, impact of problems on efficacy of HMSP, proposed remedies if necessary and schedule to implement remedies. Also describe if alternative constituent list or alternative frequency has been approved [including Appendix II resample], or if the permit holder is requesting approval of an alternative source demonstration. Also describe the status of plume delineation activities and property owner notifications, as necessary.)

This worksheet;

- 1) Compares result to background standard (to verify the SSI),*
- 2) Compares LCL to GWPS (to determine if it is an SSL),*
- 3) Reviews timing of resample collection,*
- 4) Reviews timing of background establishment,*
- 5) Compares table to statistical software output and previous table to ensure all SSIs are included, and*
- 6) Shows what additional testing is needed to do confidence interval testing.*

Table 8
Summary of Ongoing and Newly Identified SSLs
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Well	Constituent	Units	Most recent result	Upper Confidence Limit	GWPS	Initial Exceedance	Consecutive Compliance Dates		
							1st Occurrence	Most Recent	Duration
MW-2	Cobalt	µg/l	2.3	3.57	2.8	10/3/2010			
	TCE	µg/l	17.8	38.2	5	New SSL - 4/1/2015			
	Vinyl Chloride	µg/l	7.4	16	2	12/5/2008			
MW-3	Arsenic	µg/l	5.34	N/A - 2 sample test	15.2	6/12/2011	4/28/2012	4/1/2015	3 years*
MW-9	Arsenic	µg/l	31.4	N/A - 2 sample test	15.2	4/28/2012			
	Vinyl Chloride	µg/l	0.7	1.74	2	5/24/2013	4/1/2015		0 years

* This well/contaminant pair has been compliant for 3 consecutive years and no longer has an SSL

Comments: (insert clarifications or notes as needed) Explain deviations to schedule as required by permit/rule.

This worksheet;

- 1) *Compares UCL to GWPS (to verify that it's still an SSL),*
- 2) *Reviews timing if UCL has fallen below the GWPS, and*
- 3) *Compares table to statistical software output and previous table to ensure all SSLs are included.*

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Acetonitrile; Methyl cyanide (75-05-8)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Acetophenone (98-86-2)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
2-Acetylaminofluorene; 2-AAF (53-96-3)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Acrolein (107-02-8)	7/26/2008	µg/l	<0.75	<0.75	<0.75						<0.75				
	6/15/2009	µg/l	<0.75	<0.75	<0.75						<0.75				
	4/12/2011	µg/l				<0.75	<0.75								
	1/16/2012	µg/l									<0.75				
	4/28/2012	µg/l				<0.75	<0.75								
	5/24/2013	µg/l									<0.75				
	5/13/2014	µg/l	<0.75	<0.75	<0.75						<0.75				
	12/1/2014	µg/l							<0.75						
Aldrin (309-00-2) SS = 0.01	7/26/2008	µg/l	<0.032	<0.032	<0.032						<0.032				
	6/15/2009	µg/l	<0.032	<0.032	<0.032						<0.032				
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032						<0.032				
	12/1/2014	µg/l							<0.032						
Allyl chloride (107-05-1)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
4-Aminobiphenyl (92-67-1) SS = 0.0083	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Anthracene (120-12-7) SS = 2100	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Benzo[a]anthracene (56-55-3) SS = 0.24	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Benzo[b]fluoranthene (205-99-2) SS = 0.24	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Benzo[k]fluoranthene (207-08-9) SS = 0.24	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Benzo[ghi]perylene (191-24-2) SS = 21	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5						<0.5				
	12/1/2014	µg/l							<0.5						
Benzo[a]pyrene (50-32-8) SS = 0.18	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l								<0.5					
alpha-BHC (319-84-6) SS = 0.028	7/26/2008	µg/l	<0.032	<0.032	<0.032						<0.032				
	6/15/2009	µg/l	<0.032	<0.032	<0.032						<0.032				
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032					<0.032					
	12/1/2014	µg/l						<0.032							
beta-BHC (319-85-7) SS = 0.042	7/26/2008	µg/l	<0.032	<0.032	<0.032						<0.032				
	6/15/2009	µg/l	<0.032	<0.032	<0.032						<0.032				
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032					<0.032					
	12/1/2014	µg/l						<0.032							
delta-BHC (319-86-8) SS = 2.1	7/26/2008	µg/l	<0.032	<0.032	<0.032						<0.032				
	6/15/2009	µg/l	<0.032	<0.032	<0.032						<0.032				
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032					<0.032					
	12/1/2014	µg/l						<0.032							
gamma-BHC; Lindane (58-89-9) MCL = 2	7/26/2008	µg/l	<0.032	<0.032	<0.032						<0.032				
	6/15/2009	µg/l	<0.032	<0.032	<0.032						<0.032				
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032					<0.032					
	12/1/2014	µg/l						<0.032							
Bis(2-chloroethoxy)methane (111-91-1)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Bis(2-chloroethyl) ether (111-44-4) SS = 0.16	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Bis-(2-chloro-1-methylethyl) (108-60-1) SS = 300	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Bis(2-ethylhexyl) phthalate (117-81-7) SS = 6	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									2.3				
	4/28/2012	µg/l				<0.5	<0.5				<0.5				
	6/21/2012	µg/l									<0.5				
	8/31/2012	µg/l									<0.5				
	1/8/2013	µg/l									5.4				
	5/24/2013	µg/l									<0.5				
	10/25/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5	<0.5				
	9/12/2014	µg/l									<0.5				
	12/1/2014	µg/l							<0.5						
	4/1/2015	µg/l									3.8				
4-Bromophenyl phenyl ether (101-55-3)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Butyl benzyl phthalate; Benzyl (85-68-7) SS = 140	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Chlordane MCL = 2	7/26/2008	µg/l	<2	<2	<2						<2				
	6/15/2009	µg/l	<2	<2	<2						<2				
	4/12/2011	µg/l				<2	<2								
	1/16/2012	µg/l									<2				
	4/28/2012	µg/l				<2	<2								
	5/24/2013	µg/l									<2				
	5/13/2014	µg/l	<2	<2	<2					<2					
	12/1/2014	µg/l						<2							
p-Chloroaniline (106-47-8) SS = 28	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5						<0.5				
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Chlorobenzilate (510-15-6)	7/26/2008	µg/l	<0.5	<0.5	<0.5						<0.5				
	6/15/2009	µg/l	<0.5	<0.5	<0.5										

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
2-Chloronaphthalene (91-58-7) SS = 560	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
2-Chlorophenol (95-57-8) SS = 40	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
4-Chlorophenyl phenyl ether (7005-72-3)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Chloroprene (126-99-8)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Chrysene (218-01-9) SS = 24	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
m-Cresol; 3-methylphenol (108-39-4)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
o-Cresol; 2-methylphenol (95-48-7) SS' = 35	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
p-Cresol; 4-methylphenol (106-44-5) SS = 70	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Cyanide (57-12-5) SS = 200	7/26/2008	µg/l	<10	<10	<10				<10						
	6/15/2009	µg/l	<10	<10	<10				<10						
	4/12/2011	µg/l				<10	<10								
	1/16/2012	µg/l									<10				
	4/28/2012	µg/l				<10	<10								
	5/24/2013	µg/l									<10				
	5/13/2014	µg/l	<10	<10	<10				<10						
	12/1/2014	µg/l					<10								
2,4-D; 2,4-Dichlorophenoxyacetic (94-75-7) MCL = 70	7/26/2008	µg/l	<0.49	<0.49	<0.49				<0.49						
	6/15/2009	µg/l	<0.49	<0.49	<0.49				<0.49						
	4/12/2011	µg/l				<0.49	<0.49								
	1/16/2012	µg/l									<0.49				
	4/28/2012	µg/l				<0.49	<0.49								
	5/24/2013	µg/l									<0.49				
	5/13/2014	µg/l	<0.49	<0.49	<0.49				<0.49						
	12/1/2014	µg/l					<0.49								
4,4-DDD (72-54-8) SS = 0.73	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
	12/1/2014	µg/l					<0.032								
4,4-DDE (72-55-9) SS = 0.51	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
	12/1/2014	µg/l					<0.032								
4,4-DDT (50-29-3) SS = 0.51	7/26/2008	µg/l	<0.032	<0.032	<0.032		</								

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
Dibenz[a,h]anthracene (53-70-3) SS = 0.024	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
Dibenzofuran (132-64-9) SS = 7	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
Di-n-butyl phthalate (84-74-2) SS = 700	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
m-Dichlorobenzene (541-73-1) SS = 600	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
3,3-Dichlorobenzidine (91-94-1) SS = 0.39	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
Dichlorodifluoromethane (75-71-8) SS = 1000	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
2,4-Dichlorophenol (120-83-2) SS = 20	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
2,6-Dichlorophenol (87-65-0)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
1,3-Dichloropropane (142-28-9)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
2,2-Dichloropropane (594-20-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
1,1-Dichloropropene (563-58-6)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l					<0.5								
Dieldrin (60-57-1) SS = 0.011	7/26/2008	µg/l	<0.032	<0.032	<0.032					<0.032					
	6/15/2009	µg/l	<0.032	<0.032	<0.032					<0.032					
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032					<0.032					
	12/1/2014	µg/l					<0.032								
Diethyl phthalate (84-66-2) SS = 5600	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
Disulfoton (298-04-4) SS = 0.7	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Endosulfan I (959-98-8) SS = 42	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Endosulfan II (33213-65-9) SS = 42	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Endosulfan sulfate (1031-07-8)	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Endrin (72-20-8) MCL = 2	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Endrin aldehyde (7421-93-4) SS = 2.1	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Ethyl methacrylate (97-63-2)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Ethyl methanesulfonate (62-50-0)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Famphur (52-85-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Fluoranthene (206-44-0) SS = 280	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Fluorene (86-73-7) SS = 280	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
12/1/2014	µg/l					<0.5									
Heptachlor (76-44-8) MCL = 0.4	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Heptachlor epoxide (1024-57-3) MCL = 0.2	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032				<0.032						
	4/12/2011	µg/l				<0.032	<0.032								
	1/16/2012	µg/l									<0.032				
	4/28/2012	µg/l				<0.032	<0.032								
	5/24/2013	µg/l									<0.032				
	5/13/2014	µg/l	<0.032	<0.032	<0.032				<0.032						
12/1/2014	µg/l					<0.032									
Hexachlorobenzene (118-74-1) MCL = 1	7/26/2008	µg/l	<0.5	<0.5	<0.5										

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Hexachlorocyclopentadiene (77-47-4) SS = 50	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Hexachloroethane (67-72-1) SS = 1	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Hexachloropropene (1888-71-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Indeno(1,2,3-cd)pyrene (193-39-5) SS = 0.24	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Isobutyl alcohol (78-83-1) SS = 2100	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Isodrin (465-73-6)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Isophorone (78-59-1) SS = 100	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Isosafrole (120-58-1)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Kepone (143-50-0)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Mercury (7439-97-6) MCL = 2	7/26/2008	µg/l	<0.2	<0.2	<0.2				<0.2						
	6/15/2009	µg/l	<0.2	<0.2	<0.2				<0.2						
	4/12/2011	µg/l				<0.2	<0.2								
	1/16/2012	µg/l									<0.2				
	4/28/2012	µg/l				<0.2	<0.2								
	5/24/2013	µg/l									<0.2				
	5/13/2014	µg/l	<0.2	<0.2	<0.2				<0.2						
	12/1/2014	µg/l						<0.2							
Methacrylonitrile (126-98-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Methapyrene (91-80-5)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Methoxychlor (72-43-5) MCL = 40	7/26/2008	µg/l	<0.032	<0.032	<0.032				<0.032						
	6/15/2009	µg/l	<0.032	<0.032	<0.032										

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Methyl methacrylate (80-62-6)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Methyl methanesulfonate (66-27-3) SS = 1.8	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
2-Methylnaphthalene (91-57-6) SS = 28	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Methyl parathion (298-00-0) SS = 1	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Naphthalene (91-20-3) SS = 100	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
1,4-Naphthoquinone (130-15-4)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
1-Naphthylamine (134-32-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
2-Naphthylamine (91-59-8) SS = 0.097	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
o-Nitroaniline; 2-Nitroaniline (88-74-4)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
m-Nitroaniline; 3-Nitroaniline (99-09-2)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
p-Nitroaniline; 4-Nitroaniline (100-01-6)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Nitrobenzene (98-95-3)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
o-Nitrophenol; 2-Nitrophenol (88-75-5)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l													

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5		<0.5				
	12/1/2014	µg/l							<0.5						
N-Nitrosodi-n-butylamine (924-16-3) SS = 0.032	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosodiethylamine (55-18-5)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosodimethylamine (62-75-9) SS = 0.0034	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosodiphenylamine (86-30-6) SS = 36	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosodipropylamine (621-64-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosomethylethalamine (10595-95-6) SS = 0.008	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosopiperidine (100-75-4)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
N-Nitrosopyrrolidine (930-55-2) SS = 0.083	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
5-Nitro-o-toluidine (99-55-8)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Parathion (56-38-2)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Pentachlorobenzene (608-93-5)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Pentachloronitrobenzene (82-68-8)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Pentachlorophenol (87-86-5) MCL = 1	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l						<0.5							
Phenacetin (62-44-2)	7/26/2008</														

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
Phenanthrene (85-01-8) SS = 210	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Phenol (108-95-2) SS = 2000	7/26/2008	µg/l	<2	<2	<2				<2						
	6/15/2009	µg/l	<2	<2	<2				<2						
	4/12/2011	µg/l				<2	<2								
	1/16/2012	µg/l									<2				
	4/28/2012	µg/l				<2	<2								
	5/24/2013	µg/l									<2				
	5/13/2014	µg/l	<2	<2	<2				<2						
	12/1/2014	µg/l					<2								
p-Phenylenediamine (106-50-3)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Phorate (298-02-2) SS = 1.4	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Polychlorinated biphenyls (1336-36-3) SS = 0.5	7/26/2008	µg/l	<0.8	<0.8	<0.8				<0.8						
	6/15/2009	µg/l	<0.8	<0.8	<0.8				<0.8						
	4/12/2011	µg/l				<0.8	<0.8								
	1/16/2012	µg/l									<0.8				
	4/28/2012	µg/l				<0.8	<0.8								
	5/24/2013	µg/l									<0.8				
	5/13/2014	µg/l	<0.8	<0.8	<0.8				<0.8						
	12/1/2014	µg/l					<0.8								
Pronamide (23950-58-5) SS = 5	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Propionitrile; Ethyl cyanide (107-12-0)	7/26/2008	µg/l	<2	<2	<2				<2						
	6/15/2009	µg/l	<2	<2	<2				<2						
	4/12/2011	µg/l				<2	<2								
	1/16/2012	µg/l									<2				
	4/28/2012	µg/l				<2	<2								
	5/24/2013	µg/l									<2				
	5/13/2014	µg/l	<2	<2	<2				<2						
	12/1/2014	µg/l					<2								
Pyrene (129-00-0) SS = 210	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Safrole (94-59-7)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
Silvex; 2,4,5-TP (93-72-1) SS = 50	7/26/2008	µg/l	<0.3	<0.3	<0.3				<0.3						
	6/15/2009	µg/l	<0.3	<0.3	<0.3				<0.3						
	4/12/2011	µg/l				<0.3	<0.3								
	1/16/2012	µg/l									<0.3				
	4/28/2012	µg/l				<0.3	<0.3								
	5/24/2013	µg/l									<0.3				
	5/13/2014	µg/l	<0.3	<0.3	<0.3				<0.3						
	12/1/2014	µg/l					<0.3								
Sulfide (18496-25-8)	7/26/2008	µg/l	<50	<50	<50				<50						
	6/15/2009	µg/l	<50	<50	<50				<50						
	4/12/2011	µg/l				<50	<50								
	1/16/2012	µg/l									<50				
	4/28/2012	µg/l				<50	<50								
	5/24/2013	µg/l									<50				
	5/13/2014	µg/l	<50	<50	<50				<50						
	12/1/2014	µg/l					<50								
2,4,5-T; 2,4,5- (93-76-5) SS = 70	7/26/2008	µg/l	<0.46	<0.46	<0.46				<0.46						
	6/15/2009	µg/l	<0.46	<0.46	<0.46				<0.46						
	4/12/2011	µg/l				<0.46	<0.46								
	1/16/2012	µg/l									<0.46				
	4/28/2012	µg/l				<0.46	<0.46								
	5/24/2013	µg/l									<0.46				
	5/13/2014	µg/l	<0.46	<0.46	<0.46				<0.46						
	12/1/2014	µg/l					<0.46								
1,2,4,5-Tetrachlorobenzene (95-94-3) SS = 2.1	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5				<0.5						
	12/1/2014	µg/l					<0.5								
2,3,4,6-Tetrachlorophenol (58-90-2)	7/26/2008	µg/l	<0.5	<0.5	<0.5				<0.5						
	6/15/2009	µg/l	<0.5	<0.5	<0.5				<0.5						
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l													

			MW-1	MW-8	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9	MW-10	GU-1	MW-28	MW-30
	4/12/2011	µg/l				<10	<10								
	1/16/2012	µg/l									<10				
	4/28/2012	µg/l				<10	<10								
	5/24/2013	µg/l									<10				
	5/13/2014	µg/l	<10	<10	<10					<10					
	12/1/2014	µg/l						<10							
o-Toluidine (95-53-4) SS = 11	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
Toxaphene (8001-35-2) SS = 3	7/26/2008	µg/l	<2	<2	<2					<2					
	6/15/2009	µg/l	<2	<2	<2					<2					
	4/12/2011	µg/l				<2	<2								
	1/16/2012	µg/l									<2				
	4/28/2012	µg/l				<2	<2								
	5/24/2013	µg/l									<2				
	5/13/2014	µg/l	<2	<2	<2					<2					
	12/1/2014	µg/l						<2							
1,2,4-Trichlorobenzene (120-82-1) MCL = 70	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
2,4,5-Trichlorophenol (95-95-4) SS = 700	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
2,4,6-Trichlorophenol (88-06-2) SS = 16	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
0,0,0-Triethyl phosphorothioate (126-68-1)	7/26/2008	µg/l	<0.5	<0.5	<0.5					<0.5					
	6/15/2009	µg/l	<0.5	<0.5	<0.5					<0.5					
	4/12/2011	µg/l				<0.5	<0.5								
	1/16/2012	µg/l									<0.5				
	4/28/2012	µg/l				<0.5	<0.5								
	5/24/2013	µg/l									<0.5				
	5/13/2014	µg/l	<0.5	<0.5	<0.5					<0.5					
	12/1/2014	µg/l						<0.5							
sym-Trinitrobenzene (99-35-4)	7/26/2008	µg/l	<1.5	<1.5	<1.5					<1.5					
	6/15/2009	µg/l	<1.5	<1.5	<1.5					<1.5					
	4/12/2011	µg/l				<1.5	<1.5								
	1/16/2012	µg/l									<1.5				
	4/28/2012	µg/l				<1.5	<1.5								
	5/24/2013	µg/l									<1.5				
	5/13/2014	µg/l	<1.5	<1.5	<1.5					<1.5					
	12/1/2014	µg/l						<1.5							

Key:

MCL = USEPA Maximum Contaminant Level
SS = Iowa Statewide Standards

Comments: (insert clarifications or notes as needed) This is landfill data since December 2007.

This worksheet;
1) Determines if 5 samples for a new well and/or new contaminant have been collected within 1 year.
2) Determines if resamples are being collected within 90 days.
3) Looks for gaps in data record and if an explanation for those gaps was prepared.
4) Ensures that DQR is being correctly applied (are all double quantifications noted in the SSI or SSL summary table?).
5) Examines if RLs are reasonable and if they have changed over the course of the project..

QAQC Summary

Provide a discussion on the effectiveness of the Quality Assurance/Quality Control (QA/QC) Plan including the measured levels of the duplicate samples, trip blanks, and field blanks and corrective measures such as re-sampling or laboratory review taken when, if any, trigger levels established in the QA/QC plan were realized. Describe if sample turbidity or the presence of solids in the samples are affecting inorganic results.

Please reveal the duplicate sampling point name(s).

Table 10
Historic SSI and SSL since January 1, 2018
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Key: gray = SSI; black = SSL		S p r i n g 2013	F a l l 2013	S p r i n g 2014	F a l l 2014	S p r i n g 2015
Well	Constituent					
MW-2	Arsenic					
	Cobalt					
	cis-1,2-Dichloroethylene					
	Trichloroethylene					
	Vinyl chloride					
MW-3	Arsenic					
	Cobalt					
MW-4	Cobalt					
	Vanadium					
MW-5	(none)					
MW-6	Benzene					
	Vinyl Chloride					
MW-7	(none)					
MW-9	Arsenic					
	Barium					
	cis-1,2 Dichloroethylene					
	Vinyl Chloride					
MW-10	(none)					

Comments: (insert clarifications or notes as needed)

This worksheet;

- 1) Summarizes the historical extent of groundwater impact,
- 2) Tracks ACM effectiveness, and
- 3) Potentially highlights sequential degradation of contaminants of concern.

Table 11
Corrective Action Trend Analysis
2015 Annual Water Quality Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Well	Current SSL	Trend	N	Projected Year to Completion*
MW-2	Arsenic	decreasing	24	2024
MW-2	TCE	decreasing	21	2012
MW-3	TCE	increasing	12	Not Estimated
MW-3	Vinyl Chloride	decreasing	12	2028
MW-9	Benzene	decreasing	17	2019
MW-9	TCE	decreasing	17	2020

N - Number of Samples

* - To satisfy IAC 113.10(9)"e"

* - Permit holder addresses adequacy of corrective measure when trend is not favorable

* - Permit shall adjust corrective action for financial assurance as completion date warrants

Comments: (insert clarifications or notes as needed)List each well and the corresponding constituent lists and sample frequency for each well in the corrective action monitoring program. Provide the status of corrective action activities (if any) including schedules, evaluation and effectiveness of the progress being made, and whether adjustments to the remedy are necessary, including all required DNR notifications.

This worksheet summarizes progress to ending corrective action.

Recommendations

Provide a brief summary of the impact the site has on the groundwater being monitored. Provide narrative discussion on proposed monitoring for the next and future sampling events, including installing/abandoning wells, adding/removing wells from the approved HMSP, modifying sampling and analysis of constituents, modifying statistical procedures, etc.

Groundwater Sampling Field Sheet

Site Name: _____ Permit No.: _____
 Well/Piezometer: _____ Weather: _____
 Date: _____ Personnel: _____

Monitoring Well Details

Borehole diameter (in): _____ Casing Diameter (in): _____ Ground surface elevation (ft. MSL): _____
 Top of screen (ft. TOS): _____ Materials: _____ Top of Casing elevation (ft. MSL): _____

Locked (Y/N) _____

	Before purging	After purging	Before sampling
Water Level (ft. TOC):	_____	_____	_____
Water elevation (ft. MSL)	_____	_____	_____

3 Well Volumes (gal): _____ Screen submerged? (Y/N): _____

	Constructed	Measured	Difference
Well Depth (ft. TOC)	_____	_____	_____

Well conditions commentary: _____

Sampling Details

Sampling Method: (circle one) Pump (conventional or low flow?) _____ No-purge (specify sample interval) _____
 Bailer _____ Other (specify) _____

Equipment type: (check one) Submersible pump _____ Peristaltic pump _____ Bladder pump _____ Inertial lift pump _____
 Bailer _____ No-purge (specify): _____ Other (specify): _____

Equipment name/description: _____ Dedicated? (Y/N) _____ Disposable? (Y/N) _____
 Decontamination method: _____

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
			Yes or No
			Yes or No
			Yes or No
			Yes or No

Field Analysis

							Final Reading
Time							
Temp (°C)							
Sp. Cond (umhos/cm)							
pH							
DO (mg/l)							
ORP (mV)							
Turbidity (NTU)							

Equipment depth: _____ Flow Rate: _____ Volume removed: _____ Volume sampled: _____
 Well dry? (Y/N) _____ Odor? (Y/N) _____ Color? (Y/N) _____

Comments: _____

Table 12
Leachate Management Summary
2015 Leachate Control System Performance Evaluation Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Month	Maximum Head on Liner (ft)				Leachate Collected (gal)				Volume Recirculated (gal)		Discharged to Hayden Falls POTW (gal)	Precipitation (in)
	PZ1-1	PZ1-2	PZ2-1	PZ-PH-1 (unlined)	Unlined Cells	Phase 1	Phase 2	Site wide total	Phase 1	Phase 2		
January	0.25	< 0.1	< 0.1	16	35,690	112,634	245,623	393,947	25,716	36,624	331,607	0.9
February	0.25	< 0.1	< 0.1	16	94,131	203,006	524,096	821,233	25,729	62,755	732,749	1.5
March	0.25	< 0.1	0.3	23	41,717	199,205	586,067	826,989	65,521	73,566	687,902	3.14
April	0.314	< 0.1	0.3	15	83,482	106,335	425,266	615,083	32,456	67,125	515,502	5.8
May	0.8	0.3	0.68	21	25,283	241,485	370,727	637,495	32,397	25,227	579,871	4.56
June	1.2	0.58	0.999	17	120,744	172,647	641,917	935,308	0	39,361	895,947	6.7
July	0.6	0.3	0.75	19	79,865	76,387	262,333	418,585	45,969	28,846	343,770	3.8
August	0.4	0.2	0.52	21	56,735	233,994	108,627	399,356	36,315	63,424	299,617	2.17
September	0.3	0.3	0.6	22	111,948	102,918	544,660	759,526	35,289	39,570	684,667	4.1
October	0.25	0.1	0.3	18	43,723	209,290	120,465	373,478	41,789	66,345	265,344	2.72
November	0.25	< 0.1	0.1	20	76,289	100,005	393,151	569,445	63,938	25,593	479,914	1.738
December	0.25	< 0.1	< 0.1	22	61,182	148,105	239,108	448,395	30,326	25,683	392,386	1.2
2015 Annual Total					830,789	1,906,011	4,462,040	7,198,840	435,445	554,119	6,209,276	38.33

NA - Measurement not available (clarify)

Comments: (insert clarifications or notes as needed) Recommended changes to the leachate collection system, if any. Also, describe maintenance performed on the leachate collection system in the previous year.

This worksheet;

- 1) Summarizes data used to evaluate leachate control system performance,
- 2) Reviews compliance and trends of leachate head levels,
- 3) Reviews impact of rainfall quantity,
- 4) Reviews adequacy of leachate storage volume,
- 5) Reviews that leachate recirculation is in approved area, and
- 6) Reviews that an approved POTW is being utilized.

Table 13
Gas Monitoring Summary
2015 Gas Monitoring Report
Hawkeye County Sanitary Landfill
Permit No. 00-SDP-01-74P

Monitoring Points			Methane Results (% LEL)							
Name	Type	Description	1/12/2015 - S (Y/N)		4/1/2015 - S (Y/N)		7/13/2015 - S (Y/N)		10/22/2015 - S (Y/N)	
BLDG-1	Indoor	Office	0		0		0		0	
BLDG-2	Indoor	Scale House	0		0		0		0	
BLDG-3	Indoor	Recycling Building	0		0		0		0	
BLDG-4	Indoor	Maintenance Building	0		0		0		0	
UTILITY-1	Utility Trench	Along north property boundary	0		0		0		0	
GU-1	Underdrain	Phase 1 & 2 Underdrain	0		0		0		0	
GMP-1	Gas Monitoring Probe	West side of Phase 1	12	N	7	N	0	N	0	N
GMP-2	Gas Monitoring Probe	Property boundary near residence	0	N	0	N	0	N	0	N
GMP-3	Gas Monitoring Probe	North side of Phase 2	0	N	0	N	0	N	0	N
GMP-4	Gas Monitoring Probe	Along east property boundary	0	N	0	N	0	N	0	N
MW-6	Monitoring Well	South side of unlined area	0	N	0	N	0	N	0	N

S(Y/N) - Was screen submerged, yes or no or blank is non-applicable

Comments: (insert clarifications or notes as needed) Describe actions taken to comply with exceedances.

This worksheet ;

- 1) Summarizes gas monitoring plan and schedule, and*
- 2) Identifies potential exceedances.*

Site Figures

(Map must contain gas monitoring locations.)