

BP Remediation Update – SVE Monitoring

To: Cory Smith (NMOCD)
From: Steve Moskal (BP)
CC: Blagg Engineering
Date: 8/19/2019
Re: Heaton LS 005 – SVE Monitoring Report
API #30-045-10251 (M) S28, T31N, R11W
Incident ID – NCS1725739883
Date of Discovery – September 2013

RCVD Via Email
8/19/2019



Dear Mr. Smith,

The Heaton LS 005 remediation site is on an active natural gas production pad within the San Juan Basin Gas Field in San Juan County, New Mexico. The site is located on land controlled by the Bureau of Land Management. The well pad is in an area primarily used by oil and gas production but also for recreational.

BACKGROUND

The vertical and lateral extents of the impacted soil were identified via a soil boring investigation. Soil vapor extraction points were installed and the system became operation on March 2015. Attached is the field data documenting performance of the SVE system. A theft of the entire SVE system occurred in November of 2017. The system was replaced and restarted in August of 2018. Again, the SVE unit was vandalized in May of 2019 and further reinforced with steel armor to deter vandalism. The unit was restarted on June 20, 2019. The SVE continues to appear effective in reducing the contaminant concentration thus far. Attached is the operation data through July of 2019.

Regards,



Steve Moskal
BP America Production Co.

BP America - Heaton LS 5

Summary SVE System Monitoring Data

Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Exhaust Rate (cfm)	System Operational at Time of Arrival?	H ₂ O Drained from drum?	H ₂ O Amt. Drained (Gal.)?	Comments
3/9/2015	BH-1	562	30	65	-	-	-	Initial vac startup on SVE - BH1.
3/10/2015	BH-1	425	30	65	YES	NO		
3/11/2015	BH-1	490	30	60	YES	NO		
3/12/2015	BH-1	549	32	50	YES	NO		
3/13/2015	BH-1	641	31	60	YES	NO		
3/16/2015	BH-1	792	31	60	YES	NO		
3/18/2015	BH-1	751	33	60	YES	NO		
3/19/2015	BH-1	801	33	60	YES	NO		
3/23/2015	BH-1	823	34	50	YES	NO		
3/30/2015	BH-1	859	34	60	YES	NO		
4/1/2015	BH-1	910	34	60	YES	NO		
4/6/2015	BH-1	917	34	50	YES	NO		
4/15/2015	BH-1	907	36	50	YES	NO		
4/20/2015	BH-1	847	34	60	YES	NO		
4/27/2015	BH-1	832	35	50	YES	NO		
5/7/2015	BH-1	849	36	50	YES	NO		
5/11/2015	BH-1	824	36	60	YES	NO		
5/20/2015	BH-1	877	38	50	YES	NO		
5/26/2015	BH-1	717	36	50	YES	NO		
6/4/2015	BH-1	829	36	50	YES	NO		
6/8/2015	BH-1	808	36	50	YES	NO		
6/15/2015	BH-1	690	38	50	NO	NO		Collected readings after restarting
6/22/2015	BH-1	724	38	50	YES	NO		
6/29/2015	BH-1	665	36	50	YES	NO		
7/6/2015	BH-1	661	36	50	YES	NO		
7/13/2015	BH-1	690	36	50	YES	NO		
7/20/2015	BH-1	702	36	50	YES	NO		
7/27/2015	BH-1	650	36	50	YES	NO		
8/5/2015	BH-1	685	38	50	YES	NO		
8/12/2015	BH-1	599	38	50	YES	NO		
8/19/2015	BH-1	688	38	50	YES	NO		
8/24/2015	BH-1	655.0	38	50	YES	NO		
8/24/2015	BH-1	663.0	38	50	YES	NO		
9/8/2015	BH-1	690.0	38	50	YES	NO		

BP America - Heaton LS 5

Summary SVE System Monitoring Data

Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Exhaust Rate (cfm)	System Operational at Time of Arrival?	H ₂ O Drained from drum?	H ₂ O Amt. Drained (Gal.)?	Comments
9/17/2015	BH-1	654.0	38	50	YES	NO		Dry drum
9/22/2015	BH-1	950	36	50	YES	NO		Dry drum, switched to SVE-BH2
9/23/2015	BH-2	335	38	50	YES	NO		Dry drum, switched to SVE-BH4
9/24/2015	BH-4	1,023	39	50	YES	NO		Dry drum, switched to SVE-BH5
9/25/2015	BH-5	472	40	50	YES	NO		Dry drum, switched to SVE-BH6
9/28/2015	BH-6	600	40	50	YES	NO		Dry drum, switched to SVE-BH4
9/29/2015	BH-4	751	39	50	YES	NO		Dry drum
10/8/2015	BH-4	719	40	50	YES	NO		Did not check water level in drum
10/15/2015	BH-4	865	40	50	YES	NO		Did not check water level in drum
10/23/2015	BH-4	806	40	50	YES	NO		Dry drum
10/28/2015	BH-4	1,148	40	50	YES	NO		Did not check water level in drum
11/6/2015	BH-4	1,053	40	50	YES	NO	0.00	Measured ~ 1.5" H2O in drum
11/13/2015	BH-4	1102	40	50	YES	NO		Did not check water level in drum
11/20/2015	BH-4	1094	40	50	YES	YES	3.00	
11/27/2015	BH-4	1232	40	50	YES	NO		Did not check water level in drum
12/4/2015	BH-4	1339	40	50	YES	NO		Did not check water level in drum
12/11/2015	BH-4	1337	40	50	YES	NO	0.00	Measured ~ 4.5" H2O in drum
12/18/2015	BH-4	1,310	40	50	YES	YES	11.50	
12/24/2015	BH-4	1,620	40	60	YES	NO		Did not check water level in drum
12/31/2015	BH-4	1,407	40	60	YES	NO		Did not check water level in drum
1/7/2016	BH-4	1,260	40	50	YES	NO		Did not check water level in drum
1/14/2016	BH-4	1,337	40	50	YES	YES	17.00	
1/21/2016	BH-4	1,388	42	NA	YES	NO		Did not check water level in drum
1/29/2016	BH-4	1,206	42	NA	YES	NO		Did not check water level in drum
2/5/2016	BH-4	1,301	42	NA	YES	YES	24.00	
2/13/2016	BH-4	1,062	42	60	YES	NO		Did not check water level in drum
2/19/2016	BH-4	1,005	40	60	YES	NO	0.00	Measured ~ 8.5" H2O in drum
2/26/2016	BH-4	909	40	70	YES	YES	16.50	
3/3/2016	BH-4	988	40	60	YES	NO		Did not check water level in drum
3/10/2016	BH-4	879	40	60	YES	NO	0.00	Measured ~ 8.5" H2O in drum
3/17/2016	BH-4	1,133	40	NA	YES	YES	5.50	
3/24/2016	BH-4	1,155	41	NA	YES	NO	0.00	Measured ~ 1.0" H2O in drum
3/31/2016	BH-4	1,086	40	NA	YES	YES	4.00	Drained ~ 4 gal., restarted
4/8/2016	BH-4	920	40	NA	YES	NO	0.00	Measured ~ 1.0" H2O in drum
4/15/2016	BH-4	914	40	NA	YES	NO	0.00	Measured ~ 1.5" H2O in drum
4/22/2016	BH-4	837	40	NA	YES	NO	0.00	Measured ~ 2.5" H2O in drum

BP America - Heaton LS 5

Summary SVE System Monitoring Data

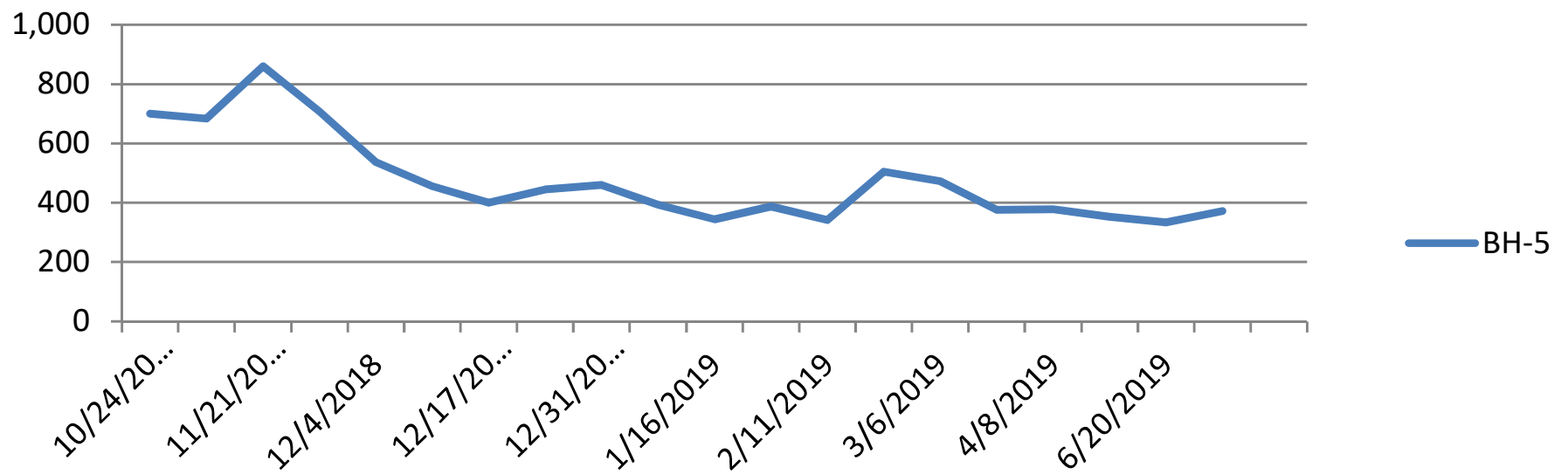
Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Exhaust Rate (cfm)	System Operational at Time of Arrival?	H ₂ O Drained from drum?	H ₂ O Amt. Drained (Gal.)?	Comments
4/29/2016	BH-4	815	40	NA	YES	NO	0.00	Measured ~ 3.0" H2O in drum
5/6/2016	BH-4	780	40	NA	YES	YES	6.50	
5/19/2016	BH-4	669	40	NA	YES	NO		Did not check water level in drum
6/3/2016	BH-4	629	40	NA	YES	NO		Water in drum below drain port
6/16/2016	BH-4	616	38	NA	YES	NO		Dry drum
6/30/2016	BH-4	535	37	70	YES	NO		Dry drum
7/14/2016	BH-4	531	36	50	YES	NO		Dry drum
8/19/2016	BH-4	474	38	NA	YES	NO		Dry drum
9/26/2016	BH-4	464	40	40	YES	YES	7.50	
10/25/2016	BH-4	379	38	NA	YES	YES	7.50	
11/8/2016	BH-4	-	-	NA	YES	YES	23.00	
11/21/2016	BH-4	975	38	NA	NO	YES	27.00	Collected readings after draining & restarting, commenced using Mini Rae PID
11/29/2016	BH-4	360	36	NA	YES	YES	25.50	
12/6/2016	BH-4	511	37	NA	YES	YES	24.00	
12/14/2016	BH-4	584	37	NA	NO	YES	27.00	Collected readings after draining & restarting
12/20/2016	BH-4	860	38	NA	YES	YES	19.00	
12/27/2016	BH-4	916	34	NA	YES	YES	22.00	
1/5/2017	BH-4	1,268	38	NA	YES	NO	27.00	Collected readings after draining & restarting
1/11/2017	BH-4	821	37	NA	YES	YES	17.00	
1/19/2017	BH-4	-	38	NA	YES	YES	19.00	
1/25/2017	BH-4	941	38	NA	YES	YES	17.00	
2/2/2017	BH-4	784	37	NA	YES	YES	24.50	
2/9/2017	BH-4	863	38	NA	YES	YES	15.50	
2/15/2017	BH-4	799	37	NA	YES	YES	10.50	
2/22/2017	BH-4	744	36	NA	YES	YES	12.00	
3/3/2017	BH-4	757	37	NA	YES	YES	18.00	
3/9/2017	BH-4	860	37	NA	YES	YES	11.50	
3/15/2017	BH-4	1,526	36	NA	YES	YES	6.50	
3/29/2017	BH-4	850	36	NA	YES	YES	6.50	
4/13/2017	BH-4	954	36	NA	YES	YES	15.50	
4/25/2017	BH-4	1,210	35	NA	YES	YES	3.00	
5/12/2017	BH-4	875	35	NA	YES	YES	7.00	
6/12/2017	BH-4	745	35	NA	YES	NO	0.00	Water in drum below drain port
7/11/2017	BH-4	541	32	NA	YES	NO	0.00	Dry drum
8/14/2017	BH-4	615	35	NA	YES	NO	0.00	Dry drum
9/15/2017	BH-4	816	32	NA	YES	NO	0.00	Dry drum

BP America - Heaton LS 5

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10/3/2017	BH-4	431	34	NA	YES	YES	26.00	
10/27/2017	BH-4	520	34	NA	YES	YES	22.00	
11/10/2017	BH-4	651	34	NA	YES	YES	26.00	
11/22/2017	Blower unit & electrical box stolen; collected photos, reported to BP							
8/29/2018	1 & 5	617	52	NA	YES	NO	0.00	Restarted 8/27/2018. Water level in drum not measured
9/24/2018	-	-	-	NA	NO	-		Not operational at time of arrival, could not restart
9/27/2018	1 & 5	1,167	50	NA	YES	NO	0.00	Water in drum below drain port
10/24/2018	BH-5	700	54	NA	YES	NO	0.00	Water in drum below drain port
11/16/2018	BH-5	684	50	NA	YES	YES	32.50	
11/21/2018	BH-5	860	54	NA	YES	YES	15.50	Collected data, drained without shutting down unit
11/26/2018	BH-5	707	54	NA	YES	YES	16.00	
12/4/2018	BH-5	537	54	NA	YES	YES	22.00	Collected data, drained without shutting down unit
12/11/2018	BH-5	456	53	NA	YES	YES	22.00	
12/17/2018	BH-5	400	52	NA	YES	YES	17.00	
12/24/2018	BH-5	445	53	NA	YES	YES	15.50	
12/31/2018	BH-5	460	52	NA	YES	YES	18.50	
1/9/2019	BH-5	393	51	NA	YES	YES	19.50	
1/16/2019	BH-5	344	49	NA	YES	YES	10.50	
1/28/2019	BH-5	387	50	NA	YES	YES	21.00	
2/11/2019	BH-5	341	48	NA	YES	YES	17.00	
2/28/2019	BH-5	505	50	NA	YES	YES	17.00	
3/6/2019	BH-5	473	54	NA	YES	YES	10.50	Collected data, drained without shutting down unit
3/11/2019	BH-5	377	53	NA	YES	YES	6.50	
3/28/2019	BH-5	NA	NA	NA	YES	NO	?	Did not check water level in drum
4/8/2019	BH-5	378	50	NA	YES	NO	0.00	
5/3/2019	BH-5	353	50	NA	YES	YES	5.50	
5/29/2019	BH-5	NA	NA	NA	NO			Theft of unit parts, vandalized security measures
6/19/2019	BH-5	-	-	-	-	-	-	Completed repair of damaged security welding
6/20/2019	BH-5	334	54	NA	YES	NO	0.00	Dry drum
7/5/2019	BH-5	372	56	NA	YES	NO		Dry drum
7/27/2019	BH-5	208	51	NA	YES	NO		Dry drum

BH-5



Heaton LS 005

SVE Operation and Performance Oct.2018
API# 30-045-10251
(M), S28, T31N, R11W
SVE GPS:
36.865510°, -108.001121°

Legend

- Heaton LS 005 Wellhead
- SVE Point
- SVE Unit

SVE Unit

BH-2

BH-6

BH-1

BH-4

BH-5

BH-3 (P&A)

Heaton LS 005



100 ft

Google Earth

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