Los Alamos Technical Associates, Inc.

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August 15, 2017

Mr. Travis Young
Project Manager
US Army Corps of Engineers
Kansas City District
601 East 12th Street
Kansas City, Missouri 64106

SUBJECT: August 2017 Operating Report for the Vestal Well Field 1-1 Superfund Site, Area 4, Vestal, New York

Dear Mr. Young:

Attached is the monthly report for August 2017 on the activities being performed at the Vestal Well field 1-1 Superfund Site, Area 4, Vestal, New York. This report details the activities and data collected at the site over the operating period.

If you have any questions, please feel free call me at (614) 508-1200.

Sincerely,
LOS ALAMOS TECHNICAL ASSOCIATES, INC.

Nathan Canaris
Project Manager

Attachments

cc: Damian Duda – USEPA
Payson Long – NYS DEC
Tom Cimarelli –USACE-NYD
Timothy Leonard – USACE-NYD
Jason Lecuyer – USACE-NWK
Andrew Smith – USACE-NYD
File

TO: Travis Young, Project Manager
United States Army Corps of Engineers (USACE)

FROM: Nathan Canaris, Project Manager
Los Alamos Technical Associates, Inc. (LATA)

SUBJECT: August 2017 Monthly Report on Activities at the Vestal Well field 1-1 Superfund Site, Area 4, Vestal, New York

LATA Project # 11202
Contract # W912DQ-09-D-3003,
Task Order # 008

DATE: August 15, 2017

CURRENT ACTIVITIES

LATA's project manager and technician visited the Vestal Area 4 Site for the regularly scheduled monthly O&M visit on August 2, 2017 to perform the routine monthly inspection and testing of the facilities and equipment.

Work performed during the August 2nd visit was; inspect the main treatment system and cell buildings and surrounding areas for issues, inspect the equipment in the main building and ancillary buildings, re-start the system to verify operation, and collect data and equipment readings in the main building and ancillary buildings.

Prior to re-starting the system, the system was de-energized at the main breaker panel and tagged out, and the electrical closet was closed. After de-energizing the system, both of the Roots® injection and vacuum blowers were greased and the oil changed. Shell Gadus® S2 U1000 #2 grease was added to the drive end bearings using a hand operated grease gun until traces of clean grease came out of the relief fitting in accordance with the manufacturer's operation manual. Oil levels in the blowers were checked and found to be within the manufacturer's specified range. The blowers were then drained of oil, the overflow drain was opened and the top vent plug removed. The blowers were then refilled with Roots® Synthetic VG-220 oil until oil flowed from the overflow drain port in accordance with the manufacturer's operation manual. The overflow valve drain was then closed and the top vent plug reinstalled. The belt guard for the blowers was then removed for inspection of the belts and sheaves. The belts were found to be properly aligned and in good condition, without excessive wear. The General Electric® motor that drives the blowers was inspected in accordance with the manufacturer's operation manual. The motor was clean and the ventilating openings were clear. In accordance with the manufacturer's operation manual for this 40 HP motor, which is mounted in a horizontal configuration and operated infrequently, the lubrication interval is 7 years. Overgreasing can damage the motor, so no lubrication was performed on the motor. Following this inspection the belt guard was reinstalled.

The injection blower filter was visually inspected and observed to not be significantly fouled. The Xchanger® heat exchangers were visually inspected and observed to not be significantly fouled. No material or debris was within the manufacturer's recommended clearance around the heat exchanger base. The knockout tank and water storage tank were visually inspected to confirm there was no water present in either tank. All aboveground piping, valves and fittings were visually inspected for cracks or leaks.

Following the inspections described above, the system was re-energized at the main breaker panel and the system was re-started for collection of data and equipment readings. While the system was operating, all aboveground piping, valves and fittings were again visually inspected for cracks or leaks. No cracks or leaks were observed. The pressure differential across the vacuum blower filter was observed to be 3" H_2O, which is less than the 15" H_2O pressure differential specified in the O&M manual that requires replacement of the filter. Following collection of data and equipment readings, the system was then shut down.

Details and photos of the visit are attached. The site inspection forms detailing the data readings collected and observations during the site visit are attached to this report. No other operational issues were noted during the inspection. Both the distribution buildings and the adjacent parking lot area were inspected and no issues were noted.

The insulation inside the treatment building was inspected. The insulation is in acceptable condition, though some deterioration over time has occurred. One small section of wood on the south wall of the treatment building had previously deteriorated and had been patched with wood in February 2014. It was observed that the pieces of wood which had been used to patch this hole had been knocked loose. This will be repaired during the September site inspection.

There were no communications or concerns with local municipalities or others during this inspection.

Blower Run Hours

Date	Hour Meter Reading
07/06/17	18,355.2
08/02/17	18,356.5
	1.3 hrs. run time

OUTSTANDING ISSUES/RESOLUTIONS

NONE

PLANS FOR NEXT MONTH

Plans for the September visit includes inspection and collection of SVE system readings and its components, other maintenance as required, and handoff of the keys to the gate, main building, and treatment cells to the on-site USACE representative.

TOTAL ELECTRICITY USAGE
DW96941964 Vestal Well Field

Year	2008			2009											
Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	1105	2417	3728	4141	4004	2995	1847	475	350	311	347	552	2011	1918	4134
Cost	$389.66	$483.00	$588.73	$716.13	$492.59	$428.00	$331.56	$190.91	$292.77	$282.02	$350.19	$233.91	$382.99	$372.20	$776.85

2009 YTD Total Usage (kwh) = 23,085
2009 YTD Total Cost = $4,850.12

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2010											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	3360	3567	2892	585	1189	400	303	342	308	1184	3113	4022
Cost	$481.87	$569.27	$533.39	$212.58	$227.32	$160.27	$145.14	$136.06	$131.83	$267.07	$459.14	$547.56

2010 YTD Total Usage (kwh) = 21,265
2010 YTD Total Cost = $3,871.50

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2011											
Month	Jan	Feb	Mar	Apr	May (1)	June	July (1)	Aug	Sept (2)	Oct	Nov	Dec
kwh used	4040	3667	3341	2172	286	319	293	0	678	1473	3257	4579
Cost	$460.89	$493.33	$415.59	$338.11	-$457.97	$144.99	-$130.93	$0.00	$346.60	$317.96	$487.69	$588.15

2011 YTD Total Usage (kwh) = 24,105
2011 YTD Total Cost = $3,004.41

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2012											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	4027	4141	1516	515	334	344	289	325	303	0	1065	2601
Cost	$523.86	$549.93	$287.00	$155.04	$138.66	$161.01	$134.87	$154.12	$316.80		$302.85	$520.97
Account Holder - Shaw									**LATA**			

2012 YTD Total Usage (kwh) = 15,460
2012 YTD Total Cost = $3,245.11

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2013											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	2594	2875	2257	740	377	358	344	354	314	641	2658	3161
Cost	$316.55	$522.94	$485.38	$394.71	$345.18	$347.92	$351.75	$349.49	$344.31	123.75 *	$515.42	$677.78
							LATA					

*- NYSEG error on October billing. LATA notified NYSEG of error and will get corrected bill

2013 YTD Total Usage (kwh) = 16,673
2013 YTD Total Cost = $4,775.18

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2014											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	3356	3211	2684	1007	373	391	286	350	324	352	1713	2204
Cost	$793.03	$570.31	$581.33	$359.97	$296.86	$294.20	$44.15	$294.56	$292.42	$295.25	$415.87	$239.73
							LATA					

2014 YTD Total Usage (kwh) = 16,251
2014 YTD Total Cost = $4,477.68

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2015											
Month	Jan	Feb	Mar (3)	Apr	May	June	July	Aug	Sept	Oct	Nov (4)	Dec
kwh used	2204	0 *	6735	502	320	400	305	357	324	433	993	1484
Cost	$249.30	$0.00	$1,203.79	$93.37	$283.90	$394.41	$295.20	$292.74	$289.40	$296.82	-$9.48	$392.39
							LATA					

*- NYSEG was not able to perform actual meter reading due to snow.

2015 YTD Total Usage (kwh) = 14,057
2015 YTD Total Cost = $3,781.84

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2016											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
kwh used	2534	2936	1203	721	327	358	378	297	367	431	1398	3182
Cost	$198.49	$451.34	$364.52	$317.51	$278.90	$288.42	$310.89	$47.40	$314.22	$100.40	$371.72	$493.34
							LATA					

2016 YTD Total Usage (kwh) = 14,132
2016 YTD Total Cost = $3,537.15

Entire Year Using Renewable Electricity Delivered by New York State Electric & Gas

Year	2017								
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
kwh used	2390	2204	2163	560	375	423	392		
Cost	$213.96	$470.04	$436.35	$331.40	$335.53	$333.45	$327.63		
					LATA				

2017 YTD Total Usage (kwh) = 8,507
2017 YTD Total Cost = $2,448.36

(1) = May and July 2011 cost is a previous deposit with interest credited back to account.
(2) = Usage and costs in September 2011 cover August 2011 as well.
(3) = Usage and costs in March 2015 cover February 2015 as well.
(4) = November 2015 cost is a previous deposit with interest credited back to account

SITE PHOTO LOG

Picture 1 - Main Treatment Building Exterior

Picture 2 - Main Treatment Building Interior

Picture 3 - Greasing the Injection and Vacuum Blowers

Picture 4 - Refilling the Injection and Vacuum Blowers With Oil

Picture 5 - Distribution Cell 1 Exterior

Picture 6 - Distribution Cell 1 Interior

Picture 7 - Distribution Cell 2 Exterior

Picture 8 - Distribution Cell 2 Interior

SITE VISIT SHEETS

Los Alamos Technical Associates, Inc.
756 Park Meadow Road
Westerville, OH 43081

Field Data Reading Sheet

Site Name VESTAL **Sampled By:** J. Patel
Project Number: 60402566.1113064
Date: 8/2/2017
Weather: Overcast 80s

Instrument Identification

Make/Model / Cal info	PID	Other
	NA	NA

Main Equipment Building

Main Control Panel _____ Control Box Locked **No Lock** Control Door Locked **No Lock**

Hour Meter Reading - SVE Unit **18356.5**

SVE Pumping Unit

Injection Blower Temp	218	°F
Injection Blower Temp Setting	--	
Pressure After Injection Blower	2	" H2O
Vacuum Blower Temp	150	°F
Vacuum Blower Temp Setting	--	
Vacuum After Filter	17	" H2O
Pressure AfterVacuum Blower	14	" H2O

Grease Seals Checked ☑ Yes ☐ No Date of last Grease 8/2/2017
Oil Levels Checked ☑ Yes ☐ No Date of Last Oil Change 8/2/2017
Belts Checked for Wear ☑ Yes ☐ No Belt Guard in Place Yes

Alarms Present (described below if Yes) ☐ Yes ☑ No

Comments - Checked oil levels in blowers. Drained both blowers of oil and refilled with Roots Synthetic VF-220 oil. Greased drive end bearings with Shell Gadus S2 U1000 #2 grease. Inspected belts for wear and alignment

General Site Observations

Check and Note Condition of Site
Grass around Buildings ☐ OK ☑ Trimmed
Vines and Weeds around Buildings ☑ OK ☐ Trimmed
Comments - Removed vines from perimeter fence

Field Activity Checklist

SVE Wellhead air Flows Measured	☐ Yes	☑ No
SVE Wells Sampled	☐ Yes	☑ No
Carbon Changeout Performed	☐ Yes	☑ No
Water Removal Performed	☐ Yes	☑ No
Exterior of Main building and Cell Buildings Inspected	☑ Yes	☐ No

Summary of Process Air Sampling
NA

Summary of Other Activities - Small hole in south wall of building which had previously been patched requires repair

Los Alamos Technical Associates, Inc.
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Westerville, OH 43081

Field Data Reading Sheet

Site Name **VESTAL** **Sampled By: J. Patel** **Date** **8/2/2017**

Carbon Bed System

Check all aboveground piping, valves, fittings and other components for cracks or leaks.
Check Carbon Beds connections and associated instrumentation

Pressure Before GAC Unit 1	**37**	**" H2O**
Temperature Before GAC Unit 1	**131**	**F**
Pressure Between GACUnit 1 and GAC Unit 2	**28**	**"H2O**
Pressure Before GAC Unit 2	**6**	**" H2O**
Temperature Before GAC Unit 2	**86**	**F**

Water Storage Unit

Check all aboveground piping, valves, fittings and other components for cracks or leaks.
Check Carbon Beds connections and associated instrumentation

Volume of Water in Storage Tank **0** Gallons
Water in Containment Vessel ☐ Yes ☑ No Amount **0** **Inches**

Cell 1 Distribution Building

Check all aboveground piping, valves, fittings and other components for cracks or leaks and adequacy of seals

Building Locked	☑ Yes	☐ No				
Control Box Locked	☑ Yes	☐ No				
Control Box Disconnect On	☑ Yes	☐ No	240 V Disconnect On	☑ Yes	☐ No	
Selector Switch	☐ MAN	☐ OFF	☑ AUTO			
Vacuum Status Light	☑ OFF	☐ ON				

Electrical Heat Breaker	☑ Yes	☐ No
Heater Thermostat Setting	**38**	**°F**
Pressure at Injection Manifold	**121**	**"H2O**
Temperature at Injection Manifold	**70**	**°F**
Vacuum at Vacuum Manifold	**50**	**"H2O**
Temperature at Vacuum Manifold	**72**	**°F**
Vacuum at Knockout Tank	**18**	**"H2O**
Water Pump Pressure Relief Settings	**--**	**psi**

Cell 2 Distribution Building

Check all aboveground piping, valves, fittings and other components for cracks or leaks and adequacy of seals

Building Locked	☑ Yes	☐ No				
Control Box Locked	☑ Yes	☐ No				
Control Box Disconnect On	☑ Yes	☐ No	240 V Disconnect On	☑ Yes	☐ No	
Selector Switch	☐ MAN	☐ OFF	☑ AUTO			
Vacuum Status Light	☑ OFF	☐ ON				

Electrical Heat Breaker	☑ Yes	☐ No
Heater Thermostat Setting	**43**	**°F**
Pressure at Injection Manifold	**143**	**"H2O**
Temperature at Injection Manifold	**70**	**°F**
Vacuum at Vacuum Manifold	**40**	**"H2O**
Temperature at Vacuum Manifold	**72**	**°F**
Vacuum at Knockout Tank	**28.5**	**"H2O**
Water Pump Pressure Relief Settings	**--**	**psi**

Comments

Signature of Operator/Tech **Jay Patel** **Date** **8/2/2017**

Daily Quality Control Report

Date: 08/02/2017		**Report No**.						
Project: VESTAL	**Day:**	Su	M	T	W	Th	F	Sa
Project no.: 60402566.11130644	**Weather:**	Clear	Cloudy		Overcast		Rain	Snow
Project Manager: Nathan Canaris	**Temp. (°F)**	To 32°	32° - 50°		50°- 70°		70° - 85°	85° up
Project QC Officer:	**Wind:**	Still	Moderate		High			
	Humidity:	Dry	Moderate		High			

Personnel onsite:
Jay Patel (AECOM)
Sampling equipment on site:
N/A
Work performed:
Performed general site observations and maintenance, recorded system readings in main equipment building, Cell 1 distribution building, and Cell 2 distribution building.
Greased and changed oil in the injection and vacuum blowers. Checked belts for alignment and wear.
Visually inspected blower drive motor for cleanliness and to ensure ventilating openings were clear.
Visually inspected injection blower filter for fouling.
Visually inspected heat exchangers for fouling and to verify no debris is within 2’ of the heat exchanger base.
Visually inspected the KO tank and water storage tank to confirm no presence of water.
Visually inspected aboveground piping, valves and fittings for cracks or leaks prior to system restart.
Visually inspected aboveground piping, valves and fittings for cracks or leaks after system restart.
Removed vines from perimeter fencing.

Daily Quality Control Report (continued)

Project: VESTAL **Report no**.:

Project no.: 60402566.11130644 **Date**: 08/02/2017

Quality control activities (including field calibrations):
N/A
Health and safety levels and activities:
Reviewed Lock Out/Tag Out procedures and AHA
Problems encountered/corrective actions taken:
Small hole in south wall of treatment building which had previously been patched requires repair. This will be conducted on the next month's site visit.
Special notes:
Tomorrow's expectations:

By: _Jay Patel_____Title:_Staff Geologist_