

Current Projects Using AgroRemed/VaporRemed

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February 17, 2021

DeeAar Holdings, LLC

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Abandoned Gas Station in Mays Landing, NJ



Site location



Figure: Site: An Abandoned Gas Station

Background

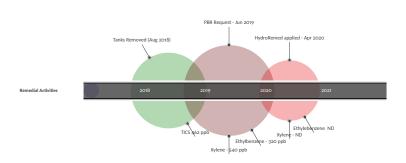


- The gas station has been abandoned for over ten (10) years.
- At the time of cleanup, the team could arrive at an estimated gas tanks.
- Tanks were removed in 2018.
- Contamination baselines were established in 2019.
- HydroRemed was added to site in April 2020.
- The hydrocarbon contamination levels have been non-detect (ND) for two samples.
- Secondary contamination has been detected and is being addressed.

Current State: The monitoring for levels of secondary contamination is continuing.

Mays Landing - Remediation Timeline contd.





Contaminated Gas Station in Antrim, NH



Site location



Figure: Figure: Sitemap of monitoring wells

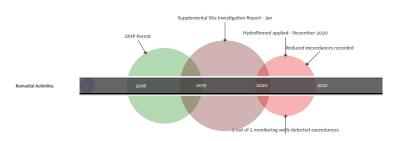
Background

- The site is a former retail gasoline and fueling facility, reportedly since 1970s;
- In 1988, several underground storage tanks were removed.
- Previous remedial efforts at the site were conducted by prior consultants and included the use of an in-situ submerged oxygen curtain (ISOC) in 2002 and bio-augmentation via the addition of live bacterial cultures in 2004 to remediate residual petroleum contaminant levels in groundwater at the site.
- Our group acquired the property in July 2018;
- The project is currently 70 % complete. There are exceedances recorded near two monitoring wells;
- Groundwater from MW-101 contained concentrations of 11 VOCs and 3 PAHs, including concentrations of benzene (32 parts per billion [ppb]) and naphthalene (160 ppb) that exceeded the New Hampshire Ambient Groundwater Quality Standards (AGQS);
- Groundwater from MW-102 contained concentrations of eight VOCs and 3 PAHs, none of which exceeded the AGQS; and
- * Details are in the attached report.

Current State: Active. We are reaching out to the DES to discuss our protocol to address the remaining 30% of contamination.

Antrim NH - Remediation Timeline contd.





Past Projects using AgroRemed/HydroRemed



 UST decommissioning and complex soil-only risk-based cleanup, Portland OR

UST Decommissioning and Complex Soil-only Risk based Cleanup

... As suggested by the results of the second sub-slab air sample, the microbes were particularly successful in degrading the plume beneath the basement slab

Please click on this link for details.



Some more references



References from Sarva Bio Remed's online shop, with their permission.

- Cleanup of contaminated soil at ANA Shipyard, 2006
- Corrective Action Plan VDEQ PC#911427
- Corrective Action Plan VDEQ PC#972073
- Corrective Action Plan VDEQ PC# 055074
- PADEP closure report documenting removal of one 500-gallon tank and two 1000-gallon tanks

About DeeAar Holdings, LLC



Our group specializes in bioremediation of contaminated properties such as,

- abandoned gas stations;
- and properties contaminated with TCE/PCE.

We strive to keep the costs of cleanup within a narrow range to realize value to our clients.



► - Dinkar Ganti, Lead Developer, DeeAar Holdings, LLC.



Appendix



		SAMPLE ID:	TMW-1				
					1851886-00	951996-01	
		COLLECTION DATE:	12/17/2018				
		SAMPLE DEPTH					
		SAMPLE MATRICE	WATER				
	Т —	NJ LPL (POL)					
ANALYTE	CAS	(497)	Conc	9	RL	MDG	
MICROEXTRACTABLES BY GC							
VOLATILE ORGANICS BY GCIMS							
Betzene	71-69-2	1	ND:		0.6	0.1	
Diverse	109-89-3	1	ND		0.75	0.2	
Ethyberzene	100-41-4	2	ND		0.6	0.1	
Mediyi set buyi ether	\$636-06-6	1	ND		1	0.1	
Xylene (Tatal)	1330-20-7	2	ND		1	0.30	
cis-1,2-bichlarcethese	156-59-2	1	0.29	J	0.6	0.1	
Acetone	67-66-1	10	2.5	- 3	- 5	1.5	
Carbon disuffide	75-15-0	1	ND		- 6	0.3	
7-Buttone	70-93-2	2	ND		- 5	1.9	
VOLATILE ORGANICS BY GCIMS-TIC							
Total TIC Compounds			-		-	-	
DASEINEUTRAL EXTRACTABLES BY							
Acenaghthene	10-32-9	10	ND		- 2	0.4	
Naphthalene	¥1-20-3	1 2	12	- 3	- 2	0.68	
Bio(2-ethylhexyl)phthalate	117-91-7	2	2.4	J	- 2	1.5	
Fluorene	86-73-7	1	ND		2		
Phenasthrene	85-01-6		ND		2	0.83	
Dibersoluan	132-66-9		ND		2	0.5	
2-Methylmaphthalene	11-57-6		ND		- 2	0.4	
Carbassie	86-74-6		ND	_	2	0.6	
BASEINEUTRAL EXTRACTABLES BY	GDMS-WESTE	OROUGH LAB-TIC					
Total TIC Compounds BASSING (TDA) EVTDA/TABLES BY			162	J	0	Ö	
Berzojijurdracene	\$6-55-3	0.1	0.1		0.1	0.00	
Bet20(s)pyrene	\$0-32-6	0.1	0.09	J	0.1	0.00	
Berzo Effuciantiene	305-99-2	0.2	0.19		0.1		
Betzojkjfuoranthene	207-08-9	0.3	0.09	J	0.1	0.00	
Diservoja i jarovacene			0.03	-			
indeno(1,2,3-cd)pyrene	193-39-5	0.2	0.09	3	0.1	0.00	

Eight Walkup Drive, Westborough, MA 01581-0159 509-999-6220 (Fax) 509-699-9032 900-624-6220 www.alphalab.com

Figure: Concentration Levels, ML: Dec 2018

Appendix - Contd.



				SAMPLE ID:
				LABID
				COLLECTION DATE:
				SAMPLE DEPTH
				SAMPLE MATRIX
		NJ-GWEA	N2-INTOW	NJ-GWI-PL
MALYTE	CAS	(1991)	(Feet)	(491)
OLATILE ORGANICS BY GOMS		1961	1961	
Inchese	71-63-2	1		1
tybecome	100-61-6	700		2
ylenes, Total	1330-20-7	1000		2
Cesone	67-66-1	6000		10
sograpyberzene	99-62-8	700		1
yolshexane	110-62-7			1
Aethyl cyclohexane	109-97-2			1
OLATILE ORGANICS BY GOMS-TIC		_		
AOLATILE ORGANICS BY GCMS-TIC		_		
		_		- 1
ndane	000896-11-7			
Lagitchalene Jriknown Aromatic	000091-20-2	-		2
Jrknown Aromatic Jrknown Benzene		_		1
Introde Bergene	00000346-1	_		
	00000349-1	_		-
Arknown Benzene slandi, Trimethil-	001066-40-6			- i -
Arknown Benzene		_		<u> </u>
ixel TiC Compounds	_	Some		-
ASSINGUTRAL EXTRACTABLES BY C	AMS, WESTER	OUGHLAD		
isohthalene	69-20-3	200		-
lig2-ettythey/jphthalate	117-65-7	200		1
ASENEUTRAL EXTRACTABLES BY C		OUICÚL AD	THE CONTRACT	-
Jriknoun Alkane	CHAP WESTER	OUGH LA	-	- 1
triamen Alizana				1
Arknown Alkane	_			1 1
Jokopun Alkane				1
Jokopan Benzene				1
Jrknown Aldehyde				1
Jokopura Bengene				1
				1
Jrkrown Bergene				1
Jirknown Alkane				1
Anknown				1
Joknown				1
Ankrown				- 1
Anknown Benzene				1
Jrknown Alkane		-		-
Anknown		-		1
dane	000896-11-7			
triknown Benzene		-		1
trknown Benzene drybenzene	000000-41-4	-		1
rkrown Alkane	000000-41-4	_		
	_	_		
Anknown Phenol		_		1

Figure: Concentration Levels, ML: Jun 2019

Appendix - Contd.



		SAMPLE ID:	L2036435-65 \$1387020			
		LAR ID:				
		COLLECTION DATE:				
		SAMPLE DEPTH:				
		SAMPLE MATRIX		WATER		
		N3-GW8A				
NALYTE CLATILE ORGANICS BY GOMS	CAS	(Fgs)	Conc	Q RL	MDL	
	96-12-8	0.02	ND.	2.5	0.35	
6-Dioxane	123-91-1	9.4	ND:	250	60	
2-Dibromoethane	109-93-4	0.03	MD	2	0.19	
ethylene chloride	15-09-2 15-33-1	- 3	NO.	25	0.68	
1-Dicholoethane	79-30-3 67-66-3	10	ND ND	0.79	0.22	
adon tetrachioride	56-23-5	1	MS	0.5	0.13	
	79-97-5	1	MD	1	0.14	
bromochioromethane	120-09-1	1	NO:	0.6	0.15	
1,2-Trichloroethane	79-00-5	3	ND:	0.75	0.14	
machioroethene Paramontoria	127-18-6	-8-	- 90	0.5	0.18	
CONTRACTOR CONTRACTOR	75-99-4	900	ND ND	2.5	0.15	
2-Dichlossethane	117-06-2	2	ND.	0.5	0.13	
1,1-Trichiproethane	71-65-6	30	ND	0.5	0.16	
romodichloromethane	75-27-4	1	ND:	0.6	0.19	
ann-1,3-Elichloropropene	10061-02-6		MD.	0.6	0.16	
ic-1,3-Ochloropropene 3-Dichloropropene, Total	10061-01-5	- 1	ND ND	0.5	0.14	
	75757	-	MS		0.25	
1.2.0.Eartachinosethane	79-34-5	1	MS	A.C	617	
erpene	71-63-2	1	NO.	0.6	0.16	
auece .	109-99-2	600	ND:	0.76	0.2	
tybeczese	100-61-6	700	MD.	0.6	0.17	
hisromethane orromethane	7447-3	30	NO NO	25	0.2	
ryl (7600de	75-03-0	10	NO NO	1 67	0.09	
nizarnane	75-00-3	-	MS	1	0.13	
	75-35-4	1	NO.	0.9	0.17	
sno-1,2-Dichloroethene	159-60-6	200	NO.	0.76	0.16	
Charcethese	79-01-6	1	MD:	0.6	0.18	
2-Dichloroberzene	95-60-1	600	100	25	0.18	
3-Dichlosperzene 5-Dichlosperzene	106-66-7	800	MS	2.5	0.19	
HENV SHIT DUDY HENV	1534,64.4	70	MS	- 1	0.12	
ID-Xulene	179601,03.1		MS		0.93	
Xylana	95-47-6		ND:	i	0.39	
denes, Total	1330-20-7	2000	ND MD	100	0.33	
t-1,2 Octorostena 2-Dotorostena, filia	150-50-2 583-59-0	70	ND ND	0.5	0.19	
	195.95	100	NO NO	0.5	0.16	
Chlorod fluoromethane	75-71-8	1000	ND.	- 5	0.34	
petone	67464	6000	6.3	- 6	1.5	
atton disultide	75-45-0	700	ND:	- 6	0.3	
Ruzanone	78-93-3	200	102	- 6	1.9	
Methyl-2-pentanone Heightigh	10910-1		100		0.42	
HENDESON CONTRACTOR	73.07.4	- 60	MS	- 12	0.12	
occon/her tane	60.07.0	990	MO	0.5	0.18	
2.3-Trichlanderzene	87-61-6		NO.	2.5	0.23	
2.6-Trichloroberzene	120-92-1	9	162	2.5	0.22	
etry Acesse voteware	79-20-9 110-92-7	7000	MD:		0.23	

Figure: Concentration Levels, ML: Dec 2020

Appendix - Contd.





Figure: Snapshot of the report submitted in June 2020, AN

This document presents a high-level overview. Details are available for review.

