

New Jersey Department of Environmental Protection Site Remediation Program

Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/rcra_cercla_fed_facility_sites.pdf.

Document:

 "UST 800-20 Site Investigation Report Addendum, Request for Unrestricted Use, No Further Action Approval, Fort Monmouth, Monmouth County, Oceanport, New Jersey" (21 November 2018)

PERSON RESPONSIBLE FOR CONDUCTING THE RE	EMEDIAT	ION INFORI	MATION AND CERTI	FICATION
Full Legal Name of the Person Responsible for Conduct	ing the R	emediation:	William R. Colvin	
Representative First Name: William			Last Name: Colvin	
Title: Fort Monmouth BRAC Environmental Coordinate	tor (BEC)	1		
Phone Number: (732) 383-5104	Ext:		Fax:	
Mailing Address: P.O. Box 148				
City/Town: Oceanport	State:	NJ	Zip Code:	07757
Email Address: william.r.colvin18.civ@mail.mil				
This certification shall be signed by the person responsil				
in accordance with Administrative Requirements for the	Remediat	tion of Conta	minated Sites rule at	N.J.A.C. 7:26C-1.5(a).
I certify under penalty of law that I have personally exam	nined and	am familiar	with the information so	ubmitted herein,
including all attached documents, and that based on my				
the information, to the best of my knowledge, I believe the	nat the su	bmitted infor	mation is true, accura	te and complete. I am
aware that there are significant civil penalties for knowing	gly submi	itting false, in	naccurate or incomple	te information and that I
am committing a crime of the fourth degree if I make a w	vritten fals	se statement	which I do not believe	e to be true. I am also
aware that if I knowingly direct or authorize the violation	of any sta	atute, I am pe	ersonally liable for the	penalties.
Signature: () ()		Date:	21 November 2018	
Signature: William & Colvin				
Name/Title: William R. Colvin		 ,		
BRAC Environmental Coordinator				
		-		

Completed form should be sent to:

Mr. Ashish Joshi

New Jersey Department of Environmental Protection Division of Remediation Management & Response Bureau of Northern Field Operations 7 Ridgedale Avenue (2nd Floor)

Cedar Knolls, New Jersey 07927-1112

DEPARTMENT OF THE ARMY



OFFICE OF ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT U.S. ARMY FORT MONMOUTH P.O. 148 OCEANPORT, NEW JERSEY 07757

21 November 2018

Mr. Ashish Joshi New Jersey Department of Environmental Protection Division of Remediation Management & Response Northern Bureau of Field Operations 7 Ridgedale Avenue (2nd Floor) Cedar Knolls, NJ 07927-1112

SUBJECT: UST 800-20 Site Investigation Report Addendum

Request for Unrestricted Use, No Further Action Approval Fort Monmouth, Monmouth County, Oceanport, New Jersey

PI G00000032

Dear Mr. Joshi:

The U.S. Army Fort Monmouth (FTMM) Team has prepared this Site Investigation (SI) Report Addendum to present the results of resampling at former Underground Storage Tank (UST) 800-20. Monitor well PAR-56-800-20-MW-02 was resampled for benzo(a)anthracene in October 2018 to address New Jersey Department of Environmental Protection (the Department) comments (Attachment A) on the 15 June 2018 UST 800-20 Site Investigation Report.

Background

Former UST 800-20, a steel 1,000-gallon tank used to store No. 2 fuel oil, was removed in July 2003. Additional background information and the results of groundwater investigations conducted by the Army in 2016 to 2018 were presented in the 15 June 2018 UST 800-20 Site Investigation Report, which included a No Further Action request. The Department did not approve the request and required the collection of one additional groundwater sample at monitor well PAR-56-800-20-MW-02 to be analyzed for benzo(a)anthracene only (**Attachment A**).

2018 Groundwater Site Investigation Results

Polynuclear aromatic hydrocarbons (PAHs) such as benzo(a)anthracene have been encountered at other FTMM locations, and often PAH exceedances in groundwater are attributed to sample turbidity. Therefore, the well was purged and resampled as required by the Department (**Attachment B**). As shown on **Table 1**, benzo(a)anthracene was not detected in the sample collected at well PAR-56-800-20-MW-02 during the October 2018 sampling event.

Summary and Recommendations

Based on the results of the October 2018 groundwater sampling and analysis effort the Army has determined that further remedial efforts are not warranted, and an Unrestricted Use, NFA determination is requested for former UST 800-20.

Ashish Joshi, NJDEP UST 800-20 Site Investigation Report Addendum 21 November 2018 Page 2 of 2

Thank you for reviewing this request; we look forward to your approval and/or comments. Our technical Point of Contact is Kent Friesen at (732) 383-7201; kent.friesen@parsons.com. I can be reached at (732) 383-5104; william.r.colvin18.civ@mail.mil.

Sincerely,

William & Colvin

BRAC Environmental Coordinator

cc: Ashish Joshi (e-mail and 2 hard copies)

William Colvin, BEC (e-mail and 1 hard copy)

Joseph Pearson, Calibre (e-mail) James Moore, USACE (e-mail) Jim Kelly, USACE (e-mail) Joseph Fallon, FMERA (e-mail) Cris Grill, Parsons (e-mail)

Attachments:

Table 1 – Ground Water Sampling Results for Permanent Wells – Comparison to NJDEP Ground Water Quality Criteria

Attachment A - Regulatory Correspondence

Attachment B - Groundwater Sampling Record and Field Notes

TABLE 1 GROUND WATER SAMPLING RESULTS for PERMANENT WELLS COMPARISON TO NJDEP GROUND WATER QUALITY CRITERIA SITE AREA 800, AREA 800AREA 800, AREA 800 FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Ground	PAR-56-800-20-MW-02	PAR-56-800-20-MW-02				
Sample ID	Water Quality	PAR-56-800-20-GW-MW-02-15	PAR-56-800-20-GW-MW-02-15				
Sample Date	Criteria	1/17/2018	10/18/2018				
Filtered		Total	Total				
Volatile Organic Compounds (μg/l) 1,1,1,2-Tetrachloroethane	1	< 0.75	NA				
1,1,1-Trichloroethane	30	< 0.75	NA NA				
1,1,2,2-Tetrachloroethane	1	< 0.75	NA NA				
1,1,2-Trichloroethane	3	< 0.75	NA				
1,1-Dichloroethane	50	< 0.75	NA				
1,1-Dichloroethene	1 100	< 0.75 < 0.75	NA NA				
1,1-Dichloropropene 1,2,3-Trichlorobenzene	100	< 0.75	NA NA				
1,2,3-Trichloropropane	0.03	< 2.5	NA NA				
1,2,4-Trichlorobenzene	9	< 0.75	NA				
1,2,4-Trimethylbenzene	100	< 0.75	NA				
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane	0.02	< 2.5 < 0.75	NA NA				
1,2-Dichlorobenzene	600	< 0.75	NA NA				
1,2-Dichloroethane	2	< 0.75	NA NA				
1,2-Dichloropropane	1	< 0.75	NA				
1,3,5-Trimethylbenzene	100	< 0.75	NA NA				
1,3-Dichlorobenzene	600 100	< 0.75	NA NA				
1,3-Dichloropropane 1,4-Dichlorobenzene	75	< 0.75 < 0.75	NA NA				
2,2-Dichloropropane	100	< 0.75	NA NA				
2-Chlorotoluene	100	< 0.75	NA				
Acetone	6,000	3.9 J	NA				
Benzene	100	< 0.75	NA NA				
Bromobenzene Bromochloromethane	100	< 0.75 < 0.75	NA NA				
Bromodichloromethane	1	< 0.75	NA NA				
Bromoform	4	< 0.75	NA				
Carbon tetrachloride	1	< 0.75	NA				
Chlorobenzene Chlorodibromomethane	50 1	< 0.75 < 0.75	NA NA				
Chloroethane	5	< 0.75	NA NA				
Chloroform	70	< 0.75	NA				
Cis-1,2-Dichloroethene	70	< 0.75	NA				
Cis-1,3-Dichloropropene	1	< 0.75	NA				
Cymene Dichlorodifluoromethane	1,000	< 0.75 < 0.75	NA NA				
Ethyl benzene	700	< 0.75	NA NA				
Hexachlorobutadiene	1	< 3.8	NA				
Isopropylbenzene	700	< 0.75	NA				
Meta/Para Xylene	1,000	< 1.5	NA NA				
Methyl bromide Methyl butyl ketone	10 300	< 0.75 < 3.8	NA NA				
Methyl chloride	100	< 0.75	NA NA				
Methyl ethyl ketone	300	< 3.8	NA				
Methyl isobutyl ketone	100	< 3.8	NA				
Methyl Tertbutyl Ether	70	< 0.75	NA NA				
Methylene chloride Naphthalene	300	< 0.75 < 0.75	NA NA				
n-Butylbenzene	100	< 0.75	NA NA				
Ortho Xylene	1,000	< 0.75	NA				
p-Chlorotoluene	100	< 0.75	NA				
Volatile Organic Compounds (μg/l) Propylbenzene	100	< 0.75	NA				
sec-Butylbenzene	100	< 0.75	NA NA				
Styrene	100	< 0.75	NA				
Tert Butyl Alcohol	100	< 12.5	NA NA				
tert-Butylbenzene Tetrachloroethene	100	< 0.75	NA NA				
Toluene	600	< 0.75 < 0.75	NA NA				
Total Xylenes	1,000	< 2.3	NA NA				
Trans-1,2-Dichloroethene	100	< 0.75	NA				
Trans-1,3-Dichloropropene	1	< 0.75	NA				
Trichloroethene	2.000	< 0.75	NA NA				
Trichlorofluoromethane Vinyl chloride	2,000	< 0.75 < 0.75	NA NA				
viriyi cilionde	1 1	< 0.75	INA				

Loc ID	NJ Ground	PAR-56-800-20-MW-02	PAR-56-800-20-MW-02				
Sample ID	Water Quality	PAR-56-800-20-GW-MW-02-15	15 PAR-56-800-20-GW-MW-02-15				
Sample Date	Criteria	1/17/2018	10/18/2018				
Filtered	1	Total	Total				
TIC VOCs (μg/l)							
Total TICs	500	NA	NA				
Semivolatile Organic Compounds (μg/l)	9	0.05	NIA.				
1,2,4-Trichlorobenzene	600	< 0.95	NA NA				
1,2-Dichlorobenzene 1,2-Diphenylhydrazine	20	< 0.95 < 0.95	NA NA				
1,3-Dichlorobenzene	600	< 0.95	NA NA				
1.4-Dichlorobenzene	75	< 0.95	NA NA				
2,4,5-Trichlorophenol	700	< 2.9	NA NA				
2,4,6-Trichlorophenol	20	< 0.95	NA				
2,4-Dichlorophenol	20	< 0.95	NA				
2,4-Dimethylphenol	100	< 4.8	NA				
2,4-Dinitrophenol	40	< 7.6	NA				
2,4-Dinitrotoluene	10	< 0.95	NA				
2,6-Dinitrotoluene	10	< 0.95	NA				
2-Chloronaphthalene	600	< 0.95	NA				
2-Chlorophenol	40	< 1.9	NA				
2-Methylnaphthalene	30	< 0.95	NA				
2-Methylphenol	100	< 0.95	NA				
2-Nitroaniline	100	< 0.95	NA				
2-Nitrophenol	100	< 1.9	NA				
3,3'-Dichlorobenzidine	30	< 2.9	NA NA				
3-Nitroaniline 4,6-Dinitro-2-methylphenol	100	< 1.9 < 4.8	NA NA				
, ,	1 100		NA NA				
4-Bromophenyl phenyl ether 4-Chloro-3-methylphenol	100	< 0.95 < 0.95	NA NA				
4-Chloroaniline	30	< 0.95 < 0.95	NA NA				
4-Chlorophenyl phenyl ether	100	< 0.95	NA NA				
4-Nitroaniline	5	< 0.95	NA NA				
4-Nitrophenol	100	< 4.8	NA NA				
Acenaphthene	400	< 0.95	NA				
Acenaphthylene	100	< 0.95	NA				
Anthracene	2,000	< 0.95	NA				
Benzidine	20	< 28.6	NA				
Benzo(a)anthracene	0.1	0.19 J	<0.037 U				
Benzo(a)pyrene	0.1	< 0.95	NA				
Benzo(b)fluoranthene	0.2	0.13 J	NA				
Benzo(ghi)perylene	100	< 0.95	NA				
Benzo(k)fluoranthene	0.5	< 0.95	NA				
Benzyl alcohol	2,000	< 1.9	NA				
Bis(2-Chloroethoxy)methane	100	< 0.95	NA				
Bis(2-Chloroethyl)ether	7	< 0.95	NA NA				
Bis(2-Chloroisopropyl)ether	300	< 0.95	NA NA				
Bis(2-Ethylhexyl)phthalate Butyl benzyl phthalate	100	0.29 J 0.16 J	NA NA				
- · · ·	400						
Carbazole Chrysene	100	< 0.95 < 0.95	NA NA				
Semivolatile Organic Compounds (µg/l)	,	< 0.33	IVA				
Cresol	NLE	< 0.95	NA				
Dibenz(a,h)anthracene	0.3	< 0.95	NA				
Dibenzofuran	100	< 0.95	NA				
Diethyl phthalate	6,000	< 0.95	NA				
Dimethyl phthalate	100	< 0.95	NA				
Di-n-butylphthalate	700	0.17 J	NA				
Di-n-octylphthalate	100	0.13 J	NA				
Fluoranthene	300	< 0.95	NA				
Fluorene	300	< 0.95	NA				
Hexachlorobenzene	0.02	< 0.95	NA NA				
Hexachloroputadiene	1 40	< 0.95	NA NA				
Hexachlorocyclopentadiene Hexachloroethane	7	< 1.9 < 0.95	NA NA				
Indeno(1,2,3-cd)pyrene	0.2	< 0.95 < 0.95	NA NA				
Isophorone	40	< 0.95 < 0.95	NA NA				
Naphthalene	300	< 0.95 < 0.95	NA NA				
Nitrobenzene	6	< 1.9	NA NA				
N-Nitrosodimethylamine	0.8	< 1.9	NA NA				
N-Nitroso-di-n-propylamine	10	< 0.95	NA NA				
N-Nitrosodiphenylamine		< 1.9	NA NA				
	10						
Pentachlorophenol	0.3		NA				
Pentachlorophenol Phenanthrene		< 7.6 < 0.95	NA NA				
	0.3	< 7.6					
Phenanthrene Phenol Pyrene	0.3 100	< 7.6 < 0.95	NA				
Phenanthrene Phenol	0.3 100 2,000	< 7.6 < 0.95 < 0.95	NA NA				

Footnote:

- 1) Number of Analyses is the number of detected and non-detected results excluding rejected results. Sample duplicate pairs have not been averaged.
- 2) NLE = no limit established.
- 3) NA = Not Applicable
- 4) µg/l = micrograms per Liter
- 5) Bold chemical dectection
- 6) SS = Site Specific action level, see "Specific Chemical Class (or Parameter)" footnote for details.
- 7) Chemical result qualifiers are assigned by the laboratory and are evaluated and modified (if necessary) during the data validation.

[blank] = detect, i.e. detected chemical result value.

U = non-detect, i.e. not detected at or above this value.

- JN = Tentatively identified compound, estimated concentration.
- J = estimated detected value due to a concetration below the reporting limit or due to discrepancies UJ=The compound was not detected: however, the results is estimated in meeting certain analyte-specific quality control.
 - because of discrepancies in meeting certain analyte-specific QC criteria.
- 8) Specific Chemical Classes (or Parameters) comments or notes regarding how data is displayed, compared to Action Levels, or represented in this table.
- a) DELETE THIS NOTE BEFORE GOING FINAL: Refer to the NJDEP Protocol for Addressing Extractable Petroleum Hydrocarbons (Version 5.0, August 9, 2010) and the NJDEP Health Based end Ecological Screening Criteria for Petroleum Hydrocarbons (Version 4.0, August 9, 2010) to determine the category of tank being investigated and the appropriate cleanup standards or screening levels for that category of tank.
- 9) Chemical results greater than or equal to the action level (depending on criteria) are highlighted based on the Criteria that are present.
- Cell Shade values represent a result that is above the NJ Ground Water Quality Criteria

####

NJDEP Interim Specific GWQC values are presented for the NJ GWQS where there is not a Specific Ground Water Quality Criteria. A full list of compounds is av ailable at (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm).

NJDEP Interim Generic GWQC values are presented for the NJ GWQS where there is not a XXXXX or a NJDEP Interim Specific GWQC. Available at (http://www.nj.gov/dep/wms/bwgsa/gwgs interim criteria table.htm).

- 10) Criteria action level source document and web address.
- The NJ Ground Water Quality Criteria refers to the NJDEP Groundwater Quality Standards Adopted July 22, 2010 http://www.state.nj.us/dep/wms/bwqsa/docs/njac79C.pdf

Attachment A Regulatory Correspondence



State of New Jersey

PHIL MURPHY Governor DEPARTMENT OF ENVIRONMENTAL PROTECTION
Site Remediation and Waste Management Program
BUREAU OF FIELD OPERATIONS
7 RIDGEDALE AVENUE
Cedar Knolls, New Jersey 07927

CATHERINE R. McCABE Commissioner

SHEILA OLIVER Lt. Governor

September 18, 2018

Mr. William R. Colvin
OACSIM – US Army Fort Monmouth
P O Box 148
Oceanport, NJ 07757

Re

Site Investigation Report (SIR), Request for No Further Action - UST 800-20

Fort Monmouth, Oceanport, Monmouth County

Preferred ID: G000000032

Dear Mr. Colvin:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced SIR and a Request for No Further Action for UST 800-20. Based upon the review, the Department offers the following comments.

The SIR shows that an exceedance of benzo(a)anthracene occurred at one permanent monitor well PAR-56-800-20-MW-02 at concentration of 0.19 ppb, above the Department's Ground Water Quality Standard of 0.1 ppb. As a result, the Department cannot approve the request for No Further Action at this time.

The Department will require a collection of one ground water sample from well PAR-56-800-20-MW-02 using low flow sample collection technique. Please analyze this sample for benzo(a)anthracene only and submit the result of this sample to my attention for review.

Thank you and please feel free to contact me if you have any questions at 973-656-4427.

Sincerely,

A.J. Joshi

C: James Moore, USACE Cristina Grill, Parsons Joe Fallon, FMERA File

Attachment B Groundwater Sampling Record and Field Notes

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PROJECT SITE/LOCATION: FTAM Det 2018 6 0 / Octon Coct NS CONSULTING FIRM: PARSONS																	
DATE: 10 18-18 FIELD PERSONNEL: KA																	
WEATHER: Low So's / Cloudy																	
											ft to TO	С					
WELL PERMIT #: F>0/7-13785 WELL DIAMETER:																	
PID/FID RE		<u>55:</u>	Δ		GAUGING/	PUMPING	NFORMATI	<u>ON</u> :		. 4	· c2			WATER QU			
BACKGROU	-		C ppm		INITIAL DE	TH TO WA	FK (RFFOR	E PUMP	INSTALLATIO	v):	, r.)	ft to	IOC	SERIAL#:_	NTMAKE/P ZYZ ⊏1/2⊘	MODEL: 7	SI 6922
BENEATH OUTER CAP: ppm DEPTH TO PRODUCT: ft to TOC; PRODUCT THICKNESS: ft BENEATH INNER CAP: ppm MAKE/MODEL OF PUMP: Bladder lump 1,75"								rt	TEMP. COR			12					
DENEATH									TENIP. CON	RECTION	ALUE: _O	DEPTH					
	NG	N	pl	4	CONDU		POTEI		1	GEN		TURBI	DITY	TEMPE	RATURE	PUMPING	то
	PURGING	SAMPLING	(uni		(mS/		(m		(mg			(NT		(degre		RATE	WATER
Time	₹	SAI	READING	CHANGE	READING	CHANGE	READING	CHANG	-		NGE	READING		READING	CHANGE	(ml/min)	
0822	X	-	5-49	1	0.132		164.9	î	1.59	1	i	100	1	14.60	1		9 PB-80
1825	Ŵ	\top	4.41		0.127		1774		0.17	- 1		340		19.14			1615
0830	70	\Box	4.21		0.125		1805	1	0.74			255		19.54		250	
0835	Х		4,26		0.126		172.4	1	0.78			771		14.71			10.02
0840	X		4,30		0.126		167.9		0.66	1		83.12		14,90		250	10.02
0845	У		4,33		0.128		163.6	1	0.70			91,9		14,51		250	10.02
0850	У		41.34		01128		161.0		0.55			77.5		14.40	1		10,02
0855	Х		4.37		0.128		158.7		0,50	, in the second		65.8		14,72		250	10.02
0900	х	\neg	438	1	0.129		156.6		0.50	o dilitira di la constituto		50,1		17,38		250	10.02
19405	Х		4.38		0.128	l						24,40		250	10.02		
1910	×		4.34		0.128		153.9		0.50	ушуша		34.0		14,41	}	250	10.02
0915	×		4.40		の、はチ		153.6		0:40	eunktostes		28,3		14.53		250	10.02
0120	Х		4,41		0,127		125		0.46			23.4		14.51		200	1002
0425	Х		4.47		0(127		151.1		0.32			21,0		14.57		250	10.02
0930	X		4,41		0,126		151.3		0.33			18.8		14.28		250	10:02
12435	X		4,42		0,126		150.6		0.32	1		17.4		14,45		250	10.02
0740	X'		4,44	<u>j</u>	0,126		144.7		0:35	1		16.1		14,76		350	10-02
0945	X		4.44		0,127		148.9		0.30			1505		14.65		<u> 250</u>	10.02
0950	X		4.95		0.127		148.0		0.38			1405		14167		250	10.02
0955	y		4,45		0.127		198,2		0.41	ļ		19.1		14.86		250	10.02
1000	У		4,47		0.128		146.8		0.41			13,2		7,90	Į.	250	10.02
1005	У		4,47		0:128		146.2		0.41		١	12.9		15.04		250	10.02
1010	×		4,47		0,128		14508	\	0.41		<u> </u>	12.6		14.07		252	10.02
1015	义		4,45		Diab	<u> </u>	146.6	1	0.40		,	12,5	1	13,58		250	10.02
6	610		AMPLING IN			~	1		VFORMATION	:		a : 4		IONAL OBS	ERVATIONS	/COMMEN	TS:
			<u>6 - 800 -</u>	<i>30~6W</i> −	MM-09-1		Duplicate (Clarity:		1 01			
Sample Tir	, , , , , , , , , , , , , , , , , , , 	1 00					MS/MSD C Filtering?:		· 185_				ot Sah	obur Od	<i>o</i> {		
Comments			ACTEDO 11A	VE CTABIL	IZEN MULE	L 2 CONCE		N	ADE 11/27/114	_		Other: -					
*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: pH: ± 0.1 units; Spec. Conductivity: ± 3%; ORP: ± 10mV; D.O.: ± 10%; Turbidity: ± 10% (or <1 NTU); Temperature: ± 3%.; Water Level Change: < 0.3 ft																	
ANALYST				Ken	McM		N.	1	au_							0-48-1	P
REVIEWER	NAM	E & S	IGNATURE:	1. 150/1*t	e ce va	· VIII		# / 1	7/						DATE:	- 4.0 l	<u> </u>
REVIEWER NAME & SIGNATURE: DATE:																	

SHEET 2 OF 2

PROJECT SITE/LOCATION: FTMM Det 2618 6W / Occumpost, NT CONSULTING FIRM: PARSONS DATE: 1018-18 FIELD PERSONNEL: 120																
DATE: 10-18-18 WEATHER: LOW 50'S / Cloud																
MONITOR WELL #: ARK-5%-300-20-MV-02WELL DEPTH: 20 feet PUMP INTAKE DEPTH: 15 ft to TOC																
WELL PERI						/ELL DIAMETER: 2 inches SCREENED/OPEN INTERVAL: 10 -									ft to TOC	
PID/FID RE															ER INFORM	ATION:
BACKGRO			<i>O</i> ppr	n	INITIAL DE	PTH TO WA	ATER (BEFOR	E PUMP IN	STALLATIO	N): 9.53	ft to	тос				SI 6920
BENEATH): O	mag	DEPTH TO	PRODUCT:		ft to TOC;	PRQDUCT 1	THICKNESS	:	ft	SERIAL #: 4	26F18S	$\mathcal{D}AF$	
BENEATH	NNEF		: <u> </u>	ppm	MAKE/MO	DEL OF PU	MP: QEO	Bladder	- Pung	1175°		_	темр. сог	RECTION V	ALUE: 🕳 🙋	103
	9	SAMPLING			SPE	CIFIC	RED	юх	DISSO	DLVED				·		DEPTH
	2 5	Į,	;	Н	CONDU	CTIVITY	POTE	NTIAL	OXY	'GEN	TURB	IDITY	TEMPE	RATURE	PUMPING	то
	PURGING	Σ	(u	nits)	(mS	/cm)	(m	iV)	(m	g/L)	(NT	U)	(degr	ees C)	RATE	WATER
Time		<i>/</i> S		CHANGE		CHANGE	1	CHANGE	READING	CHANGE		CHANGE	READING	CHANGE	<u> </u>	
1020	X		4,46	1	0.125		146.2	- 1	0.35	<u> </u>	11.5	j_	14,53	1	350	10.02
1025	X		4,49		1.126		(44,7		0,35	ļ i	10.7		1501			10.02
1030	X	\bot	4150	ļ ļ	0.126		144.6		0.35		9.9		15.11			10.02
1635	K		4,49	<u> </u>	0.126		145.6		0.36		10,3		15.01			10-02
1040	Xi		4,44		0.124		146,0		0.35		10.0		15.03			10.02
1075	χ_		4,46	ļ <u>.</u>	01122		145.8		0,35		9.7		15.11			10.02
1050	X	—	4,46	<u> </u>	0:137		M5.7		0.35		10,7		15.76			10.02
	X	1 4	4.46		0.122		145.3		6735	<u> </u>	10.3	<u> </u>	15.20			10.02
1100		X	uine	 	0.122		145.1		005	<u> </u>	10.1		15.18		250	10.02
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4			 		 				 	 		 			 	
		<u>"</u>	AMPLING I	NFORMATIO	ON:	t		QA/QC INF	ORMATION	:		ADDI	TIONAL OBS	ERVATIONS	/COMMEN	TS:
Sample ID	PAR	5%-	800-20-6	6W-MW-0	2-15		Duplicate (Clarity:				,	
Sample Ti			' '				MS/MSD C				Odor: Cz	M C	John C	2/11		
Comments	:						Filtering?:	N			Other: -		T	1		
B .							CUTIVE RE	ADINGS A		-				1.61		
			ec. Conduc GNATURE:		s ; ORP: ± 1 McMn [7).: ± 10% ; T	urbidity: <u>+</u>	: 10% (or <)	1 NTU) ; To	emperatur	e; ± 3%.;	water Lev	el Change: DATE: 10		
				Movin	rier un l	1.047	Mr 0	90 11010	1901				· · · · · · · · · · · · · · · · · · ·	DATE:	1878	
REVIEWER NAME & SIGNATURE: DATE:																

10-17-18 FM/20020181-W & Very high Thibidity in SESMWOID Contact Julian Chambert Ingened him that after 80 minus of purging, Turbiday was consistent 1300 + NTU. Pump situated at 20° by 3 (Same as previous Sample events) Decision made to pump full 2his, if high turbidity romains collect filtered metals sample 0 1210 - Sample FRM-68-UN-565AW010-20,0 PFiltered Metals Sapple FTMM-68-6W-566MW01D-20.02 Z = Filtered Files Used: High Capacity Polyother Sulfone Quick Filter 1257 - Setup + LFPS Time TOS(3/L) & Trox (TOSG/L) | Time | TOSG/L) 1345 0,196 125 0.146 3/320 10.195 1300 10,197 31325 10.196 130 P. 145 (1330 10:196 1310 10,196 21335 10,196 1315 0.195 31340 10.19E 1345 - Sample FTMM-68-64-MU07-62 1420-Collect EB 20181017-1991- ALS onstle, PlU Sampler 1800 - KM Offsite

1 0 0 7000 018 134	10-18-18									
Weather Low Yo's Cloudy & brindy										
Activity - LFAS										
Personal - KM-FA - Parson:										
Activity	:									
0710- KM onsile, HSE, Collibrate comprient										
0820 - Setup + LFPS PAR-56-800-20-MW-02										
Time TOS (3/L 3 Time TOS (3/L) 3 Time TOS (3/L) Time	TDS (SIL)									
0820 0.090 3090 6.083 1000 0.0832 1050	0,079									
0425 0.083 30915 0.083 \$1005 0.083 \$1055	0.079									
0830 0.081 30920 0083 31010 0.082 21100	0.074									
0835 0.082 30925 01083 31015 0.082 3										
0840 0.082 30430 0.082 1020 0.081 3	222.0									
0845 0.084 30935 0.082 3025 0.082										
0550 0.083 3040 0.082 31030 0.08)	West and the second									
0855 0.083 JOHN 0.083 31035 0,0793										
0900 0.084 30450 0.083 3000 0.079										
0905 0,083 1095 0,083 \$1045 0,074 \$										
1100 - Sample PAR-56-800-20-64-MV-D2-15 (D/AS/AS	מ (מ									
1260 - San Collet EB-2018 1018										
PCallel off Pine equipment @ 11:58 Cent #BK6415B										
1300 - PM Gapones, Complex Paperwork. OFF	} <i>\</i> 1⁄2									
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No