

OCS EIS/EA
BOEM 2023-049



Empire Offshore Wind Final Environmental Impact Statement Volume 6 Part B EAF Appendices A, B, and C September 2023



BOEM
Bureau of Ocean Energy
Management

Appendix A USACE South Brooklyn Marine Terminal Port Infrastructure Upgrades Letter, March 21, 2022



This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Dayton, NJ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log



AIR

AIR CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX 732-329-3499
www.sgs.com/enhsusa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD 36521
Requested Analysis	

Client / Reporting Information		Project Information		Weather Parameters		Requested Analysis	
Company Name TETRA TECH		Project Name 2ND Ave # 3RD St		Temperature (Fahrenheit)		VTD15NYSVLL FC59 FC74 SHIPMENT	
Address 6 CENTURY DR		Street		Start: Maximum:			
City PARSIPPANY NJ		City BROOKLYN NY		Stop: Minimum:			
State NJ		State NY		Atmospheric Pressure (Inches of Hg)			
Zip 07954		Project #		Start: Maximum:			
Project Contact BOB CANTAGALLO		Client Purchase Order #		Stop: Minimum:		Other weather comment:	
E-mail BOB.CANTAGALLO@TETRA-TECH.COM							
Phone # (973) 630-4045							
Fax #							
Sampler(s) Name(s) A. VALU & CHRIS BEERS							

Lab Sample #	Field ID / Point of Collection	Air Type	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information					
			Indoor (I) Soil Vap (SV) Ambient (A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure (H _g)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure (H _g)	Interior Temp (F)	Sampler Init.
1	TT-SB-33SV	SV	A1363	6L	FC591	12/08/21	0740	-24	36	AV	12/08/21	1450	-3	43	AV	✓
2	TT-SB-32SV	SV	A1363	6L	FC591	12/08/21	0750	-30	36	AV	12/08/21	1453	-5	43	AV	✓
3	TT-SB-25SV	SV	M139	6L	FC707	12/08/21	0747	-28	36	AV	12/08/21	1457	-4	43	AV	✓
4	TT-SB-24SV	SV	A1325	6L	FC920	12/08/21	0753	-28	36	AV	12/08/21	1500	-4	43	AV	✓
5	TT-SB-39SV	SV	A743	6L	MC055	12/08/21	0849	-30	38	AV	12/08/21	1552	-3	40	AV	✓
6	TT-SB-37SV	SV	M011	6L	MC269	12/08/21	0852	-29	38	AV	12/08/21	1556	-4	40	AV	✓
7	TT-SB-A	A	M163	6L	FC828	12/8/21	0757	-30	37	AV	12/08/21	1626	-4	40	AV	✓
8	TT-SB-19SV	SV	A1364	6L	FC421	12/8/21	0804	-30	37	AV	12/08/21	1629	-4	40	AV	✓
9	TT-SB-14SV	SV	A1361	6L	FC610	12/8/21	0829	-30	37	AV	12/08/21	1632	-4	40	AV	✓
10	TT-SB-16SV	SV	A1359	6L	MC282	12/08/21	0820	-28	37	AV	12/08/21	1649	-4	40	AV	✓

Standard - 15 Days	Approved By: _____	All NJDEP TO-15 is mandatory Full T1 Comm A Comm B Reduced T2 Full T1 Other: DKQP reporting	Comments / Remarks Sample inventory is verified upon receipt in the Laboratory
10 Day	Date: _____		
5 Day			
3 Day			
2 Day			
1 Day			
Other			

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by: [Signature]	Date Time: 12/09/21 12:00	Received By: [Signature]	Date Time: 12/9/21 17:33	Relinquished by: [Signature]	Date Time: 12/9/21	Received By: [Signature]
Relinquished by:	Date Time:	Received By:	Date Time:	Relinquished by:	Date Time:	Received By:
Relinquished by:	Date Time:	Received By:	Date Time:	Custody Seal #		



SGS North America Inc. - Dayton
 2235 Route 130, Dayton, NJ 08810
 TEL 732-329-0200 FAX 732-329-3499
 www.sgs.com/en/susa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD36521
Requested Analysis	
Temperature (Fahrenheit) Start: _____ Maximum: _____ Stop: _____ Minimum: _____ Atmospheric Pressure (inches of Hg) Start: _____ Maximum: _____ Stop: _____ Minimum: _____ Other weather comment: _____	
Turnaround Time (Business days) <input type="checkbox"/> Standard - 15 Days <input type="checkbox"/> 10 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input type="checkbox"/> Other	
Approved By: _____ Date: _____	
Data Deliverable Information All NJDEP TO-15 is mandatory Full T1 <input type="checkbox"/> Comm A <input type="checkbox"/> Comm B <input type="checkbox"/> Reduced T2 <input type="checkbox"/> Full T1 Other: _____ <input type="checkbox"/> OKQP reporting	
Comments / Remarks Canister/PC (A1357/FC917) DOESN'T APPEAR TO BE ACTING PROPERLY. FC179 - READS 4x HIGHER THAN ACTUAL Sample inventory is verified upon receipt in the Laboratory	
Sample Custody must be documented below each time samples change possession, including courier delivery.	
Relinquished By Laboratory: A.V.R. Date Time: 12/08/21 12:20 Relinquished by: _____ Date Time: _____ Relinquished by: _____ Date Time: _____	Received By: [Signature] Date Time: 12/08/21 17:33 Received By: _____ Date Time: _____ Received By: _____ Date Time: _____
Relinquished by: _____ Date Time: _____	Received By: _____ Date Time: _____
Relinquished by: _____ Date Time: _____	Received By: _____ Date Time: _____

Client / Reporting Information Company Name: TETRA TECH Address: 6 CENTURY DR City: PARSIPPANY State: NJ Zip: 07954 Project Contact: BOB SANTA GAU Email: ROBERT.CANTAGAU@TETRA-TECH.COM Phone # (973) 630-4045 Fax # _____ Sampler(s) Name(s): ALEX VALLI & CHRIS BEERS				Project Info Project Name: 2ND AVE # 33RD Street: _____ City: BROOKLYN State: NY Project # _____ Client Purchase Order # _____				Weather Parameters Temperature (Fahrenheit) Start: _____ Maximum: _____ Stop: _____ Minimum: _____ Atmospheric Pressure (inches of Hg) Start: _____ Maximum: _____ Stop: _____ Minimum: _____ Other weather comment: _____											
Lab Sample #	Field ID / Point of Collection	Air Type			Sampling Equipment Info					Start Sampling Information					Stop Sampling Information				
		Indoor (I)	Soil Vap (SV)	Ambient (A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure (H _g)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure (H _g)	Interior Temp (F)	Sampler Init.		
11	TT-SB-36SV	SV			A1355	6L	MC189	12/08/21	0835	-30	37	AV	12/08/21	1656	-4	40	AV		
12	TT-SB-02SV	SV			A1365	6L	MC254	12/08/21	0910	-30	37	AV	12/08/21	1700	-5	40	AV		
13	TT-SB-17SV	SV			A1362	6L	FC357	12/08/21	0813	-30	37	AV	12/08/21	1739	-4	40	AV		
14	TT-SB-21SV	SV			A1357	6L	FC917	12/08/21	0738	-30	30	AV	12/08/21	1746	-5	40	AV		

VTO 15 NYSVLL

FC179

AIR SAMPLING EQUIPMENT RETURN FORM

CLIENT: Tetra Tech

PROJECT: 2nd Ave & 3rd St.

CONTROL# _____

JOB # JD 36521

ADDITIONAL SUMMA CANISTERS

1st A1360

ADDITIONAL CONTROLLERS

FC730

<u>RELINQUISHED BY:</u> 1 <u>SGS</u>	<u>DATE & TIME:</u> <u>12/9/21</u> <u>17:33</u>	<u>RECEIVED BY:</u> 2 <u>Jeemit Patel</u>	<u>DATE & TIME:</u> JD36521: Chain of Custody Page 3 of 4
<u>RELINQUISHED BY:</u> 3	<u>DATE & TIME:</u>	<u>RECEIVED BY:</u> 4	<u>DATE & TIME:</u>
<u>CUSTODY SEAL #'S:</u>		<u># OF BOXES OR PIECES IN DELIVERY</u>	

NOTES:

5.1



**Parks, Recreation,
and Historic Preservation**

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

March 21, 2022

Christopher Minck
Project Manager
USACE
26 Federal Plaza
16-406
New York, NY 10278

Re: USACE
South Brooklyn Marine Terminal Port Infrastructure Upgrades
22PR01402
NAN-2021-01202-EMI

Dear Christopher Minck:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (NY Environmental Conservation Law Article 8).

We note that the South Brooklyn Marine Terminal is not eligible for listing in the State and National Registers of Historic Places. We further note that the following State and National Register eligible or listed resources are adjacent to the project area: the Bush Terminal Historic District, the American Can Company building, the Gowanus Expressway Viaduct, Storehouse #2, U.S. Navy Fleet Supply Base, and Intermediate School 136. We have reviewed the report submitted to our office on March 1st, 2022. Based upon our review, it is SHPO's opinion that the proposed work will have No Adverse Effect upon historic properties.

If you have any questions, I am best reached via e-mail.

Sincerely,

Olivia Brazee
Historic Site Restoration Coordinator
olivia.brazee@parks.ny.gov

via e-mail only

cc: A. Sutherland, Maritime Administration
A. Rachleff and N. Stehling, AECOM

Appendix B Photographs of Historic Resources



Looking west toward Pier 7 in National Register-eligible Bush Terminal Historic District from SBMT 39th Street "Pier." Dredging would occur in the "interpier" basin between remnants of Pier 7 and 39th Street "Pier." Improvements would be made to the 39th Street "Pier."



Looking south from 39th Street "Pier" at SBMT toward remnants of Pier 7 and Bush Terminal Historic District Buildings along waterfront.



Looking east from SBMT toward contributing buildings within Bush Terminal Historic District. Buildings face proposed upland improvements and dredging activity in the Project Area.



Looking northwest toward Gowanus Bay and SBMT 39th Street, east of First Avenue. Buildings on left side of photograph are contributing resources within Bush Terminal Historic District.



Looking southwest toward existing building structures at SBMT (39th Street "Pier"). SBMT has been determined not eligible for listing in the National Register. Structures and paving will be removed, and the area will be repaved.



Looking northwest toward existing building structure at SBMT (39th Street "Pier"); structure will be removed.



Looking west toward buildings at SBMT that will be removed (39th Street "Pier").



Looking east toward Tower Building at SBMT (land side of 35th Street "Pier"). Building will be removed.



Looking west toward Tower Building at SBMT; building will be removed. Pavement will be removed and new paving and structures installed.



Looking north from 35th Street "Pier" at SBMT toward contemporary recycling facility at 29th Street "Pier."
35th Street "Pier" will be repaved, a wharf installed into the "interpier" basin, and the basin will be dredged, as will the area to the west of the 35th Street "Pier."



Looking east from 39th Street “Pier” at SBMT toward National Register-listed Navy Storehouse No. 2 (shorter building). “Interpier” basin will be dredged and new paving and structures will be installed.



Close-up of Storehouse No. 2 from 39th Street “Pier” at SBMT. “Interpier” basin will be dredged and new paving and structures will be installed on the “pier”.



Looking west toward National Register-eligible American Can Company at northeast corner of Second Avenue and 43rd Street. View between building and SBMT is obstructed by intervening development.



Looking toward east façade of American Can Company; façade faces Second Avenue.



Looking toward National Register-eligible Gowanus Expressway viaduct from Third Avenue. Views are intermittently blocked by intervening development.



View beneath Gowanus Expressway above Third Avenue.



National Register-eligible I.S. 136 at the corner of Fourth Avenue and 41st Street. Building is approximately 1,600 ft removed from SBMT. Looking northward from the south sidewalk of 41st Street



Looking south toward I.S. 136 from north side of 40th Street.

Appendix C Full Benthic Macroinvertebrate Data

FULL BENTHIC MACROINVERTEBRATE DATA - Collected at South Brooklyn Marine Terminal
 Individuals collected from 3 x 0.1 meter-squared VanVeen grabs taken July 2020

Taxa/species	1	2	3	4	5	6	7	8	Ref 1	Ref 2
ANNELIDS										
<i>Alitta succinea</i>	0	0	1	4	1	1	1	11	1	0
<i>Ampharete oculata</i>	0	0	2	0	0	0	1	0	1	0
<i>Amphitrite ornata</i>	0	0	0	1	0	0	0	0	0	0
<i>Capitella capitata</i>	0	0	0	0	0	0	0	1	0	0
Cirratulidae sp.	0	3	3	1	2	9	0	0	0	1
<i>Cossura</i> sp.	0	0	21	9	0	2	0	4	0	5
<i>Diopatra cuprea</i>	0	0	5	11	2	1	0	1	0	0
<i>Dipolydora socialis</i>	0	0	1	0	0	0	0	0	0	0
<i>Eumida sanguinea</i>	0	0	0	0	9	3	0	2	0	0
<i>Exogone dispar</i>	0	0	0	1	0	0	0	0	0	0
<i>Fabricia stellaris</i>	0	0	0	0	0	0	0	1	0	0
<i>Glycera americana</i>	0	1	8	1	8	4	1	0	0	0
<i>Glycera</i> sp.	0	0	4	13	2	2	0	0	0	0
<i>Glycinde solitaria</i>	0	0	76	128	32	114	0	0	0	0
<i>Gyptis vittata</i>	0	0	6	2	1	0	0	2	0	2
<i>Harmothoe imbricata</i>	0	0	0	0	0	0	0	1	0	0
<i>Heteromastus filiformis</i>	0	0	20	27	0	0	0	0	0	0
<i>Hypereteone heteropoda</i>	0	0	3	2	0	1	0	2	1	0
<i>Leitoscoloplos robustus</i>	0	0	1	0	0	3	0	0	0	0
<i>Leitoscoloplos</i> sp.	0	1	6	10	17	28	2	16	0	0
<i>Lepidonotus sublevis</i>	0	0	0	1	0	0	0	0	0	0
Maldanidae sp.	0	1	2	0	0	1	0	0	0	0
<i>Mediomastus ambiseta</i>	0	6	133	294	6	39	11	27	11	5
<i>Nephtys incisa</i>	14	12	15	15	0	5	16	1	12	2
Nephtyidae sp.	0	0	0	0	0	1	0	1	0	0
<i>Oligochaeta</i> sp.	5	66	1374	1445	2	82	74	17	39	23
Onuphidae sp.	0	1	0	0	0	0	0	0	0	0
<i>Odontosyllis fulgurans</i>	0	0	0	1	0	0	0	0	0	0
<i>Paranaitis speciosa</i>	0	0	0	1	0	0	0	0	0	0
<i>Paraprionospio pinnata</i>	0	0	3	0	1	0	0	0	0	0
<i>Parasabella microphthalma</i>	0	0	1	7	0	2	0	15	0	0
<i>Pectinaria gouldii</i>	0	0	179	150	44	125	0	1	0	0
<i>Phyllodoce arenae</i>	0	0	0	0	1	0	0	0	0	0
<i>Polydora cornuta</i>	0	0	0	1	0	0	3	14	1	0
<i>Prosphaerosyllis longicauda</i>	0	0	0	1	0	0	0	0	0	0
<i>Sabaco elongatus</i>	1	1	8	43	0	22	7	0	0	0
Sabellidae sp.	0	0	0	1	0	0	0	3	0	0
<i>Salvatoria clavata</i>	0	0	0	1	0	0	0	1	0	0
<i>Sige fusigera</i>	0	0	0	0	1	0	0	0	0	0
<i>Spiochaetopterus costarum oculis</i>	0	0	33	17	21	28	0	0	0	0
Spionidae sp.	1	3	0	0	0	0	2	1	0	0
<i>Sthenelais limicola</i>	0	0	1	0	0	0	0	0	0	0
<i>Streblospio benedicti</i>	1	9	2	0	0	0	2	3	21	1
NEMATODA (ROUND WORMS)										
<i>Nematoda</i> sp.	0	0	39	86	5	54	1	124	0	0
NEMERTEA (RIBBON WORMS)										
<i>Nemertea</i> sp.	0	0	91	112	12	16	0	2	0	0

FULL BENTHIC MACROINVERTEBRATE DATA - Collected at South Brooklyn Marine Terminal
 Individuals collected from 3 x 0.1 meter-squared VanVeen grabs taken July 2020

Taxa/species	1	2	3	4	5	6	7	8	Ref 1	Ref 2
PLATYHELMINTHES (FLAT WORMS)										
Stylochus ellipticus	0	0	1	0	0	1	0	1	0	0
GASTROPODS										
Acteocina canaliculata	5	85	419	419	154	321	36	19	8	1
Asmunda elegantula	1	0	1	2	0	43	2	1	1	0
Boonea bisuturalis	0	4	0	0	0	0	1	3	0	0
Boreotrophon clathratus	0	2	0	0	0	0	0	0	0	0
Epitonium angulatum	0	0	0	0	0	0	0	1	0	0
Gastropoda sp.	4	0	0	0	0	0	0	0	3	0
Japonactaeon punctostriatus	4	14	408	696	687	335	13	7	6	0
Odostomia eburnea	2	11	67	42	14	3	3	10	1	1
Oncchidorididae sp.	0	0	0	1	0	0	0	0	0	0
Neverita duplicata	0	0	0	0	0	1	0	0	0	0
Tritia obsoleta	0	1	12	0	0	1	8	1	6	0
Tritia trivittata	0	0	1	1	0	0	1	0	0	0
Turbonillinae sp.	0	0	0	0	0	0	0	0	1	0
Urosalpinx cinerea	0	0	0	0	0	0	0	14	0	5
BIVALVES										
Ameritilla agilis	0	0	7	1	1	0	3	1	0	0
Crepidula fornicata	0	0	0	0	0	0	1	0	0	0
Crepidula sp.	0	0	0	2	0	0	0	0	0	0
Ensis leei	0	0	0	0	0	0	1	0	0	0
Lyonsia hyalina	0	0	62	10	3	2	1	4	0	0
Macoploma tenta	0	0	0	0	0	1	0	0	0	0
Mercenaria mercenaria	0	0	2	2	0	1	0	2	0	0
Modiolus modiolus	0	0	0	0	0	0	0	0	2	0
Mulinia lateralis	0	11	3	2	8	7	32	5	1	0
Nucula proxima	0	1	5	3	0	0	1	0	0	0
Pandora inflata	0	0	23	8	3	6	0	0	0	0
Pitar morrhuanus	1	0	1	0	0	0	0	0	0	0
Turtonia minuta	0	0	3	4	1	1	0	0	0	0
Yoldia limatula	1	2	14	9	0	2	5	1	0	0
Yoldia myalis	0	0	0	0	0	0	1	0	0	0
Yoldia sapotilla	0	0	0	0	0	0	0	0	0	1
Yoldia sp.	1	0	8	3	0	2	2	2	0	0
ARTHROPODS										
Ampelisca abdita	5	73	15	11	32	15	60	7	35	7
Amphibalanus improvisus	0	0	0	2	0	0	0	0	0	0
Ampithoe longimana	0	0	0	0	0	3	0	0	0	0
Anoplodactylus petiolatus	0	10	16	68	17	13	10	2	5	1
Apocorophium acutum	0	0	0	0	0	0	0	2	0	0
Callinectes sapidus	1	1	0	0	0	0	3	4	3	0
Callipallene brevisrostris	0	0	0	3	0	2	0	3	0	0
Caprella equilibra	0	0	0	2	0	1	4	1	0	0
Caprella penantis	0	0	0	0	0	14	0	0	0	0
Cerapus sp.	0	0	5	3	1	0	0	0	0	0
Crangon septemspinosa	0	1	1	0	0	1	4	9	0	5
Dyspanopeus sayi	0	0	0	1	0	0	0	0	0	0
Edotea triloba	1	1	0	4	13	3	0	4	1	0
Elasmopus levis	0	0	0	23	0	9	0	6	1	0
Emerita talpoida	0	0	1	0	0	0	0	0	0	0
Grandidierella japonica	0	1	0	0	1	0	1	195	0	0
Hippolyte sp.	0	0	0	0	0	1	0	0	0	0
ARTHROPODS (continued)										
Incisocalloipe aestuarius	0	0	0	0	0	0	1	0	0	0
Jassa marmorata	0	0	0	1	0	0	1	0	0	0
Leucon americanus	0	0	4	2	7	0	2	0	0	1

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Taxa/species	1	2	3	4	5	6	7	8	Ref 1	Ref 2
<i>Libinia dubia</i>	0	0	0	1	0	0	0	0	0	0
<i>Limnoria lignorum</i>	0	0	0	0	0	0	0	3	0	0
<i>Microdeutopus gryllotalpa</i>	0	0	0	0	0	0	0	79	0	0
<i>Minuca</i> sp.	0	2	0	0	0	0	0	0	6	0
<i>Oxyurostylis smithi</i>	0	0	6	5	9	3	2	1	1	0
<i>Palaemon pugio</i>	0	0	0	0	0	0	0	1	1	1
<i>Pagurus annulipes</i>	0	0	0	0	0	0	0	0	1	0
<i>Pagurus longicarpus</i>	0	0	0	0	0	0	0	0	0	1
<i>Paracaprella tenuis</i>	0	0	0	2	0	4	0	10	0	0
<i>Stenothoe</i> sp.	0	0	0	2	0	0	1	0	0	0
<i>Synidotea laevidorsalis</i>	0	0	0	1	1	2	0	0	0	0
<i>Unciola serrata</i>	0	0	0	0	2	0	0	0	0	0
CNIDARIANS										
<i>Diadumene leucolena</i>	0	0	4	13	0	1	0	25	0	2
<i>Edwardsia elegans</i>	0	0	3	5	1	3	0	0	0	0
TUNICATES										
<i>Molgula manhattensis</i>	0	0	0	2	0	0	1	199	2	14
<i>Stylela canopus</i>	0	0	0	0	0	0	0	2	0	0
TOTAL NUMBER OF ORGANISMS	48	324	3130	3742	1122	1345	322	876	172	79
Density Per Square Meter	160.0	1080.0	10433.3	12473.3	3740.0	4483.3	1073.3	2920.0	573.3	263.3
Species Richness	16	27	53	65	36	52	40	56	27	19