



**US Army Corps
of Engineers®**

New York District
Albany Field Office
1 Bond Street
Troy, N.Y. 12180
ATTN: CENAN-OP-A

Public Notice

In replying refer to:
Public Notice No. HR-AFO-MD20

Published: December 6, 2019 Expires: January 4, 2020

HUDSON RIVER, NEW YORK GERMANTOWN AND KINGSTON DREDGE AREAS FEDERAL NAVIGATION PROJECT MAINTENANCE DREDGING

TO WHOM IT MAY CONCERN:

The New York District, US Army Corps of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 (33 U.S.C. 1344) of the Federal Water Pollution Control Act (amended in 1977 and commonly referred to as the Clean Water Act), proposes to perform maintenance dredging of the federal navigation project: Hudson River, New York City to Waterford, NY (see Enclosures 1 thru 4); with subsequent placement of the dredged material in the federally owned upland dredged material placement site on Houghtaling Island, New Baltimore, New York.

WATERWAY/PROJECT: Hudson River, New York City to Waterford, NY, Federal Navigation Project

LOCATIONS: Germantown and Kingston, New York.

The Hudson River federal navigation project was authorized by the Rivers and Harbors Acts of 1910 to 1930; and modified in 1934, 1935, 1938 and 1954, in accordance with the recommendations contained in the following Congressional Documents: House Document (HD) No. 719, 61st Congress, 2nd Session (Jun 1910) and modified by HD No. 350, 68th Congress, 1st Session (Mar 1925); HD No. 210, 70th Congress, 1st Session (Jul 1930); Senate Document No. 155, 72nd Congress, 2nd Session (Aug 1935); HD No. 572, 75th Congress, 3rd Session (Jun 1938); and Public Law No. 780, 83rd Congress, 2nd Session (Sep 1954).

The existing navigation project authorizes a channel 600 ft. wide, New York City to Kingston, thence 400 ft. wide to 2,200 ft. south of the Mall Bridge (Dunn Memorial Bridge) at Albany with a turning basin at Albany and anchorages near Hudson and Stuyvesant, all with depths of 32 ft. in soft material and 34 ft. in rock; thence 27 ft. deep and 400 ft. wide to 900 ft. south of the Mall Bridge (Dunn Memorial Bridge); thence 14 ft.

deep and generally 400 ft. wide, to the Federal Lock at Troy; and thence 14 ft. deep and 200 ft. wide, to the southern limit of the State Barge Canal at Waterford; with widening at bends and widening in front of the cities of Troy and Albany to form harbors 12 ft. deep. The total length of the existing navigation project (NYC to Waterford) is about 155 miles.

A detailed description of the proposed activities is enclosed to assist in your review. This activity is being evaluated to determine that the proposed dredging with placement of dredged material in the federally owned upland site on Houghtaling Island will not unreasonably degrade or endanger human health, welfare, economic potential, recreation and aesthetics, water quality, marine resources, ecological systems and/or flood protection.

The Corps of Engineers is soliciting comments from the public; federal, state and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Comments are used to assess impacts on navigation, water quality, endangered species, historic resources, wetlands, scenic and recreational values, and other public interest factors. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act and to determine the need for a public hearing.

ALL COMMENTS REGARDING THIS ACTIVITY MUST BE PREPARED IN WRITING AND MAILED TO REACH THE ALBANY FIELD OFFICE AT THE ADDRESS ON THE FRONT PAGE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Any person who has an interest which may be affected by the dredging and/or placement of this dredged material may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by the activity. It should be noted that information submitted by mail is considered just as carefully in the process and bears the same weight as that furnished at a public hearing.

No known archaeological, scientific, prehistorical or historical data are expected to be lost by work accomplished under the required dredging.

Reviews of the activity pursuant to Section 404 of the Clean Water Act will include application of the guidelines announced by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. The Corps will obtain a water quality certificate (WQC) or waiver from the New York State Department of Environmental Conservation, in accordance with Section 401 of the Clean Water Act prior to commencement of any work.

Pursuant to Section 307 of the Coastal Zone Management Act of 1972 as amended [16 USC 1456(c)], for activities conducted or supported by a federal agency in a state which

has a federally approved Coastal Zone Management (CZM) program, the Corps will submit a determination that the proposed project is consistent with the State CZM program to the maximum extent practicable. This activity is subject to review by the New York State Department of State for its consistency with the enforceable policies of the New York State Coastal Management Program. The New York District of the US Army Corps of Engineers has determined that the proposed activities are consistent to the maximum extent practicable with the New York State CZM program. A copy of this determination will be provided to the New York State Department of State, Division of Coastal Resources, with a request for State's agreement with that determination. For activities within the coastal zone of the State of New York, project information is available from the Coastal Zone Management Program, New York State Department of State, Office of Coastal, Local Government, and Community Sustainability, One Commerce Plaza, 99 Washington Avenue, Suite 1010, Albany, NY 11231, telephone (518) 474-3642.

In compliance with Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (1996 amendments), an Essential Fish Habitat Assessment will be prepared and submitted to the National Marine Fisheries Service for review and comment.

The proposed work is being coordinated with the following federal, state and local agencies:

- U.S. Environmental Protection Agency
- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Department of Commerce, National Marine Fisheries Service
- U.S. Coast Guard, First District
- New York State Department of Environmental Conservation
- New York State Department of State

If you have any questions concerning this notice, you may contact the Albany Field Office at (518) 273-0870 and ask for Mr. Devon Hinds. Comments or questions may be FAXED to (518) 273-3772 ATTN: Mr. Devon Hinds.

DESCRIPTION OF PLANNED FEDERAL ACTION:

The U.S. Army Corps of Engineers, New York District proposes to perform maintenance dredging of four discontinuous dredge areas in the Hudson River federal navigation project, located at the Germantown Reach 47/48 (River Mile 105 thru 108) and Kingston Reach 60/61 (River Mile 90 thru 91), New York (Enclosure 1). Based on condition surveys performed in July 2018, the proposed maintenance dredging would involve the removal of a combined estimated total of up to 184,000 CY of material from the two dredging areas. The project will be dredged to its authorized depth of -32 feet plus 1 foot of allowable overdepth. The project depth is referenced to the plane of COE Mean Low Water (original project datum). This datum is approximately 2.55 feet below NAVD88.

The purpose of the proposed dredging is to alleviate the effects of shoaling in order to maintain the authorized project dimensions, thereby assuring safe and economical use of the Hudson River by commercial shipping interests. The dredge material has been tested and meets the criteria for confined disposal in the federally owned upland dredged material placement site on Houghtaling Island, New Baltimore, New York.

Maintenance dredging of the Hudson River federal navigation projects will be accomplished by a hopper dredge, or other similar plant. The entire channel will generally not require maintenance dredging; only areas where shoaling has reduced the depth of the channel will require dredging. No in-water work will occur during the following environmental windows for Shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*Acipenser oxyrinchus*): March 1st to September 1st from RM 135 to RM 116.

ENVIRONMENTAL IMPACT STATEMENT:

An Environmental Impact Statement (EIS) was prepared by the U.S. Army Engineer District, New York in January 1983. Environmental Assessments (EA) updating this EIS were prepared by the New York District for similar maintenance dredging projects performed in calendar years 1986, 1988, 1990, 1992, 1995, 1998, 2001, 2003, 2007, 2010, 2012-13, 2014, 2016 and 2018. It was determined then that maintenance dredging of the Hudson River federal navigation project, with placement of the dredged material on the federally owned upland placement site on Houghtaling Island has no significant adverse environmental impacts on water quality, marine resources, fish, wildlife, recreation, aesthetics and flood protection

An update of the EA and a 404 (b) evaluation as required by the Clean Water Act 40 CFR 230 will be finalized prior to the implementation of the proposed work. A copy of the draft EA is available upon request by contacting the Albany Field Office.

PLACEMENT SITE:

The dredged material from this project is proposed to be placed in the federally owned upland placement site on Houghtaling Island, New Baltimore, New York. This site is located at River Mile 130 as shown on the attached map (Enclosure 3). The dredged material will be loaded into the hopper dredge, transported to the placement site, and then pumped into Area A and/or Area B utilizing the hopper dredges onboard hydraulic pumping system.

MATERIAL DESCRIPTION:

The proposed dredge areas are depicted in Enclosure 2. The proposed dredge material has been characterized by taking sediment core samples extending to a depth of -32 feet (project depth) plus 1 foot of allowable over-depth. Based on the analysis of the core samples; the average grain size characteristics of the proposed dredged material are as follows:

Germantown Dredge Area, R47/48 (Sample ID 20190300 Composite):

0.2% Gravel, 85.8% Sand, 11.8% Silt, 2.2% Clay

Kingston Dredge Area, R60 (Sample ID 20190301 Composite):

0.0% Gravel, 28.8% Sand, 48.7% Silt, 22.5% Clay

Kingston Dredge Area, R61 (Sample ID 20190302 Composite):

0.0% Gravel, 30.1% Sand, 49.8% Silt, 20.1% Clay

See Enclosure 2 for sample locations and Enclosure 4 for the physical and chemistry summary data reports. The full chemistry data reports entitled "Technical Report on the Sampling and Testing of Material from Upper Hudson River for FNC Maintenance Dredging, Delivery Order No. W912DS-19-F-0052" dated August 2019 are available for review at the Albany Field Office, Troy, NY.

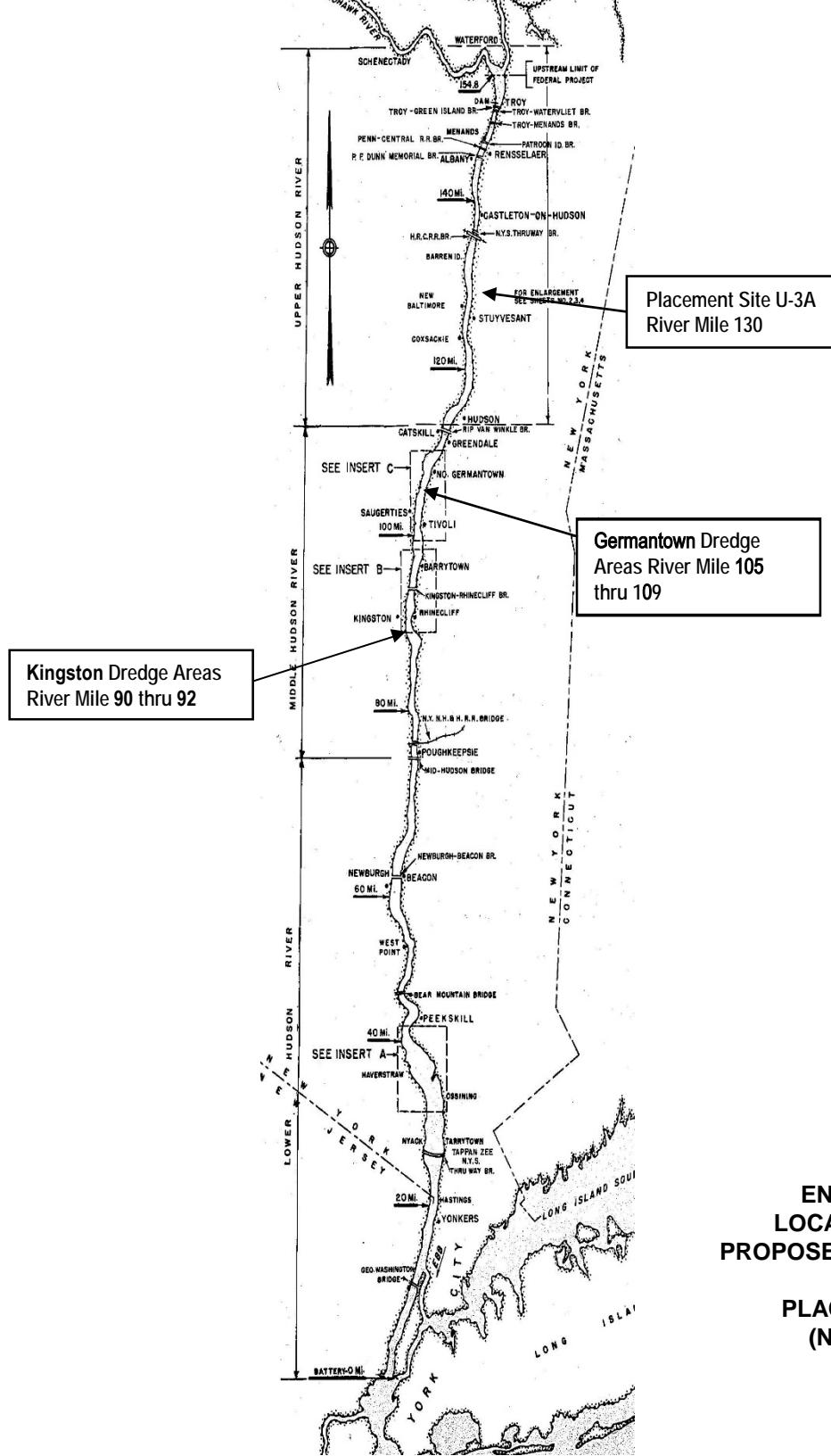
For more information on the New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>

It is requested that you communicate the foregoing information concerning the proposed work to any persons known by you to be interested and who did not receive a copy of this notice.

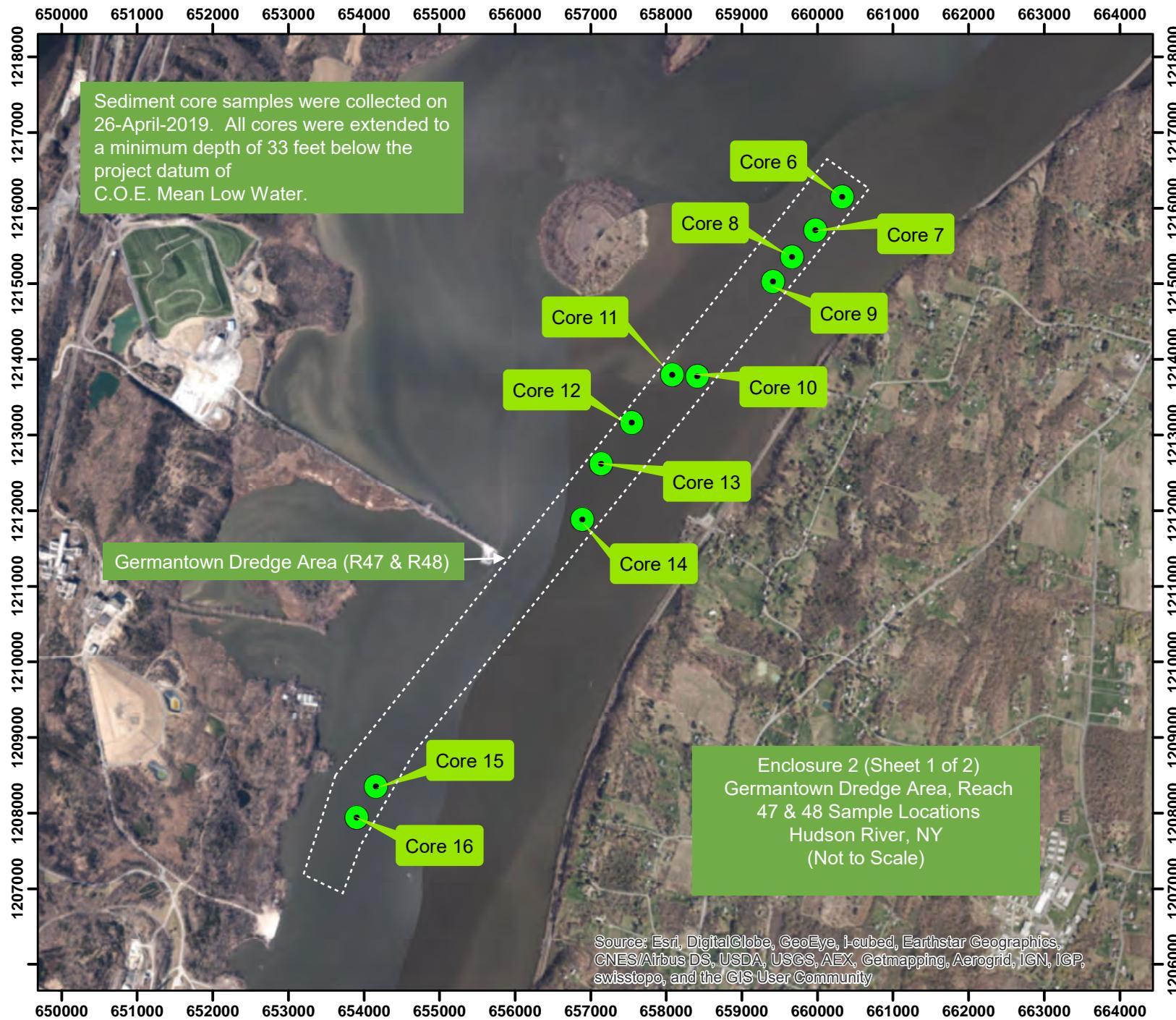


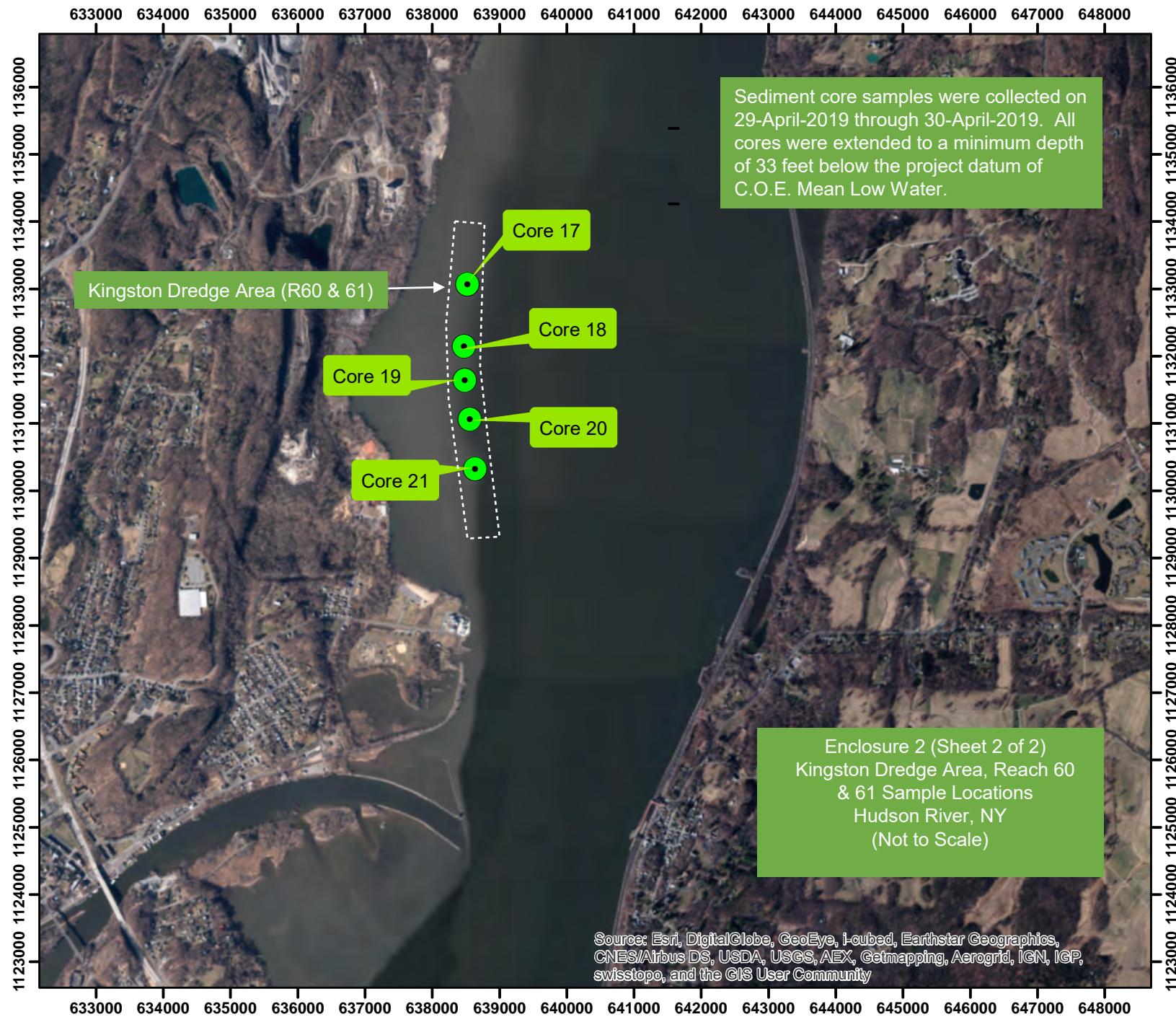
Enclosures
As stated

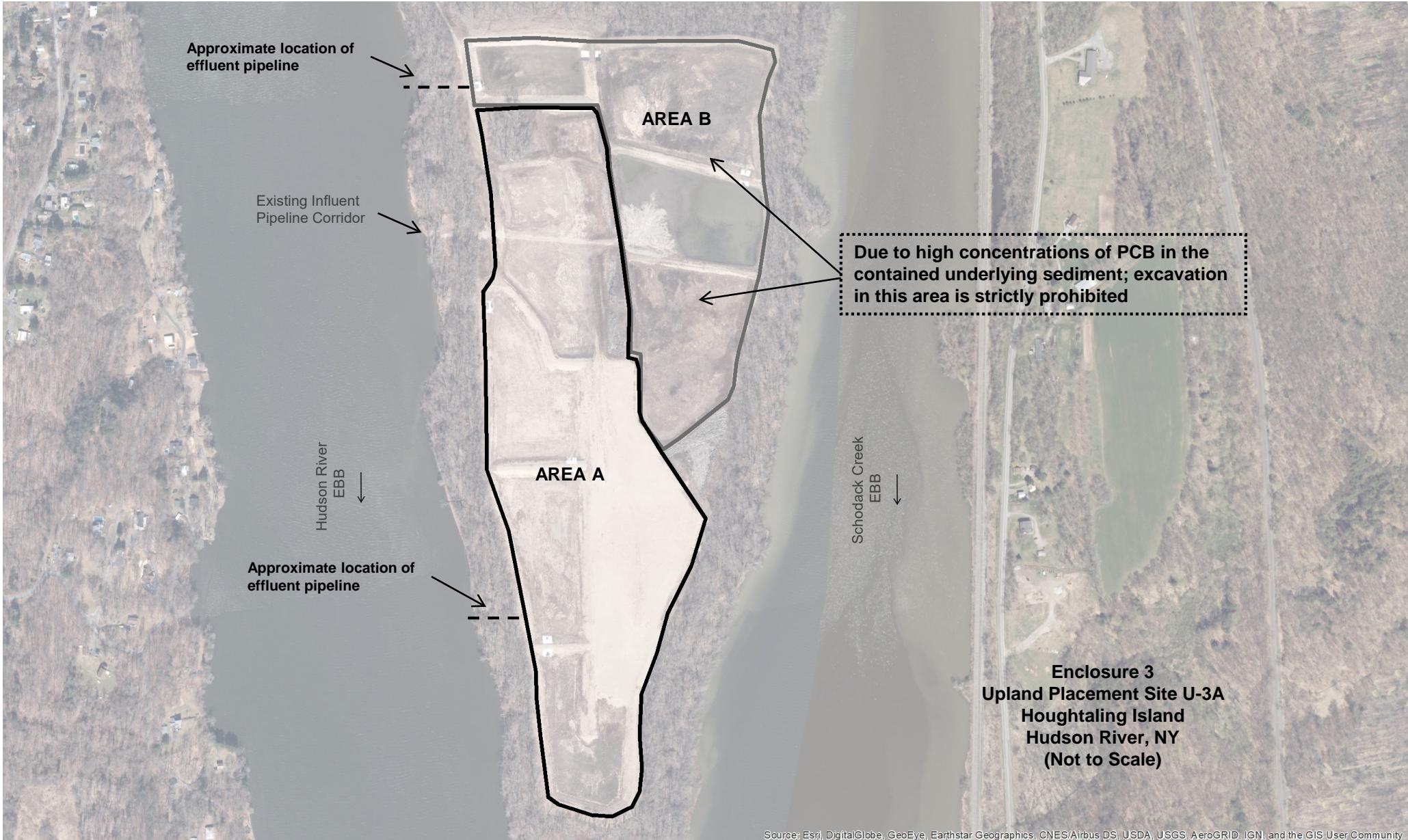
Reggie Eakins
Chief, Albany Field Office



ENCLOSURE 1
LOCATION MAP OF
PROPOSED DREDGE AREAS
AND
PLACEMENT SITE
(Not to Scale)







Enclosure 3
Upland Placement Site U-3A
Houghtaling Island
Hudson River, NY
(Not to Scale)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Grain Size Distribution, Percent Moisture, and TOC Results

Sample ID	ASI #	Total % Gravel	Total % Sand	Total % Silt	Total % Clay	% Moisture	TOC Ppm	% TOC of Dry Weight
GR-6	20190283	0.3	89.6	9.6	0.5	24.9	1,785	0.18
GR-6	20190283 dup	0.0	88.8	11.2				
GR-6	20190283 trp	0.1	88.8	11.1				
GR-7	20190284	0.2	86.7	11.7	1.4	25.4	1,811	0.18
GR-8	20190285	0.3	84.5	12.9	2.3	24.2	2,095	0.21
GR-9	20190286	0.2	83.9	10.9	5.0	26.3	3,956	0.40
GR-10	20190287	0.1	83.8	12.5	3.6	26.9	3,019	0.30
GR-11	20190288	0.0	82.9	13.8	3.3	26.1	3,135	0.31
GR Composite	20190300	0.2	85.8	11.8	2.2	26.8	2,429	0.24
KR-12	20190289	0.3	92.3	7.3	0.1	24.3	1,665	0.17
KR-13	20190290	0.0	89.3	10.5	0.2	25.8	2,537	0.25
KR-14	20190291	0.2	85.2	13.3	1.3	26.9	5,208	0.52
KR-15	20190292	0.1	90.1	8.8	1.0	25.9	1,625	0.16
KR-16	20190293	0.0	90.0	9.1	0.9	26.9	1,525	0.15
KR-17	20190294	0.0	48.2	34.3	17.5	38.4	14,281	1.43
KR-18	20190295	0.0	21.3	48.8	29.9	46.0	21,438	2.14
KR-19	20190296	0.1	24.2	50.1	25.6	45.3	22,183	2.22
KR (17-19) Composite	20190301	0.0	28.8	48.7	22.5	42.8	18,217	1.82
KR-20	20190297	0.1	44.6	39.0	16.3	39.7	16,160	1.62
KR-20	20190297 dup					39.6		
KR-20	20190297 trp					39.9		
KR-21	20190298	0.0	27.0	50.3	22.7	42.4	16,611	1.66
KR (20-12) Composite	20190302	0.0	30.1	49.8	20.1	42.4	16,792	1.68
KR (20-12) Composite	20190302					42.8		
KR (20-12) Composite	20190302					42.7		

DO33 Upland - LOC#6 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190283	
	ug/kg	ug/kg	mg/L	mg/L	LOC#6	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	21	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#7 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190284	
	ug/kg	ug/kg	mg/L	mg/L	LOC#7	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	25	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#8 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	ug/kg	Leachate mg/L	mg/L	LOC#8	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	220	P
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	7	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#9 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190286	
	ug/kg	ug/kg	mg/L	mg/L	LOC#9	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	970	PD
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#10 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190287	
	ug/kg	ug/kg	mg/L	mg/L	LOC#10	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	69	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	4.4	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#11 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190288	
	ug/kg	ug/kg	mg/L	mg/L	LOC#11	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	190	P
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	8.9	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#12 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190289	
	ug/kg	ug/kg	mg/L	mg/L	LOC#12	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	24	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#13 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	ug/kg	Leachate mg/L	mg/L	LOC#13	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	29	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#14 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	ug/kg	Leachate mg/L	mg/L	LOC#14	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	750	PD
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#15 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190292	
	ug/kg	ug/kg	mg/L	mg/L	LOC#15	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	45	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#16 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190293	
	ug/kg	ug/kg	mg/L	mg/L	LOC#16	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	37	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	ND	U
Aroclor-1260	NA	33	NA	0.001	ND	U
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#17 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	ug/kg	Leachate mg/L	mg/L	LOC#17	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	150	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	49	P
Aroclor-1260	NA	33	NA	0.001	13	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#18 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190295	
	ug/kg	ug/kg	mg/L	mg/L	LOC#18	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	1400	PD
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	400	PD
Aroclor-1260	NA	33	NA	0.001	150	JD
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#18 - Dioxin/Furan

Dioxin/Furan	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ng/kg)	
ASI ID #	Soil		Leachate		20190295	
	ng/kg		pg/L		LOC#18	Q
2,3,7,8-TCDD	NA	NA	NA	NA	1.31	
1,2,3,7,8-PeCDD	NA	NA	NA	NA	2.3	J
1,2,3,4,7,8-HxCDD	NA	NA	NA	NA	3.7	JK
1,2,3,6,7,8-HxCDD	NA	NA	NA	NA	17.6	
1,2,3,7,8,9-HxCDD	NA	NA	NA	NA	12.4	
1,2,3,4,6,7,8-HpCDD	NA	NA	NA	NA	552	
OCDD	NA	NA	NA	NA	3610	
2,3,7,8-TCDF	NA	NA	NA	NA	9.04	K
1,2,3,7,8-PeCDF	NA	NA	NA	NA	1.45	JK
2,3,4,7,8-PeCDF	NA	NA	NA	NA	4.75	K
1,2,3,4,7,8-HxCDF	NA	NA	NA	NA	4.41	J
1,2,3,6,7,8-HxCDF	NA	NA	NA	NA	3.22	J
2,3,4,6,7,8-HxCDF	NA	NA	NA	NA	3.26	J
1,2,3,7,8,9-HxCDF	NA	NA	NA	NA	1.08	J
1,2,3,4,6,7,8-HpCDF	NA	NA	NA	NA	43.9	
1,2,3,4,7,8,9-HpCDF	NA	NA	NA	NA	2.78	J
OCDF	NA	NA	NA	NA	112	

DO33 Upland - LOC#19 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190296	
	ug/kg	ug/kg	mg/L	mg/L	LOC#19	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	150	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	45	P
Aroclor-1260	NA	33	NA	0.001	15	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#20 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	ug/kg	Leachate mg/L	mg/L	LOC#20	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	150	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	51	P
Aroclor-1260	NA	33	NA	0.001	16	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - LOC#21 - Aroclors

Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190298	
	ug/kg	ug/kg	mg/L	mg/L	LOC#21	Q
Aroclor-1016	NA	33	NA	0.001	ND	U
Aroclor-1221	NA	67	NA	0.002	ND	U
Aroclor-1232	NA	33	NA	0.001	ND	U
Aroclor-1242	NA	33	NA	0.001	140	
Aroclor-1248	NA	33	NA	0.001	ND	U
Aroclor-1254	NA	33	NA	0.001	46	P
Aroclor-1260	NA	33	NA	0.001	15	J
Total Aroclor(SUM)	200	NA	0.005	NA		

DO33 Upland - COMP GR - Sediment Volatiles

Volatiles	Action Level		Action Level		Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil		Leachate		20190300	
	ug/kg		ug/L		COMP GR	Q
Chloromethane (Methyl Chloride)	4000		30		ND	U
Bromomethane	25000		10		ND	U
Vinyl chloride	700		5		ND	U
Chloroethane	220000		NA		ND	U
Methylene chloride (Dichloromethane)	34000		3		1.2	J
Acetone	70000000		700		33	
Carbon disulfide	7800000		NA		1.7	J
1,1-Dichloroethene	11000		2		ND	U
1,1-Dichloroethane	8000		50		ND	U
1,2-Dichloroethene (total)			10			
Chloroform	600		6		ND	U
1,2-Dichloroethane	900		NA		ND	U
2-Butanone (MEK)	3100000		300		5.3	J
1,1,1-Trichloroethane	290000		30		ND	U
Carbon tetrachloride	600		2		ND	U
Bromodichloromethane	1000		1		ND	U
1,2-Dichloropropane	2000		1		ND	U
cis-1,3-Dichloropropene	NA		NA		ND	U
Trichloroethene	7000		1		ND	U
Dibromochloromethane	3000		10		ND	U
1,1,2-Trichloroethane	2000		3		ND	U
Benzene	2000		1		3.8	J
trans-1,3-dichloropropene	NA		NA		ND	U
Bromoform	81000		4		ND	U
4-Methyl-2-pentanone (MIBK)	NA		400		ND	U
2-Hexanone	NA		NA		ND	U
Tetrachloroethene	2000		1		ND	U
1,1,2,2-Tetrachloroethane	1000		NA		ND	U
Toluene	6300000		1000		0.79	J
Chlorobenzene	510000		50		ND	U
Ethyl benzene	7800000		700		ND	U
Styrene	90000		100		ND	U
Xylenes(Total)	12000000		1000		ND	U
Acrolein	500				ND	U
Acrylonitrile	900				ND	U
1,2-Dibromo-3-chloropropane	80				ND	U
1,2-Dibromoethane	8				ND	U
Dichlorodifluoromethane	490000				ND	U
1,2-Dichloroethene (cis)	230000				ND	U
1,2-Dichloroethene (trans)	300000				ND	U
Methyl acetate	78000000				ND	U
Methyl tert-butyl ether (MTBE)	110000				ND	U
Tertiary butyl alcohol (TBA)	1400000				5.3	J
Trichlorofluoromethane	23000000				ND	U
Combined 1,3-dichloropropenes (SUM) cis + trans	2000		0.2			
1,4-dioxane					ND	U
n-propylbenzene					ND	U
sec-butylbenzene					ND	U
tert-butylbenzene					ND	U
1,2,4-trimethylbenzene					ND	U
1,3,5-trimethylbenzene					ND	U

DO33 Upland - COMP GR - Sediment Semivolatiles

Semivolatiles	Action Level Soil ug/kg	NJDEP DL ug/kg	Action Level Leachate mg/L	NJDEP DL mg/L	Unamended Sediment (Units: ug/kg)	
ASI ID #					20190300	
Phenol	18000000	660	4	0.01	ND	U
bis(2-Chloroethyl)ether	400	660	0.01	0.01	ND	U
2-Chlorophenol	310000	660	0.005	0.01	ND	U
1,3-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
1,4-Dichlorobenzene	5000	660	0.075	0.01	ND	U
1,2-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
2-Methylphenol (o-cresol)	310000	660	NA	0.01	ND	U
1-Chloropropane-2,2'-oxybis/ bis(2-chloroisopropyl)ether	23000	660	0.3	0.01	ND	U
4-Methylphenol (p-cresol) (co-elutes with 3-methylphenol (m-cresol))	31000	660	NA	0.01	5.2	J
N-Nitroso-Di-N-Propylamine	200	660	0.02	0.01	ND	U
Hexachloroethane	35000	660	0.01	0.01	ND	U
Nitrobenzene	31000	660	0.01	0.01	ND	U
Isophorone	510000	660	0.1	0.01	ND	U
2-Nitrophenol	NA	660	NA	0.01	ND	U
2,4-Dimethylphenol	1200000	660	0.1	0.01	ND	U
bis(2-Chloroethoxy)methane	NA	660	NA	0.01	ND	U
2,4-Dichlorophenol	180000	660	0.02	0.01	ND	U
1,2,4-Trichlorobenzene	73000	660	0.009	0.01	ND	U
Naphthalene	6000	660	0.3	0.01	6.5	J
4-Chloroaniline	NA	1300	NA	0.02	ND	U
Hexachloro-1,3-butadiene	6000	660	NA	0.01	ND	U
4-Chloro-3-methylphenol	NA	1300	NA	0.02	ND	U
2-Methylnaphthalene	230000	660	NA	0.01	4.6	J
Hexachlorocyclopentadiene	45000	660	0.05	0.01	ND	U
2,4,6-Trichlorophenol	19000	660	0.02	0.01	ND	U
2,4,5-Trichlorophenol	6100000	660	0.7	0.01	ND	U
2-Chloronaphthalene	NA	660	NA	0.01	ND	U
2-Nitroaniline	39000	3300	NA	0.05	ND	U
Dimethylphthalate	NA	660	NA	0.01	ND	U
Acenaphthylene	300000000	660	NA	0.01	ND	U
2,6-Dinitrotoluene	700	660	0.01	0.01	ND	U
3-Nitroaniline	NA	3300	NA	0.05	ND	U

Semivolatiles, continued	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	Leachate ug/kg	Soil mg/L	Leachate mg/L	20190300 COMP GR	
Acenaphthene	3400000	660	0.4	0.01	4.6	J
2,4-Dinitrophenol	120000	3300	0.04	0.05	ND	U
4-Nitrophenol	NA	3300	NA	0.05	ND	U
Dibenzofuran	NA	660	NA	0.01	3.6	J
2,4-Dinitrotoluene	700	660	0.01	0.01	ND	U
Diethylphthalate	49000000	660	5	0.01	ND	U
4-Chlorophenyl-phenylether	NA	660	NA	0.01	ND	U
Fluorene	2300000	660	0.3	0.01	6.7	J
4-Nitroaniline	NA	660	NA	0.02	ND	U
4,6-Dinitro-2-methylphenol	6000	3300	NA	0.05	ND	U
N-Nitrosodiphenylamine	99000	660	0.02	0.01	4.8	JX
4-Bromophenyl-phenylether	NA	660	NA	0.01	ND	U
Hexachlorobenzene	300	660	0.01	0.01	ND	U
Pentachlorophenol	3000	3300	0.001	0.05	ND	U
Phenanthrene	30000000	6600	NA	0.01	36	
Anthracene	17000000	6600	2	0.01	11	
Carbazole	24000	330	NA	0.01	ND	U
Di-n-butylphthalate	6100000	330	0.9	0.01	9.4	J
Fluoranthene	2300000	660	0.3	0.01	56	
Pyrene	1700000	660	0.2	0.01	47	J
Butylbenzylphthalate	1200000	660	0.1	0.01	6.1	J
3,3'-Dichlorobenzidine	1000	1300	0.06	0.02	ND	U
Benzo(a)anthracene	600	660	NA	0.01	27	
Chrysene	62000	660	NA	0.01	26	
bis(2-Ethylhexyl)phthalate	35000	660	0.03	0.01	15	J
Di-n-octylphthalate	2400000	660	0.1	0.01	ND	U
Benzo(b)fluoranthene	600	660	NA	0.01	32	
Benzo(k)fluoranthene	6000	660	NA	0.01	11	
Benzo(a)pyrene	200	660	NA	0.01	23	
Indeno(1,2,3-cd)pyrene	600	660	NA	0.01	17	
Dibenzo(a,h)anthracene	200	660	NA	0.01	4.1	J
Benzo(ghi)perylene	30000000	660	NA	0.01	17	
Pyridine	NA				ND	U
Acetophenone	2000				ND	U
Atrazine	210000				ND	U
Benzaldehyde	6100000				3.8	J
Benzidine	700				ND	U
1,1'-Biphenyl	3100000				6.8	J
Caprolactam	31000000				ND	U
1,2-Diphenylhydrazine	700				ND	U
N-Nitrosodimethylamine	700				ND	U
Total Cresol						

DO33 Upland - COMP GR - Pesticides/Aroclors

Pesticides/Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	Leachate ug/kg	Soil mg/L	Leachate mg/L	20190300 COMP GR	Q
alpha-BHC	100	1.9	0.00002	0.00005	ND	U
beta-BHC	400	3.3	0.0002	0.00005	ND	U
delta-BHC	NA	1.7	NA	0.00005	ND	U
gamma-BHC (Lindane)	400	2	0.0002	0.00005	ND	i
Heptachlor	100	2.1	0.0004	0.00005	ND	U
Aldrin	40	2	0.00004	0.00005	ND	U
Heptachlor epoxide	70	2.1	0.0002	0.00005	ND	U
Endosulfan I	NA	2.1	0.0004	0.00005	ND	U
Dieldrin	40	3.3	0.00003	0.0001	ND	i
4,4'-DDE	2000	4.2	0.0001	0.0001	0.51	JP
Endrin	23000	3.6	0.002	0.0001	ND	U
Endosulfan II	NA	3.3	0.0004	0.0001	ND	i
4,4'-DDD	3000	4.2	0.0001	0.0001	ND	U
Endosulfan sulfate	470000	3.6	0.0004	0.0001	ND	U
4,4'-DDT	2000	3.6	0.0001	0.0001	ND	i
Methoxychlor	390000	17	0.04	0.001	ND	U
Endrin ketone	NA	3.3	NA	0.0001	ND	U
Endrin aldehyde	NA	3.3	NA	0.0001	ND	U
alpha-Chlordane	200	1.7	NA	0.00005	ND	U
gamma-Chlordane	200	1.7	0.0005	0.00005	ND	i
Toxaphene	600	170	0.003	0.005	ND	U
Mirex					ND	U

DO33 Upland - COMP GR - Herbicides

Herbicides	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil	Leachate	Soil	Leachate	20190300	
2,4,5-TP (Silvex)	NA	NA	NA	NA	ND	U
2,4-D	NA	NA	NA	NA	ND	U

Metals	Action Level Soil mg/kg	NJDEP DL Leachate mg/kg	Action Level mg/L	NJDEP DL mg/L	Unamended Sediment (Units: mg/kg)	
ASI ID #					20190300	
Aluminum	78000	40	0.2	0.2	5240	
Antimony	31	12	0.02	0.06	0.028	J
Arsenic	19	2	0.008	0.01	2.88	
Barium	16000	40	2	0.2	32.2	
Beryllium	16	1	0.02	0.005	0.273	
Cadmium	78	1	0.004	0.005	0.244	
Calcium	NA	1000	NA	5	1340	
Chromium	NA	2	0.1	0.01	14.1	
Hexavalent Chromium	120000				ND	U
Trivalent Chromium	20				14.1	
Cobalt	1,600	10	NA	0.05	5.93	
Copper	590	5	1	0.025	6.89	
Iron	NA	20	0.3	1	12600	
Lead	400	0.6	0.01	0.003	12.2	
Magnesium	NA	1000	NA	5	2380	
Manganese	5900	3	0.05	0.015	228	
Mercury	23	0.1	0.002	0.0002	0.067	
Nickel	1,600	8	0.1	0.04	12.4	
Potassium	NA	1000	NA	5	690	
Selenium	390	1	0.05	0.015	ND	U
Silver	390	2	NA	0.01	0.043	
Sodium	NA	1000	50	5	82	
Thallium	5	2	0.01	0.01	0.053	
Vanadium	78	10	NA	0.05	7.81	
Zinc	23,000	4	5	0.02	72.7	
Cyanide, total	1,600	0.5	0.2	0.01	ND	U

Volatiles	Action Level Soil ug/kg	Action Level Leachate ug/L		Unamended Sediment (Units: ug/kg)	
ASI ID #				20190301	
				COMP KR 17-19	Q
Chloromethane (Methyl Chloride)	4000	30		ND	U
Bromomethane	25000	10		ND	U
Vinyl chloride	700	5		ND	U
Chloroethane	220000	NA		ND	U
Methylene chloride (Dichloromethane)	34000	3		2.1	J
Acetone	70000000	700		170	
Carbon disulfide	7800000	NA		4.7	J
1,1-Dichloroethene	11000	2		ND	U
1,1-Dichloroethane	8000	50		ND	U
1,2-Dichloroethene (total)		10			
Chloroform	600	6		ND	U
1,2-Dichloroethane	900	NA		ND	U
2-Butanone (MEK)	3100000	300		23	J
1,1,1-Trichloroethane	290000	30		ND	U
Carbon tetrachloride	600	2		ND	U
Bromodichloromethane	1000	1		ND	U
1,2-Dichloropropane	2000	1		ND	U
cis-1,3-Dichloropropene	NA	NA		ND	U
Trichloroethene	7000	1		ND	U
Dibromochloromethane	3000	10		ND	U
1,1,2-Trichloroethane	2000	3		ND	U
Benzene	2000	1		0.78	J
trans-1,3-dichloropropene	NA	NA		ND	U
Bromoform	81000	4		ND	U
4-Methyl-2-pentanone (MIBK)	NA	400		ND	U
2-Hexanone	NA	NA		ND	U
Tetrachloroethene	2000	1		ND	U
1,1,2,2-Tetrachloroethane	1000	NA		ND	U
Toluene	6300000	1000		1	J
Chlorobenzene	510000	50		ND	U
Ethyl benzene	7800000	700		ND	U
Styrene	90000	100		ND	U
Xylenes(Total)	12000000	1000		ND	U
Acrolein	500			5.7	J
Acrylonitrile	900			ND	U
1,2-Dibromo-3-chloropropane	80			ND	U
1,2-Dibromoethane	8			ND	U
Dichlorodifluoromethane	490000			ND	U
1,2-Dichloroethene (cis)	230000			ND	U
1,2-Dichloroethene (trans)	300000			ND	U
Methyl acetate	7800000			ND	U
Methyl tert-butyl ether (MTBE)	110000			ND	U
Tertiary butyl alcohol (TBA)	1400000			20	J
Trichlorofluoromethane	2300000			ND	U
Combined 1,3-dichloropropenes (SUM) cis + trans	2000	0.2			
1,4-dioxane				ND	U
n-propylbenzene				ND	U
sec-butylbenzene				ND	U
tert-butylbenzene				ND	U
1,2,4-trimethylbenzene				ND	U
1,3,5-trimethylbenzene				ND	U

Semivolatiles	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	Leachate ug/kg	mg/L	mg/L	20190301 COMP KR 17-19	Q
Phenol	18000000	660	4	0.01	4.7	J
bis(2-Chloroethyl)ether	400	660	0.01	0.01	ND	U
2-Chlorophenol	310000	660	0.005	0.01	ND	U
1,3-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
1,4-Dichlorobenzene	5000	660	0.075	0.01	4.5	J
1,2-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
2-Methylphenol (o-cresol)	310000	660	NA	0.01	ND	U
1-Chloropropane-2,2'-oxybis/ bis(2-chloroisopropyl)ether	23000	660	0.3	0.01	ND	U
4-Methylphenol (p-cresol) (co-elutes with 3-methylphenol (m-cresol))	31000	660	NA	0.01	7.7	J
N-Nitroso-Di-N-Propylamine	200	660	0.02	0.01	ND	U
Hexachloroethane	35000	660	0.01	0.01	ND	U
Nitrobenzene	31000	660	0.01	0.01	ND	U
Isophorone	510000	660	0.1	0.01	ND	U
2-Nitrophenol	NA	660	NA	0.01	ND	U
2,4-Dimethylphenol	1200000	660	0.1	0.01	ND	U
bis(2-Chloroethoxy)methane	NA	660	NA	0.01	ND	U
2,4-Dichlorophenol	180000	660	0.02	0.01	ND	U
1,2,4-Trichlorobenzene	73000	660	0.009	0.01	4.7	J
Naphthalene	6000	660	0.3	0.01	31	
4-Chloroaniline	NA	1300	NA	0.02	ND	U
Hexachloro-1,3-butadiene	6000	660	NA	0.01	ND	U
4-Chloro-3-methylphenol	NA	1300	NA	0.02	ND	U
2-Methylnaphthalene	230000	660	NA	0.01	27	
Hexachlorocyclopentadiene	45000	660	0.05	0.01	ND	U
2,4,6-Trichlorophenol	19000	660	0.02	0.01	ND	U
2,4,5-Trichlorophenol	6100000	660	0.7	0.01	ND	U
2-Chloronaphthalene	NA	660	NA	0.01	ND	U
2-Nitroaniline	39000	3300	NA	0.05	ND	U
Dimethylphthalate	NA	660	NA	0.01	ND	U
Acenaphthylene	300000000	660	NA	0.01	16	
2,6-Dinitrotoluene	700	660	0.01	0.01	ND	U
3-Nitroaniline	NA	3300	NA	0.05	ND	U

Semivolatiles, continued	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended	
					Sediment (Units: ug/kg)	
ASI ID #	ug/kg	ug/kg	mg/L	mg/L	20190301	
Acenaphthene	3400000	660	0.4	0.01	11	
2,4-Dinitrophenol	120000	3300	0.04	0.05	ND	U
4-Nitrophenol	NA	3300	NA	0.05	ND	U
Dibenzofuran	NA	660	NA	0.01	11	
2,4-Dinitrotoluene	700	660	0.01	0.01	ND	U
Diethylphthalate	49000000	660	5	0.01	ND	U
4-Chlorophenyl-phenylether	NA	660	NA	0.01	ND	U
Fluorene	2300000	660	0.3	0.01	23	
4-Nitroaniline	NA	660	NA	0.02	ND	U
4,6-Dinitro-2-methylphenol	6000	3300	NA	0.05	ND	U
N-Nitrosodiphenylamine	99000	660	0.02	0.01	16	
4-Bromophenyl-phenylether	NA	660	NA	0.01	ND	U
Hexachlorobenzene	300	660	0.01	0.01	ND	U
Pentachlorophenol	3000	3300	0.001	0.05	ND	U
Phenanthrene	300000000	6600	NA	0.01	120	
Anthracene	17000000	6600	2	0.01	38	
Carbazole	24000	330	NA	0.01	9	
Di-n-butylphthalate	6100000	330	0.9	0.01	17	
Fluoranthene	2300000	660	0.3	0.01	240	
Pyrene	1700000	660	0.2	0.01	190	
Butylbenzylphthalate	1200000	660	0.1	0.01	13	
3,3'-Dichlorobenzidine	1000	1300	0.06	0.02	ND	U
Benzo(a)anthracene	600	660	NA	0.01	120	
Chrysene	62000	660	NA	0.01	130	
bis(2-Ethylhexyl)phthalate	35000	660	0.03	0.01	48	J
Di-n-octylphthalate	2400000	660	0.1	0.01	ND	U
Benzo(b)fluoranthene	600	660	NA	0.01	160	
Benzo(k)fluoranthene	6000	660	NA	0.01	57	
Benzo(a)pyrene	200	660	NA	0.01	130	
Indeno(1,2,3-cd)pyrene	600	660	NA	0.01	93	
Dibenzo(a,h)anthracene	200	660	NA	0.01	21	
Benzo(ghi)perylene	30000000	660	NA	0.01	91	
Pyridine	NA				ND	U
Acetophenone	2000				ND	U
Atrazine	210000				5.5	JX
Benzaldehyde	6100000				18	
Benzidine	700				0.48	J
1,1'-Biphenyl	3100000				10	J
Caprolactam	31000000				ND	U
1,2-Diphenylhydrazine	700				ND	U
N-Nitrosodimethylamine	700				ND	U
Total Cresol						

DO33 Upland - COMP KR 17-19 - Pesticides/Aroclors

Pesticides/Aroclors	Action Level Soil ug/kg	NJDEP DL ug/kg	Action Level Leachate mg/L	NJDEP DL mg/L	Unamended Sediment (Units: ug/kg)	
ASI ID #					20190301 COMP KR 17-19	Q
alpha-BHC	100	1.9	0.00002	0.00005	ND	U
beta-BHC	400	3.3	0.0002	0.00005	ND	i
delta-BHC	NA	1.7	NA	0.00005	ND	U
gamma-BHC (Lindane)	400	2	0.0002	0.00005	5.4	P
Heptachlor	100	2.1	0.0004	0.00005	ND	U
Aldrin	40	2	0.00004	0.00005	ND	i
Heptachlor epoxide	70	2.1	0.0002	0.00005	1.2	J
Endosulfan I	NA	2.1	0.0004	0.00005	2.7	
Dieldrin	40	3.3	0.00003	0.0001	3.3	P
4,4'-DDE	2000	4.2	0.0001	0.0001	3.5	
Endrin	23000	3.6	0.002	0.0001	ND	i
Endosulfan II	NA	3.3	0.0004	0.0001	ND	i
4,4'-DDD	3000	4.2	0.0001	0.0001	2	
Endosulfan sulfate	470000	3.6	0.0004	0.0001	ND	U
4,4'-DDT	2000	3.6	0.0001	0.0001	ND	i
Methoxychlor	390000	17	0.04	0.001	ND	U
Endrin ketone	NA	3.3	NA	0.0001	ND	i
Endrin aldehyde	NA	3.3	NA	0.0001	ND	U
alpha-Chlordane	200	1.7	NA	0.00005	ND	i
gamma-Chlordane	200	1.7	0.0005	0.00005	ND	i
Toxaphene	600	170	0.003	0.005	130	J
Mirex					ND	U

DO33 Upland - COMP KR 17-19 - Herbicides

Herbicides	Action Level Soil	NJDEP DL	Action Level Leachate	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #					20190301 COMP KR 17-19	Q
2,4,5-TP (Silvex)	NA	NA	NA	NA	ND	U
2,4-D	NA	NA	NA	NA	ND	U

Metals	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended	
					Sediment (Units: mg/kg)	
ASI ID #	Soil mg/kg		Leachate mg/L		20190301 COMP KR 17-19	
Aluminum	78000	40	0.2	0.2	9620	
Antimony	31	12	0.02	0.06	0.155	
Arsenic	19	2	0.008	0.01	7.1	
Barium	16000	40	2	0.2	91.3	
Beryllium	16	1	0.02	0.005	0.633	
Cadmium	78	1	0.004	0.005	0.853	
Calcium	NA	1000	NA	5	7600	
Chromium	NA	2	0.1	0.01	32.4	
Hexavalent Chromium	120000				ND	U
Trivalent Chromium	20				32.4	
Cobalt	1,600	10	NA	0.05	12	
Copper	590	5	1	0.025	27.7	
Iron	NA	20	0.3	1	25800	
Lead	400	0.6	0.01	0.003	29.5	
Magnesium	NA	1000	NA	5	6000	
Manganese	5900	3	0.05	0.015	960	
Mercury	23	0.1	0.002	0.0002	0.119	
Nickel	1,600	8	0.1	0.04	24.7	
Potassium	NA	1000	NA	5	1320	
Selenium	390	1	0.05	0.015	0.3	J
Silver	390	2	NA	0.01	0.177	
Sodium	NA	1000	50	5	136	
Thallium	5	2	0.01	0.01	0.132	
Vanadium	78	10	NA	0.05	19.8	
Zinc	23,000	4	5	0.02	116	
Cyanide, total	1,600	0.5	0.2	0.01	0.12	J

DO33 Upland - COMP KR 20-21 - Sediment Volatiles

Volatiles	Action Level Soil ug/kg	Action Level Leachate ug/L		Unamended Sediment (Units: ug/kg)	
ASI ID #				20190302	
				COMP KR 20-21	Q
Chloromethane (Methyl Chloride)	4000	30		ND	U
Bromomethane	25000	10		ND	U
Vinyl chloride	700	5		ND	U
Chloroethane	220000	NA		ND	U
Methylene chloride (Dichloromethane)	34000	3		1.9	J
Acetone	7000000	700		180	
Carbon disulfide	7800000	NA		4.3	J
1,1-Dichloroethene	11000	2		ND	U
1,1-Dichloroethane	8000	50		ND	U
1,2-Dichloroethene (total)		10			
Chloroform	600	6		ND	U
1,2-Dichloroethane	900	NA		ND	U
2-Butanone (MEK)	3100000	300		26	J
1,1,1-Trichloroethane	290000	30		ND	U
Carbon tetrachloride	600	2		ND	U
Bromodichloromethane	1000	1		ND	U
1,2-Dichloropropane	2000	1		ND	U
cis-1,3-Dichloropropene	NA	NA		ND	U
Trichloroethene	7000	1		ND	U
Dibromochloromethane	3000	10		ND	U
1,1,2-Trichloroethane	2000	3		ND	U
Benzene	2000	1		0.62	J
trans-1,3-dichloropropene	NA	NA		ND	U
Bromoform	81000	4		ND	U
4-Methyl-2-pentanone (MIBK)	NA	400		ND	U
2-Hexanone	NA	NA		ND	U
Tetrachloroethene	2000	1		ND	U
1,1,2,2-Tetrachloroethane	1000	NA		ND	U
Toluene	6300000	1000		0.83	J
Chlorobenzene	510000	50		ND	U
Ethyl benzene	7800000	700		ND	U
Styrene	90000	100		ND	U
Xylenes(Total)	12000000	1000		ND	U
Acrolein	500			7	J
Acrylonitrile	900			ND	U
1,2-Dibromo-3-chloropropane	80			ND	U
1,2-Dibromoethane	8			ND	U
Dichlorodifluoromethane	490000			ND	U
1,2-Dichloroethene (cis)	230000			ND	U
1,2-Dichloroethene (trans)	300000			ND	U
Methyl acetate	78000000			ND	U
Methyl tert-butyl ether (MTBE)	110000			ND	U
Tertiary butyl alcohol (TBA)	1400000			ND	U
Trichlorofluoromethane	23000000			ND	U
Combined 1,3-dichloropropenes (SUM) cis + trans	2000	0.2			
1,4-dioxane				ND	U
n-propylbenzene				ND	U
sec-butylbenzene				ND	U
tert-butylbenzene				ND	U
1,2,4-trimethylbenzene				ND	U
1,3,5-trimethylbenzene				ND	U

DO33 Upland - COMP KR 20-21 - Sediment Semivolatiles

Semivolatiles	Action Level ug/kg	NJDEP DL ug/kg	Action Level mg/L	NJDEP DL mg/L	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil	Leachate			20190302	
Phenol	18000000	660	4	0.01	3.9	J
bis(2-Chloroethyl)ether	400	660	0.01	0.01	ND	U
2-Chlorophenol	310000	660	0.005	0.01	ND	U
1,3-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
1,4-Dichlorobenzene	5000	660	0.075	0.01	2.8	J
1,2-Dichlorobenzene	5300000	660	0.6	0.01	ND	U
2-Methylphenol (o-cresol)	310000	660	NA	0.01	ND	U
1-Chloropropane-2,2'-oxybis/ bis(2-chloroisopropyl)ether	23000	660	0.3	0.01	ND	U
4-Methylphenol (p-cresol) (co-elutes with 3-methylphenol (m-cresol))	31000	660	NA	0.01	6.2	J
N-Nitroso-Di-N-Propylamine	200	660	0.02	0.01	ND	U
Hexachloroethane	35000	660	0.01	0.01	ND	U
Nitrobenzene	31000	660	0.01	0.01	ND	U
Isophorone	510000	660	0.1	0.01	ND	U
2-Nitrophenol	NA	660	NA	0.01	ND	U
2,4-Dimethylphenol	1200000	660	0.1	0.01	ND	U
bis(2-Chloroethoxy)methane	NA	660	NA	0.01	ND	U
2,4-Dichlorophenol	180000	660	0.02	0.01	ND	U
1,2,4-Trichlorobenzene	73000	660	0.009	0.01	ND	U
Naphthalene	6000	660	0.3	0.01	20	
4-Chloroaniline	NA	1300	NA	0.02	ND	U
Hexachloro-1,3-butadiene	6000	660	NA	0.01	ND	U
4-Chloro-3-methylphenol	NA	1300	NA	0.02	ND	U
2-Methylnaphthalene	230000	660	NA	0.01	18	
Hexachlorocyclopentadiene	45000	660	0.05	0.01	ND	U
2,4,6-Trichlorophenol	19000	660	0.02	0.01	ND	U
2,4,5-Trichlorophenol	6100000	660	0.7	0.01	ND	U
2-Chloronaphthalene	NA	660	NA	0.01	ND	U
2-Nitroaniline	39000	3300	NA	0.05	ND	U
Dimethylphthalate	NA	660	NA	0.01	ND	U
Acenaphthylene	300000000	660	NA	0.01	14	
2,6-Dinitrotoluene	700	660	0.01	0.01	ND	U
3-Nitroaniline	NA	3300	NA	0.05	ND	U

Semivolatiles, continued	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
					Soil ug/kg	Leachate ug/kg
ASI ID #					mg/L	mg/L
Acenaphthene	3400000	660	0.4	0.01		9.7
2,4-Dinitrophenol	120000	3300	0.04	0.05	ND	U
4-Nitrophenol	NA	3300	NA	0.05	ND	U
Dibenzofuran	NA	660	NA	0.01	9.7	
2,4-Dinitrotoluene	700	660	0.01	0.01	ND	U
Diethylphthalate	49000000	660	5	0.01	ND	U
4-Chlorophenyl-phenylether	NA	660	NA	0.01	ND	U
Fluorene	2300000	660	0.3	0.01	19	
4-Nitroaniline	NA	660	NA	0.02	ND	U
4,6-Dinitro-2-methylphenol	6000	3300	NA	0.05	ND	U
N-Nitrosodiphenylamine	99000	660	0.02	0.01	19	
4-Bromophenyl-phenylether	NA	660	NA	0.01	ND	U
Hexachlorobenzene	300	660	0.01	0.01	ND	U
Pentachlorophenol	3000	3300	0.001	0.05	ND	U
Phenanthrene	300000000	6600	NA	0.01	100	
Anthracene	17000000	6600	2	0.01	32	
Carbazole	24000	330	NA	0.01	9.1	
Di-n-butylphthalate	6100000	330	0.9	0.01	12	J
Fluoranthene	2300000	660	0.3	0.01	230	
Pyrene	1700000	660	0.2	0.01	170	
Butylbenzylphthalate	1200000	660	0.1	0.01	9.9	
3,3'-Dichlorobenzidine	1000	1300	0.06	0.02	ND	U
Benzo(a)anthracene	600	660	NA	0.01	110	
Chrysene	62000	660	NA	0.01	120	
bis(2-Ethylhexyl)phthalate	35000	660	0.03	0.01	41	J
Di-n-octylphthalate	2400000	660	0.1	0.01	ND	U
Benzo(b)fluoranthene	600	660	NA	0.01	160	
Benzo(k)fluoranthene	6000	660	NA	0.01	51	
Benzo(a)pyrene	200	660	NA	0.01	120	
Indeno(1,2,3-cd)pyrene	600	660	NA	0.01	89	
Dibenzo(a,h)anthracene	200	660	NA	0.01	20	
Benzo(ghi)perylene	30000000	660	NA	0.01	86	
Pyridine	NA				ND	U
Acetophenone	2000				ND	U
Atrazine	210000				ND	U
Benzaldehyde	6100000				13	J
Benzidine	700				0.62	J
1,1'-Biphenyl	3100000				7.8	J
Caprolactam	31000000				ND	U
1,2-Diphenylhydrazine	700				ND	U
N-Nitrosodimethylamine	700				ND	U
Total Cresol						

DO33 Upland - COMP KR 20-21 - Pesticides/Aroclors

Pesticides/Aroclors	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil ug/kg	Leachate ug/kg	mg/L	mg/L	20190302	
alpha-BHC	100	1.9	0.00002	0.00005	ND	U
beta-BHC	400	3.3	0.0002	0.00005	ND	I
delta-BHC	NA	1.7	NA	0.00005	ND	U
gamma-BHC (Lindane)	400	2	0.0002	0.00005	ND	I
Heptachlor	100	2.1	0.0004	0.00005	ND	U
Aldrin	40	2	0.00004	0.00005	ND	I
Heptachlor epoxide	70	2.1	0.0002	0.00005	ND	U
Endosulfan I	NA	2.1	0.0004	0.00005	ND	U
Dieldrin	40	3.3	0.00003	0.0001	1.7	P
4,4'-DDE	2000	4.2	0.0001	0.0001	2	
Endrin	23000	3.6	0.002	0.0001	ND	U
Endosulfan II	NA	3.3	0.0004	0.0001	ND	U
4,4'-DDD	3000	4.2	0.0001	0.0001	1.2	J
Endosulfan sulfate	470000	3.6	0.0004	0.0001	ND	U
4,4'-DDT	2000	3.6	0.0001	0.0001	ND	I
Methoxychlor	390000	17	0.04	0.001	ND	U
Endrin ketone	NA	3.3	NA	0.0001	ND	U
Endrin aldehyde	NA	3.3	NA	0.0001	ND	U
alpha-Chlordane	200	1.7	NA	0.00005	ND	U
gamma-Chlordane	200	1.7	0.0005	0.00005	ND	I
Toxaphene	600	170	0.003	0.005	ND	U
Mirex					ND	U

DO33 Upland - COMP KR 20-21 - Herbicides

Herbicides	Action Level	NJDEP DL	Action Level	NJDEP DL	Unamended Sediment (Units: ug/kg)	
ASI ID #	Soil	Leachate			20190302	
2,4,5-TP (Silvex)	NA	NA	NA	NA	ND	U
2,4-D	NA	NA	NA	NA	ND	U

Metals	Action Level Soil mg/kg	NJDEP DL mg/kg	Action Level Leachate mg/L	NJDEP DL mg/L	Unamended Sediment (Units: mg/kg)	
ASI ID #					20190302	
Aluminum	78000	40	0.2	0.2	9160	
Antimony	31	12	0.02	0.06	0.108	
Arsenic	19	2	0.008	0.01	6.33	
Barium	16000	40	2	0.2	83.5	
Beryllium	16	1	0.02	0.005	0.601	
Cadmium	78	1	0.004	0.005	0.494	
Calcium	NA	1000	NA	5	7510	
Chromium	NA	2	0.1	0.01	23.4	
Hexavalent Chromium	120000				ND	U
Trivalent Chromium	20				23.4	
Cobalt	1,600	10	NA	0.05	11.4	
Copper	590	5	1	0.025	23.8	
Iron	NA	20	0.3	1	25200	
Lead	400	0.6	0.01	0.003	22.8	
Magnesium	NA	1000	NA	5	6180	
Manganese	5900	3	0.05	0.015	918	
Mercury	23	0.1	0.002	0.0002	0.119	
Nickel	1,600	8	0.1	0.04	23.3	
Potassium	NA	1000	NA	5	1180	
Selenium	390	1	0.05	0.015	0.3	J
Silver	390	2	NA	0.01	0.152	
Sodium	NA	1000	50	5	128	
Thallium	5	2	0.01	0.01	0.117	
Vanadium	78	10	NA	0.05	19.1	
Zinc	23,000	4	5	0.02	101	
Cyanide, total	1,600	0.5	0.2	0.01	ND	U

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.