APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): April 17, 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMS (Cove Point LNG Terminal/Liquefaction Project/JD) 2012-02579-M13

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Maryland County/parish/borough: Calvert City: near Lusby

Center coordinates of site (lat/long in degree decimal format):

Site 1: NTW Waters of the US at an an approximately 39 acre site (Laydown Area1) located at 11430 Solomons Island Road, Solomons and the Patuxent River temporary pier location tidal waters and a 0.07 acre emergent tidal marsh grading up to a non-tidal wetland abutting the Patuxent River at the eastern edge of Site 1.
Latitude Longitude
38.328152° -76.467370°

Site 2: RPW stream crossing of unnamed tributary of St. Pauls' Branch which flows directly into the Patuxent River a NTW an approximate 84-acre property identified as Site #2 (Laydown Area 2) located 205 West Cove Road, Lusby
38.388703° -76.437704°

Sites 3 and 4 are within an approximate 136 acre property, within the Dominion Cove Point LNG Terminal, located at 2100 Cove Point Road, Lusby

Site 3: Non RPW and adjacent wetlands of an unnamed tributary of Gray's Creek which flows directly into the Chesapeake Bay a NTW
38.386557° -76.413570°

Site 4: Ephemeral swale and erosion gully system drains into the unnamed tributary of Gray's Creek a Non RPW
38.386189° -76.412545°

Name of nearest waterbody: Site 1: Patuxent River
Site 2: St. Paul's Branch, a tributary to the Patuxent River
Site 3: unnamed tributary of Gray's Creek, a tributary to the Chesapeake Bay
Site 4: flows into unnamed tributary of Gray's Creek Site 3, a tributary to the Chesapeake Bay

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: The Patuxent River and the Chesapeake Bay are TNW's.
Name of watershed or Hydrologic Unit Code (HUC): Patuxent River 02060006 and Upper Chesapeake Bay 02060001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s) 2 October 2012 with representatives of the Maryland Department of the Environment

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☒ Waters subject to the ebb and flow of the tide. (Site 1)
☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. (Site 1) Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):**

☒ TNWs, including territorial seas Site 1

☒ Wetlands adjacent to TNWs There is a 0.07 acre emergent tidal marsh grading up to a non-tidal wetland abutting the Patuxent River at the eastern edge of Site 1, the wetlands are not within the impact area of Laydown Area 1

☒ Relatively permanent waters[1] (RPWs) that flow directly or indirectly into TNWs Site 2
☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Site 2

☒ Non-RPWs that flow directly or indirectly into TNWs Site 3
X Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Site 3

☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area: The size of Site #1 is approximately 39 acres.
Non-wetland waters: linear feet: width (ft) and/or 3 acres of open water within the impact area of the temporary pier

Wetlands: acres.

Identify (estimate) size of waters of the U.S. in the review area: The size of Site #2 is approximately 84 acres.
Non-wetland waters: 598 linear feet: width (ft) and/or
Wetlands: 1.59 acres

Sites 3 and 4 are located within the fenced Dominion Cove Terminal which is approximately 136 acres.
Identify (estimate) size of waters of the U.S. in the review area:
Site 3 Non-wetland waters: 293 linear feet: width (ft) and/or
Wetlands: 0.06 acre.

Identify (estimate) size of waters of the U.S. in the review area:
Site 4 Ephemeral channel and pipe**:** 857 linear feet
Wetlands

c. Limits (boundaries) of jurisdiction based on:
Elevation of established OHWM for Sites #1 shoreline and tidal wetlands, Site #2 waters and Site #3 waters only.

2. Non-regulated waters/wetlands (check if applicable):[2]

☒ Potentially jurisdictional waters were assessed within the review area and determined to be not jurisdictional. Explain: Site 4 is an ephemeral swale and existing concrete pipe under the Terminal service road. On the higher flat ground the swale does not have a high water mark or contain any hydric soils or wetland vegetation. The source of flow in the swale is dependent on storm flow from the upland parking areas, road and a small storm water pond. After the swale reaches the steeper slope the swale takes on the characteristics of an erosional gully. This swale and erosional feature system was the subject of a previous CENAB-OP-RMS (DOMINION/COVE POINT TERMINAL/ JD) 2005-01430-19, dated 21 March 2005 which determined that the subject ephemeral system was not a regulated waterway.

There are no abutting or adjacent wetlands at the drainage pattern area. The swale and erosion gully system has no sorting of bed material. There are no boulders, stone, cobble or gravel in the drainage; there are no pool areas or woody debris. The following stream geomorphology was absent: continuous bed and bank, sinuosity; riffle-pool sequence; substrate sorting; depositional bars or benches; braided channels; and grade controls. The drainage is set within a natural step slope area with a 2-foot erosion cut at the lower end of the drainage. It had rained within the previous few days in the area and there was no water in the channel (even the intermittent channel was dry). There were no crayfish, snails, fish, amphibians or wetland vegetation observed in the channel.

There is no evidence that flow within this system is fed by groundwater and the character of the swale bottom is upland grasses and erosion gully bottom was scoured bear soil with no vegetation. There were no sand bars, gravel bottom nor sediment mixing. The swale is located in the grassed area at the head of the system flowing into the ephemeral erosion gully which is within a forested area and the forested drainage area is approximately 2.5 acres. There is no OHWM. The upland drainage pattern does not have jurisdictional stream characteristics and the areas do not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. The swale and erosion gully features are consistent with the non-jurisdictional definitions contained in the U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook.

SECTION III: CWA ANALYSIS

[1] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[2] Supporting documentation is presented in Section III.F.

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: Site 1 is the Patuxent River a tidal water body flowing into the Chesapeake Bay

Summarize rationale supporting determination:.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": There is a 0.07 acre emergent tidal marsh grading up to a non-tidal wetland abutting the Patuxent River at the eastern edge of Site 1.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[3] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **PWCharacteristics of non-TNWs that flow directly or indirectly into TNW** Site 3 non- RPW

(i) General Area Conditions:
Watershed size: 10 acres Pick List
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through two tributaries before entering TNW. Unnamed tributary flows into Gray's Creek which flows directly into the Chesapeake Bay a tidal waterbody
Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .
Identify flow route to TNW[4]: .
Tributary stream order, if known: Unnamed tributary flows into Gray's Creek which flows directly into the Chesapeake Bay is a NTW tidal waterbody

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[3] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[4] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 2 feet
Average depth: 1 foot
Average side slopes: 2:1 Pick List.

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: eroded banks with visible ground water.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: Pick List
Tributary gradient (approximate average slope): 2-4 %

(c) Flow:

Tributary provides for: Pick List intermittant flow from surface runoff and groundwater
Estimate average number of flow events in review area/year: Pick List
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: Pick List. Characteristics: .

Subsurface flow: Pick List. Explain findings: visible ground flow in the stream during the dry season site inpsection.
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[5] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☒ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[6] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: clear water color.
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): .

[5]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[6]Ibid.

☒ Wetland fringe. Characteristics: .
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW Site 3 non-RPW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: 0.06 acres
Wetland type. Explain:emergent.
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: intermittent flow.

Surface flow is**: Pick List**
Characteristics: intermittent flow .

Subsurface flow: **Pick List**. Explain findings: intermittent flow .
☐ Dye (or other) test performed: subsurface flow was visible during site inspection during dry season.

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain:
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:
Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: water color is clear .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): .
☐ Vegetation type/percent cover. Explain: .
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
yes	0.06		

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

Site 3:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW? Yes the intermittent stream flows into the larger Gray's Creek which flows directly into the Chesapeake Bay
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? No
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs? Yes
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW? Yes
- Site 3, located within the fenced LNG Terminal is an unnamed intermittent headwaters tributary and adjacent headwaters wetland which has been manipulated by the Terminal construction which flows into Gray's Creek which flows directly into the Chesapeake Bay a NTW

- This is a defined stream channel that gets deeper and wider as goes downstream ranging from two feet wide with almost vertical banks. There is some sorting of bed material and there is leaf litter in the channel. Woody debris crosses over the channel. Closer to the bottom of the channel, there is some cobble. The channel has some sinuosity and some substrate sorting. The adjacent headwater wetlands have impacted in the past by landscape grading and storm water management. There are no boulders or stone in the channel and there are pool areas which appear to be groundwater fed. The following stream geomorphology was absent: riffle-pool sequence; depositional bars or benches; braided channels; and grade controls. The upper limits of the intermittent channel are demarcated by a 1-foot deep cut with a streambed that deepens as it moves downhill with distinct stream banks. It had rained within the previous few days in the area and there was water in the channel. There were no crayfish, snails, fish, amphibians or wetland vegetation observed in the channel. There is an ephemeral drainage pattern above this reach that flows directly to this system.

- Aquatic Life (Organisms): No aquatic species or indicators of aquatic species such as crayfish chimneys were observed during the site visit. The channel was standing water in the intermittent channel at the time of the site visit

- Habitat for Wildlife – A detailed assessment of the quality of wildlife habitat was not performed. The intermittent stream corridor and adjacent upland areas provide habitat for a variety of upland wildlife species.

- Support Nutrient Cycling – This area of review supports nutrient cycling. The riparian forested corridor manages the nutrients from the adjacent forested land. The deciduous forest also inputs detritus into this system. The opportunity to perform this function within the channel is limited since there is only five acres of forest that drain to the channel and the channel lacks the plant cover to cycle the nutrients in the detritus. The lower reaches of the tributary and Gray's Creek have several hundreds of acres of riparian forest.

- Sediment Transport –This reach carries some sediment from forest runoff as well as the eroding banks and the drainage pattern above the ephemeral channel. The natural stream bottom has down cut over the years. The streams maintain the capacity to transport sediments from the abutting forest.

- Pollutant Trapping – The opportunity to perform this function is good since there is extensive riparian forest within the Gray's Creek drainage basin within the Dominion cove Point property outside the terminal fence.

- Water Quality Improvement: The channel does not have the vegetative cover to trap and uptake pollutants in the stormwater runoff that is received in the channel. This reach, with abutting forested uplands, filters some runoff.

- Temperature – The channel is located in a forested area, and the vegetative cover to shade the water in the stream.

- Flood Storage – There is little opportunity for this reach to provide this function. This channel is located in an area of steep slopes.

- Groundwater Discharge: There was groundwater flow into the channel bed observed during the site inspection in the intermittent channel.

- Groundwater recharge: This channel does not store water to slowly release it for groundwater recharge, which could possibly contribute to base flow to surface water systems onsite during dry periods. However, the small size of the channel and contributing drainage area would not contribute ample groundwater recharge.

- Commerce – This channel, on private property, has limited opportunities; however, it flows into Gray's Creek which flows directly into the Chesapeake Bay which does support fishing activities less than five miles from this area as well as supports boating in the tidal areas.

- Navigation – This reach is not navigable.

- Recreation –Site 3 and the majority of Gray's Creek is located on private property which fenced or a restricted area, has limited recreational opportunities; however, if allowed, could support recreational activities such as hiking and bird watching proportionate to the riparian forested habitat, if the site was not restricted due to the LNG Terminal and storage facilities.

- Public Health – The water quality functions of this reach, although limited, directly influences downstream areas; therefore, providing a direct benefit to the overall public health.

- Significant Nexus –Site 3; Based on the above and field experience in Southern Maryland, this approximate intermittent channel has significant nexus with the physical, chemical or biological integrity of the TNW. Site 3, is located within the fenced LNG Terminal is an unnamed intermittent headwaters tributary and adjacent headwaters wetland which has been manipulated by the Terminal construction which flows directly into Gray's Creek which flows directly into the Chesapeake Bay a NTW

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Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Site 3,is located within the fenced LNG Terminal is an non-RPW unnamed intermittent headwaters tributary and adjacent headwaters wetland which has been manipulated by the Terminal construction which flows into Gray's Creek which flows directly into the Chesapeake Bay a NTW which is a significant nextus to the NTW.

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Site 4:

1. Approximate linear 150-foot swale/upland drainage pattern above 1,528-foot ephemeral erosion gully and 179 linear feet of existing pipe under the Terminal service road constructed in 2006.

2. The horizontal profile of the swale/ drainage feature at the head of the system is a wide, grassed swale, gently sloped and lacking a defined bed and bank. No indicators of surface hydrology in the channel other then the outflow pipe from a small man made storm water management pond and outflow pipes from two storm drains at the curb of the adjacent parking lots. There was no bed material sorting or hydrophytic vegetation, or hydric soils observed at the time of the site visit. There are no abutting or adjacent wetlands at the drainage pattern area. There are no boulders, stone, cobble or gravel in the drainage; there are no pool areas or woody debris. The following stream geomorphology was absent, sinuosity; riffle-pool sequence; substrate sorting; depositional bars or benches; braided channels; and grade controls. The drainage is set within a natural gentle slope area at the top and a steep sloped drainage down to Site #3, with a 1-foot head cut at the lower end of the drainage. It had rained within the previous few days in the area and there was no water in the ephemeral erosion channel. There were crayfish, snails, fish, amphibians or wetland vegetation observed in the channel.

3. There is no evidence that this system is fed by groundwater and the character of the swale and erosion gully bottom is consistent throughout with significant scour. There were no sand bars, gravel bottom nor sediment mixing. The swale is the grassed area at the head of the system and the erosion channel is located within a forested area and the forested drainage area is less than 1 1/2 acres. There is no OHWM or bank and bed material. The upland drainage patterns do not have jurisdictional stream characteristics and the areas do not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

4. Aquatic Life (Organisms): No aquatic species or indicators of aquatic species such as crayfish chimneys were observed during the site visit. The channel was dry at the time of the site visit even though it had rained three days prior to the site visit.

5. Habitat for Wildlife: A detailed assessment of the quality of wildlife habitat was not performed and no wildlife was observed at the channel during the Corps site visit. The drainage pattern is within a forested area. The erosion channel had no vegetative cover. The forested areas could provide habitat for a variety of upland wildlife species, however the entire system is located within the fended portion of the LNG Terminal.

6. Support Nutrient Cycling: The opportunity to perform this function is poor since there is only 1 ½ acres of forest that drain to the ephemeral channel and the channel lacks the plant cover to cycle the nutrients in the detritus. This drainage pattern area does not support nutrient cycling; it is merely an area where water sometime flows through.

7. Sediment Transport: The channel does not have regularly occurring flow regime that would support substantial sediment transport. This reach carries some sediment from the adjacent forest and storm water pond.

8. Pollutant Trapping: The channel is located in an area of steep slopes and does not have the vegetative cover that would trap pollutants for uptake by the plants. This drainage pattern does not have the capacity to trap pollutants.

9. Pollutant Filtration: The opportunity to perform this function is poor since there is only 1 1/2 acres of forest that drain to the channel and the channel lacks the plant cover to cycle the nutrients in the detritus.

10. Water Quality Improvement: The ephemeral channel does not have the vegetative cover to trap and uptake pollutants in the stormwater runoff that is received in the channel.

11. Temperature: Although the channel is located in a forested area, the channel is located on a steep slope and there is no retention of the ephemeral stream flow. The pattern does not influence the cold and hot weather conditions of waters down slope of the pattern.

12. Commerce – This pattern, on private property entirely within the Terminal facility fence, has limited opportunities.

13. Flood Storage: There is little opportunity for this reach to provide this function. Flood storage capacity is limited because of the steep slope of the ephemeral erosion gully

14. Navigation: This reach is not navigable.

15. Recreation: This channel, on private property within the Terminal fence and the entire LNG Terminal property is a restricted access area, has limited recreational opportunities because of its small size and lack of a regular or seasonal water flow regime.

16. Public Health: The channel does not perform functions that would improve the water quality of downstream areas because of the steep slopes and erosion nature of the upland drainage system. This reach has limited water quality functions and therefore, does not substantially influence down slope waters. It does not provide a direct benefit to the overall public health.

17. Groundwater Discharge: This function was not confirmed in the field. Due to the steepness of the slope the ephemeral channel, there is little opportunity time for the water pond and infiltrate through the channel bed to the underlying water table below.

18. Groundwater recharge: This channel does not store water to slowly release it for groundwater recharge, which could possibly contribute to base flow to surface water systems onsite during dry periods. .

19. Significant Nexus – Based on the above and field experience in Southern Maryland, this approximate linear 150-foot swale/upland drainage pattern and 528 linear feet of ephemeral erosion gully and 179 linear feet of existing pipe does not have significant nexus with the physical, chemical or biological integrity of the TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: Site 1 is located in the Patuxent River which is a tidal waterbody which flows into the Chesapeake Bay which is tidal waterbody

1.

☒ TNWs: 756 linear feet width (ft),
☒ Wetlands adjacent to TNWs: 0.06 acres.

2. **RPWs that flow directly or indirectly into TNWs.** Site 2 is a RPW tributary of St. Paul's Branch which flows into the Patuxent River

☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☒ Tributary waters: 598 linear feet with 12-foot width.
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters:

3. **Non-RPWs[7] that flow directly or indirectly into TNWs.** Site 3 is a non-RPW tributary of Gray's Creek which flows into the Chesapeake Bay
☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.** Site 2 an intermittent tributary of St. Paul's Branch which flows directly into the Patuxent River
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

- ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: 1.59 acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.** Site 3 is an unnamed tributary with adjcent nontidal wetlands of Gray's Creek which flows into the Chesapeake Bay which is a tidal waterbody.
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.06 acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: **0.06** acres.

7. **Impoundments of jurisdictional waters.[8]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[9]

[7] See Footnote # 3.
[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[9] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

Site 4 is an ephemeral swale and erosional gully system which carries upland runoff flows into the intermittent stream Site #3
Site 4 the non-jurisdiction ephemeral swale and erosional gully system was the determined to not be a regulated waterway during the last Dominion Terminal expansion under CENABOP-RMS (Dominion/Cove Point Terminal/JD) 05-01430-19 dated 21 March 2005.

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Site 4.

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW? There no adjacent wetlands, there were no hydric soils or wetland vegetation and no visible water flow at the time of the site inspection. The swale carries only upland surface water runoff. There was no high water mark or any subsurface water flow. The fall from the swale to the existing pipe under the service road creates an erosional gully with an approximately 6-7% slope therefore; there is no retention of the stormwater runoff. There is visible erosion in the lower portion forming an erosional gully, there are visible tree roots, but there is no wetland vegetation and there is no high water mark. The drainage pattern has no sorting of bed material. There are no boulders, stone, cobble or gravel in the drainage; there are no pool areas or woody debris. The following stream geomorphology was absent: continuous bed and bank, sinuosity; riffle-pool sequence; substrate sorting; depositional bars or benches; braided channels; headcuts; and grade controls. There is no evidence that flow within this system is fed by groundwater and the character of the swale bottom is consistent throughout with upland grass and the erosion gully displayed significant scour. There were no sand bars, gravel bottom nor sediment mixing. The swale is located above the forest area and erosion gully id located within a forested area and the forested drainage area is less than 1 1/2 acres. There are no OHWM or bank and bed material. The upland drainage pattern swale and erosion gully system does not have jurisdictional stream characteristics and the areas do not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? No. The ephemeral water flow is too short duration to support any aquatic species. The swale and erosional gully system carries only upland surface water runoff. There was no high water mark or any subsurface water flow. From the swale to the existing pipe under the service road creates an erosional gully which has an approximately 6-7% slope therefore; there is no retention of the stormwater runoff. A detailed assessment of the quality of wildlife habitat was not performed and no wildlife was observed at the channel during the Corps site visit. The drainage pattern is within a forested area. The erosion channel had no vegetative cover. The forested areas could provide habitat for a variety of upland wildlife species, however the entire system is located within the fended portion of the LNG Terminal.

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs? No. The swale and erosional gully system carries only upland surface water runoff. There was no high water mark or any subsurface water flow. The fall from the swale to the existing pipe under the service road is approximately 6% therefore there is no retention of the stormwater runoff. The opportunity to perform this function is poor since there is only 1 ½ acres of forest that drain to the ephemeral channel and the channel lacks the plant cover to cycle the nutrients in the detritus. This drainage pattern area does not support nutrient cycling; it is merely an area where water sometime flows through

Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW? No. There no adjacent wetlands, there were no hydric soils or wetland vegetation and no visible water flow at the time of the site inspection. The swale and erosional gully system carries only upland surface water runoff. There was no high water mark or any subsurface water flow. There was no high water mark or any subsurface water flow. The fall from the swale to the existing pipe under the service road creates an erosional gully with an approximately 6-7% slope therefore; there is

no retention of the stormwater runoff. There is visible erosion in the lower portion forming an erosional gully, there are visible tree roots, but there is no wetland vegetation and there is no high water mark. Based on the above and field experience in Southern Maryland, this approximate linear 150-foot swale/upland drainage pattern and 528 linear feet of ephemeral erosion gully and 179 linear feet of existing pipe does not have significant nexus with the physical, chemical or biological integrity of the TNW.

☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Site 4 is a non-RPW swale where there no adjacent wetlands, there were no hydric soils or wetland vegetation and no visible water flow at the time of the site inspection. The swale and erosional gully system carries only upland surface water runoff. There was no high water mark or any subsurface water flow. There was no high water mark or any subsurface water flow. The fall from the swale to the existing pipe under the service road creates an erosional gully with an approximately 6-7% slope therefore; there is no retention of the stormwater runoff. There is visible erosion in the lower portion forming an erosional gully, there are visible tree roots, but there is no wetland vegetation and there is no high water mark. Based on the above and field experience in Southern Maryland, this approximate linear 150-foot swale/upland drainage pattern and 528 linear feet of ephemeral erosion gully and 179 linear feet of existing pipe does not have significant nexus with the physical, chemical or biological integrity of the TNW.

Site 4 the non-jurisdiction ephemeral swale and erosional gully system was the determined to NOT be a regulated waterway during the last Dominion Terminal expansion under CENABOP-RMS (Dominion/Cove Point Terminal/JD) 05-01430-19 dated 21 March 2005.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Plans submitted by Dominion dated 26 December 2012
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant. submitted by Dominion dated 26 December 2012
  ☒ Office concurs with data sheets/delineation report. submitted by Dominion dated 26 December 2012
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name:
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name:
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: Panel number
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Google Earth 2005, 2008 & 2010
  or ☒ Other (Name & Date):
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): site inspection 2 October 2012 conducted with representative of the Maryland Department of the Environment, Dominion LNG, and their consultants.

Site #4 the non-jurisdiction ephemeral swale and erosional gully system was the determined to not be a regulated waterway during the last Dominion Terminal expansion under CENABOP-RMS (Dominion/Cove Point Terminal/JD) 05-01430-19 dated 21 March 2005.

B. ADDITIONAL COMMENTS TO SUPPORT JD: