

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No.

Petition of Vermont Transco LLC and Vermont)
Electric Power Company, Inc., requesting a)
certificate of public good, pursuant to 30 V.S.A.)
§ 248, authorizing the construction of the PV20)
Cable Replacement Project)
)

**PREFILED TESTIMONY AND EXHIBITS OF
TIMOTHY FOLLENSBEE II
ON BEHALF OF
VERMONT TRANSCO LLC & VERMONT ELECTRIC POWER COMPANY, INC.**

September 8, 2015

Mr. Follensbee's testimony explains the PV20 Cable Replacement Project's (Project) natural resource impacts and why the Project will not have an undue adverse effect on historic sites; natural environment; outstanding resource waters; air and water purity; headwaters; waste disposal; water conservation and water supply; floodways; streams; shorelines; wetlands; soil erosion; rare and irreplaceable natural areas; rare, threatened and endangered species; necessary wildlife habitat, and greenhouse gas emissions and use of natural resources.

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EXHIBITS

Exhibit Petitioner TF-1	Resume of Timothy Follensbee II
Exhibit Petitioner TF-2	Historic Structures Memorandum
Exhibit Petitioner TF-3	Phase I Archaeology Survey
Exhibit Petitioner TF-4	Natural Resource Report
Exhibit Petitioner TF-5	VELCO Environmental Management Plan for Decommissioning and Reclamation of Electric Facilities VELCO’s Environmental Guidance Manual
Exhibit Petitioner TF-6	VELCO Environmental Guidance Manual (DVD)

1 **Introduction**

2 Q1. Please state your name, occupation, and business address.

3 A1. My name is Timothy Follensbee II. I am the Environmental Manager for VELCO.
4 In this role I am responsible for scheduling, oversight, and data management of
5 VELCO's environmental resource assessments; environmental permit application
6 development, review and submittals; environmental compliance oversight,
7 coordination, inspection, and reporting; and agency correspondence related to
8 construction, maintenance, and operation of VELCO's facilities and assets. My
9 business address is 366 Pinnacle Ridge Road, Rutland, Vermont 05701.

10 Q2. Please describe your educational background and professional experience.

11 A2. My education, training, and professional experience have been generally focused
12 in environmental sciences, soil erosion prevention and sediment control, wildlife
13 and aquatic biology, fluvial geomorphology, and conservation law enforcement.
14 I received a Bachelor's Degree in Environmental Science majoring in
15 Conservation Law Enforcement from Unity College in Maine in May of 2000. I
16 have been employed at VELCO and part of the VELCO Environmental Team for
17 over eight years. Preceding my employment at VELCO, I worked for Queen of
18 the River Consultants in Longmont, Colorado as an aquatic biologist for
19 approximately three years. During this same timeframe I was the Assistant

1 Coordinator for the Colorado Operation Game Thief program, administered by
2 the Colorado Division of Wildlife. I have also been employed by the University
3 of Wyoming as a Fisheries Research assistant, Front Range Community College,
4 as a course instructor in the Natural, Applied, and Environmental Sciences
5 Department, and the Maine Operation Game Thief Program. My resume is
6 included as Exhibit Petitioner TF-1.

7 Q3. Have you previously testified before the Vermont Public Service Board?

8 A3. Yes. I recently provided testimony to the Vermont Public Service Board (the
9 Board) in connection with many of the environmental aspects associated with
10 several VELCO projects. I provided testimony in Docket No. 8205 (Georgia Area
11 Reinforcement Project), Docket No. 8033 (replacement of VELCO's St. Albans
12 X61 transformer), Docket No. 7942 (Grand Isle Terminal Project), Docket No.
13 7892 (K-41 Line Project), Docket No. 7731 (Georgia Substation Project), and
14 Docket No. 7829 (replacement of the Highgate Converter Warehouse Storage and
15 Maintenance Building). I have also prepared several documents that have been
16 submitted to the Board in previous VELCO proceedings, which have included
17 post-Certificate of Public Good filings for VELCO's Northwest Vermont
18 Reliability Project (Docket No. 6860) and VELCO's Lamoille County Project
19 (Docket No. 7032). These submittals addressed the potential effects of certain
20 activities on the natural environment.

1 Q4. Do you hold any professional licenses or certifications?

2 A4. Yes. I am a Certified Professional in Erosion Prevention and Sediment Control
3 (CPESC No. 6030), Certified in Hazardous Waste Operations and Emergency
4 Response (HAZWOPER), and have successfully completed certifications in the
5 Federal Emergency Management Agency (FEMA) National Incident
6 Management System Incident Command System at the 100, 200 and 402 levels.

7 **Overview of Testimony**

8 Q5. What is the purpose of your testimony?

9 A5. The purpose of my testimony is to summarize how the Project will comply with
10 the environmental criteria applicable to electric transmission projects under 30
11 V.S.A. § 248. Specifically, I address the Project's potential impacts upon historic
12 sites, air and water purity, the natural environment, the use of natural resources,
13 and greenhouse gas impacts pursuant to 30 V.S.A. § 248(b)(5), with due
14 consideration given to the relevant Act 250 criteria specified in 10 V.S.A.
15 §§ 1424a(d) and 6086(a)(1) through (8) and (9)(K), and outstanding resource
16 waters pursuant to Section 248(b)(8). In particular, I will explain why the
17 proposed Project will not have an undue adverse effect on these criteria.

18 Q6. Please provide a brief description of the Project and the scope of work.

1 A6. The PV-20 Project is joint project between VELCO and the New York Power
2 Authority (NYPA) to replace the aged PV-20 electrical transmission cables that
3 cross Lake Champlain and connect the New York and Vermont electrical
4 transmission grids. The Vermont portion of the Project includes replacing the
5 existing cables with 4 new high voltage submarine electrical transmission cables
6 (3 cables to support the 3 phase circuit and 1 spare cable); constructing a new
7 terminal station; replacing and reconfiguring two overhead transmission
8 structures and associated conductors, shield wires, and telecommunication
9 cables to connect to the new terminal station; and decommissioning the existing
10 electrical transmission structures, terminal station, and cables.

11 The installation of the 4 submarine cables is proposed to be accomplished by
12 the following parameters (please see Exhibit Petitioner TF-4, Appendix 1, Figure
13 2). From the NY and VT state boundary within Lake Champlain, the cables will
14 be laid directly on the bottom of the lake at a depth of just over 200 feet. At the
15 depth of approximately 100 feet, the cables will transition to burial within the
16 lakebed for protection. Burial within the lakebed will be accomplished utilizing
17 jet sled installation techniques and will be installed below the lake to a depth of
18 approximately 4 feet. At water depth of approximately 30 feet, the cables will be
19 installed into a conduit that will extend to a location adjacent to the new terminal
20 station. These conduits will be installed via horizontal direction drill (HDD)

1 technologies. At this point the cables will likely be anchored below grade within
2 a manhole or similar structure. They will be buried and protected by concrete or
3 similar structure below ground surface where they will enter the new terminal
4 station and extend to the proposed terminal structure. Once the cable
5 installation and construction of the proposed terminal station are complete, one
6 new overhead transmission line structure will be constructed and one existing
7 overhead utility line structure will be replaced to connect the existing K20
8 overhead transmission line to the proposed terminal station (See TF Exhibit 4,
9 Appendix 1, Figure 2). After installation, testing and commissioning of the new
10 cables, decommissioning and removal of the existing oil-filled cables and
11 terminal station will commence. The cables will be extracted from the lake
12 bottom by a barge with a hoisting system and then they will be spooled or cut
13 into manageable sections for disposal. It is possible that diver-assisted water
14 jetting efforts could be required to minimize sediment cover over the cables and
15 facilitate extraction. Once the existing cables and terminal station are
16 decommissioned the site will be restored.

17 Q7. Please describe the Project setting.

18 A7. The portion of the Project located in VT is within the Town of Grand Isle,
19 Vermont, bordered to the east by VT Route 314 and to the west by state
20 boundary line of Vermont and New York within Lake Champlain. The Project

1 setting is within the Champlain Valley biophysical region of Vermont. The
2 Champlain Valley region of Vermont has relatively low elevations, flat
3 topography, warm temperatures and longer growing seasons (Thompson and
4 Sorensen, 2005). More specifically, the Project site is located in a rural setting,
5 with neighboring residential development, and a campground located to the
6 south. The Project site essentially includes two terrestrial parcels. The first and
7 southern most parcel includes the area, which currently holds the VELCO's
8 existing K20 transmission line and right-of-way, terminal station, and
9 subterranean cables. This is an actively mowed field with a hedgerow of trees
10 separating it from the northern parcel. The northern parcel is an existing
11 undeveloped parcel consisting of a field with a few scattered trees. Both parcels
12 are essentially flat with a gently sloping topography toward the Lake.

13 **Historic Sites**

14 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(8))**

15 Q8. Will the Project have an undue adverse effect on historic sites?

16 A8. No, it will not. A historic site is one that is listed on the federal or state register of
17 historic places or one that is eligible for such listing. The Project will not directly
18 or indirectly impact any listed or eligible historic sites. VELCO commissioned a
19 comprehensive review of historic sites within the Project Area from The Louis
20 Berger Group, Inc. (Berger). The scope of Berger's review included identification

1 of listed and eligible historic sites within the Project Area and the immediate
2 vicinity, as well as, the Project's potential impacts on those sites. A Phase I
3 Archaeology Survey report and Visual Impacts on Historic Properties
4 memorandum prepared for this Project, explaining Berger's findings and
5 conclusions of no undue adverse effect is offered with my testimony as Exhibit
6 Petitioner TF-2 and TF-3.

7 Q9. Please explain generally the approach of the historic sites review.

8 A9. As part of the site assessments for the CPG Petition and permit applications to
9 the Army Corps of Engineers (ACOE), which will review the Project for effects to
10 historic sites as part of Section 106 of the National Historic Preservation Act,
11 VELCO contracted Berger to perform a review of historic sites. VELCO had
12 previously contracted Berger to perform a review of the southern portion of the
13 Project Area in 2009. For this Project, VELCO expanded the areas Berger
14 previously reviewed and had Berger conduct additional data review, field visits
15 and investigations to supplement their previous work.

16 To address historic sites as defined in 10 V.S.A. § 6001(9) as it relates to the
17 § 248 petition, the location of the Project Site was reviewed for any known
18 previously recorded historic sites that have been officially recorded in the

1 National Register of Historic Places and/or the state register of historic places,
2 none of which were identified.

3 Furthermore, to ensure compliance with section 106 of the National Historic
4 Preservation Act as administered by the ACOE for this Project, Berger first
5 assessed the site for archeological sensitivity. Based on this assessment, the
6 majority of the Project Site was deemed sensitive for potential precontact
7 archeological resources but not for other historical resources as no buildings or
8 other structures were historically present within the Project Site. Berger then
9 performed subsurface testing of the sensitive areas, by performing shovel test pit
10 excavation and screening efforts. Subsequently, over 225 shovel test pits were
11 excavated within the Project area in accordance with Vermont Division of
12 Historic Preservation Guidelines for Conducting Archeology in Vermont and no
13 potential archeological sites were found.

14 Second, Berger researched the potential for historic sites to be present
15 underwater within Lake Champlain and subcontracted with the Lake Champlain
16 Maritime Museum to review the Project activities within the Lake and their
17 potential effects on underwater historic sites. The field research and data review
18 did not uncover any historic resources within the Vermont portion of Lake
19 Champlain (See Exhibit Petitioner TF-3). The only significant underwater

1 resource the review identified is located in New York and will be assessed for
2 potential impacts by New York authorities and the U.S. Army Corps of
3 Engineers (ACOE) as part of NYPA's portion of the permitting efforts for this
4 Project.

5 Lastly, Berger reviewed the surrounding area of the Project location for
6 historic resources so they could be evaluated for potential view shed impacts.
7 For this effort, Berger reviewed all historic resources within approximately 0.5
8 miles of the Project Site. Through this review Berger identified three properties
9 listed on the State Register of Historic Places. These historic properties are
10 referred to as, the Lipsett House, the More House, and the Gordon-Center or
11 Hartford House. The Gordon Center/Hartford House is also listed on the
12 National Register of Historic Places and is located approximately 0.58 miles to
13 the south of the Project area. The More House is located approximately 0.4 miles
14 to the north-northeast. Berger concluded that the Project area would not be
15 within the view shed of either the Gordon Center/Hartford House or the More
16 House due to the distance and angle from the Project area. The Lipsett House is
17 located approximately 600 feet to the northeast from the Project area. Berger
18 concluded that this Property is adequately screened from the Project area by an
19 existing row of thick mature coniferous trees and other assorted landscape
20 plantings and that since the Project does not propose to remove any of this

1 screening, there will be no adverse effect on the property's view shed (See
2 Exhibit Petitioner TF-3).

3 **Natural Environment**
4 **(30 V.S.A. § 248(b)(5))**

5 Q10. Please explain how VELCO will ensure that the Project will not have an undue
6 adverse effect on the natural environment.

7 A10. The Project has been designed to avoid adverse impacts on the natural
8 environment and protected natural resources. VELCO will ensure through,
9 among other things, contracts, training, and consistent monitoring, that the work
10 associated with the Project will be performed in accordance with the approved
11 plans and all other federal and state permits issued for the Project. Before
12 commencing work, VELCO's contractors will receive VELCO's safety and
13 environmental training. VELCO will require site-specific oil and hazardous
14 material (OHM) release prevention and response plans, as well as plans to limit
15 the potential for the introduction of aquatic invasive species into Lake
16 Champlain from the installation and removal contractors. Contractors will be
17 required to comply with, among other things, the Vermont Department of
18 Environmental Conservation (VT DEC) Hazardous Waste Regulations and
19 VELCO's Environmental Guidance Manual (VEGM).

20 In addition, contractors will be required to:

- 1 • Become familiar with documentation associated with the Submarine
2 Electrical Transmission Lines, including, but not limited to, the Spill
3 Prevention Control and Countermeasure (SPCC) Plan, as prepared by
4 VELCO's environmental consultant, VHB, dated December 2012.
- 5 • Develop and submit for VELCO acceptance, a plan, which shall include at
6 a minimum, figures indicating the location of staging areas, temporary
7 waste containment areas, treatment areas (if applicable), sediment/riprap
8 staging areas, decontamination areas, spill response equipment, and vessel
9 configurations for off-shore removal operations.
- 10 • Maintain on site, sufficient quantities of containment equipment and
11 materials to prevent a release or spill to air, soil, surface water, or
12 groundwater during Project activities; and adequate supplies of absorbent
13 materials, booms, drum over packs, shovels and other response supplies for
14 use in case of a release or spill. In the event of any actual or suspected
15 release or spill of any chemical, petroleum product, or waste, the Contractor
16 shall immediately notify VELCO and immediately take all measures
17 necessary to control the release, contain the spread of the released material,
18 and to fully remediate all released or spilled material(s). VELCO will in
19 turn make appropriate agency notifications.
- 20 • Develop a spill prevention, containment, and contingency plan, including
21 spill prevention, containment and emergency procedures, to prevent and
22 minimize hazards to human health or the environment from fires,
23 explosions or any unplanned/uncontrolled release to the air, soil,
24 groundwater or surface water. The plan shall include, at a minimum, the
25 following:
- 26 ○ Procedures designed to prevent the discharge of OHM to air, soil,
27 surface water, or groundwater during Project activities.
- 28 ○ Identify containment equipment that will be used during Project
29 activities, including, but not limited to, draining, transferring and
30 storing of equipment, materials and waste.
- 31 ○ Contingency chain-of-command and responsibility.

- 1 ○ Communication and alarm systems to be followed during an
2 emergency.
- 3 ○ Identify notification procedures and requirements for local, state and
4 federal agencies in the event of a release of OHM to the air, soil,
5 surface water, or groundwater during Project activities.
- 6 ○ Actions/response procedures personnel must follow in the event of
7 a release of OHM to air, soil, surface water, or groundwater during
8 Project activities. The plan shall, at a minimum, identify procedures
9 for containment of the release, cleanup of the release, disposal and
10 documentation, and restoration procedures.
- 11 ○ Document arrangements between local police, fire, hospital(s),
12 contractor(s) and State and local emergency response teams to
13 coordinate emergency services.
- 14 ○ Names, addresses and phone numbers of emergency coordinator(s).
- 15 ○ Identify emergency equipment available at the site, including the
16 location and description of each item and the capabilities of the
17 equipment.
- 18 ○ Identify any emergency response subcontractors, their capabilities
19 and response times.
- 20 ○ Map and directions to the nearest health care facilities (including
21 New York and Vermont).
- 22 ○ Contingency Work Plan for the detection of polychlorinated
23 biphenyls (PCBs) within any portion of the system.

24 Contractors performing work within Lake Champlain will be required to
25 clean and disinfect boat hulls, motor propellers, wet wells, ballast tanks, and all
26 equipment entering the water prior to the vessel(s) and equipment entering Lake
27 Champlain to minimize the potential of introducing aquatic invasive species

1 (AIS) into the Lake in accordance with applicable regulations and Best
2 Management Practices (BMPs). All bilge and ballast water must be emptied prior
3 to the disinfection process. Following disinfection, only bilge and ballast waters
4 collected from the Lake may be discharged into the Lake.

5 In addition, as outlined in VHB's Natural Resource Report for the PV-20
6 Project (Exhibit Petitioner TF-4), the Project will comply with all Vermont
7 Agency of Natural Resources (VT ANR) Vermont Water Quality Standards
8 (VWQS), the Vermont Standards and Specifications for Erosion Prevention and
9 Sediment Control and the associated Stormwater Construction General Permit
10 (GP 3-9020). Additionally, the Project will also require a site-specific Erosion
11 Prevention and Sediment Control (EPSC) Plan, which will be implemented
12 during construction activities. Furthermore, all contractors will be required to
13 follow VELCO's environmental practices outlined in the VEGM.

14 **Outstanding Resource Waters**
15 **(30 V.S.A. § 248(b) (8) & 10 V.S.A. § 1424a(d))**

16 Q11. Is the Project located in any segment of waters of the state that has been
17 designated as outstanding resource waters by the Agency of Natural Resources?

18 A11. No. To date, four waterways in Vermont have been classified as Outstanding
19 Resource Waters. As documented in the Natural Resources Report prepared by
20 VHB, there are no Outstanding Resource Waters located within or adjacent to the

1 Project; therefore the Project will have no impact on the state's Outstanding
2 Resource Waters.

3 **Air and Water Purity**
4 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1))**

5 Q12. Will the Project result in an undue adverse effect on air quality?

6 A12. No, it will not. Work during the construction phase of the proposed Project will
7 result in only minor air emissions. There will be temporary vehicle emissions at
8 the site, or vessel emissions when in Lake Champlain, from the use of diesel and
9 gasoline powered vehicles and equipment. There may also be a minor amount of
10 temporary and short term dust emissions during equipment and material
11 transport, earthmoving, and general construction activities. If needed, VELCO
12 will manage dust resulting from construction activities in accordance with the
13 Vermont Standards and Specification for Erosion Prevention and Sediment
14 Control, the Projects construction stormwater discharge permit and the VEGM.
15 Dust control will primarily be accomplished through the stabilization of
16 disturbed soils and the application of water or calcium chloride, as needed. Once
17 commissioned, the Project's operation will not produce any regulated air
18 emissions.

19 Q13. Will the Project result in undue adverse water quality conditions?

1 A13. No. The Project does not require the discharge of waste water or other pollutants
2 beyond the discharge of stormwater during construction activities. The Project
3 will require a Construction Stormwater Discharge Permit (GP 3-9020) from the
4 Stormwater Section of VT DEC Watershed Management Division. Due to the
5 limited amount of impervious area of less than one acre that is being generated,
6 the Project does not require an operational phase permit from VT DEC for
7 stormwater discharges associated with impervious surfaces, nor any other
8 pollutant discharge (National Pollutant Discharge Elimination System or
9 NPDES) permit.

10 A significant portion of this Project is, by necessity, located within Lake
11 Champlain. As such, each Project component and its potential impacts to the
12 Lake and its associated water quality have been thoroughly evaluated and will
13 be minimized during Project activities. The Natural Resources Report prepared
14 by VHB (Exhibit Petitioner TF-4) details each of the primary construction
15 components and evaluates the potential impacts with each. The primary
16 construction components include:

- 17 • Terrestrial construction
 - 18 o Construction/Replacement of overhead utility lines and structures
 - 19 o Construction of a new terminal station
 - 20 o Open trenching for cable installation

- 1 o Horizontal directional drilling for cable installation from land to lake
- 2 • Submarine cable construction
- 3 o Horizontal directional drilling for cable installation from land to lake
- 4 o Jet sledding to facilitate installation of the new cables below the
- 5 lakebed sediments
- 6 o Direct laying of cable on the lakebed
- 7 • Decommissioning of existing cables and terminal station
- 8 o Purging of oil from and removal of the existing cables and oil
- 9 reservoirs
- 10 o Dismantling, removal, and restoration of the existing terminal
- 11 station

12 Potential water quality impacts associated with each of these activities has
13 been evaluated and will be mitigated through the utilization of appropriate
14 BMPs and will remain in compliance with the VWQS. Specifically, the Project
15 components have been evaluated for potential impacts associated with erosion
16 and sedimentation, the potential inadvertent release of OHM or drilling fluids,
17 resuspension of lakebed sediments, resuspension of phosphorous contained
18 within the lakebed sediments, release of metals contained within the lakebed
19 sediments, and thermal impacts associated with operation of the cables. VHB
20 found that potential impacts associated with erosion and sedimentation and the
21 potential release of OHM can be appropriately managed and mitigated through
22 the utilization of appropriate BMPs. The review of recently completed modeling

1 efforts for a similar project proposed within Lake Champlain, as well as,
2 modeling efforts specific to the PV-20 Project indicate that water quality impacts
3 associated with the resuspension of lakebed sediments during Project
4 construction and decommissioning activities, and the operation of the cables
5 after construction would remain in compliance with all VWQS. See Exhibit
6 Petitioner TF-4. As such, there will be no undue adverse effect to water quality.

7 **Headwaters**
8 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(A))**

9 Q14. Is the Project located within a “headwaters” area?

10 A14. No. The headwaters criterion provides that a permit will be granted whenever:

11 [T]he development ... will meet any applicable health and
12 environmental conservation department regulation regarding
13 reduction of the quality of the ground or surface waters flowing
14 through or upon lands which are not devoted to intensive
15 development, and which lands are:

- 16 i. Headwaters or watersheds characterized by steep slopes and
17 shallow soils; or
18 ii. Drainage areas of 20 square miles or less; or
19 iii. Above 1,500 feet elevation; or
20 iv. Watersheds of public water supplies designated by VT ANR;
21 or
22 v. Areas supplying significant amounts of recharge waters to
23 aquifers.

1 Sub-criterion i, ii, iii, and v above do not apply to the Project location, as
2 summarized in the Natural Resources Report. See Exhibit Petitioner TF-4. Sub-
3 criteria iv was evaluated further as the northern most portion of the Grand Isle
4 Consolidated Water District (GICWD) Surface Protection Area (SPA) overlays a
5 small section of the Project area. Upon further review of GICWD intake
6 locations, VELCO determined that GICWD has two intakes located within the
7 Lake, one referred to as “shallow intake” and the other as “deep intake.” The
8 “deep intake” is located approximately 180 feet below the surface of the water
9 and is shared by the neighboring Vermont Fish and Wildlife Department
10 (VFWD) fish hatchery to support fish hatchery operations. Project activities will
11 be located over 3,900 feet to the north of this intake location.

12 The “shallow intake” is located approximately 28 feet below the surface of the
13 water and Project activities will be located over 2,700 feet to the north of this
14 intake location. In addition, both intakes are located hydrologically upgradient
15 of the Project Activities. Based on the considerable distance away from the
16 intakes, the fact that the intakes are located hydrologically upgradient of the
17 Project activities, and since none of the other sub-criterion apply in this
18 circumstance, the Project area does not function as a headwater.

19 Q15. Will the Project have an undue adverse impact on headwaters?

1 A15. No. The Project is not located in area that would be considered a headwaters
2 area. Furthermore, the Project will implement appropriate BMPs to ensure that
3 the Project will remain in compliance with the VWQS, and will meet applicable
4 regulations regarding the quality of groundwater and surface waters. Therefore,
5 the Project will not result in an undue adverse effect to headwaters.

6 **Waste Disposal**
7 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(B))**

8 Q16. Please discuss VELCO's plans regarding waste disposal.

9 A16. In general, the waste generated by the Project is anticipated to primarily consist
10 of oil removed from the existing submarine cables; the seven decommissioned
11 submarine cables; components of the terminal station that will be removed; and
12 general construction debris. Trees and woody vegetation removed to
13 accommodate construction will either be chipped on-site or transported for off-
14 site disposal. All construction and decommissioning materials and debris will be
15 disposed of at a New York Power Authority (NYPA) approved disposal facility
16 and in accordance with New York Department of Environmental Conservation's
17 waste management regulations. In the event that any of this material must be
18 disposed of at an alternate location, VELCO will work with the contractor to
19 ensure that the material is being disposed of in accordance with applicable
20 regulations. See Exhibit Petitioner TF-4.

1 Q17. What has VELCO done to determine the risk of polychlorinated biphenyls
2 (PCBs) leaking from the decommissioned cable post-construction?

3 A17. VELCO has tested the cooling oil of the existing cables twice for PCBs, once in
4 1982 and again in 2015, all tests have reported no detection of PCBs, with a one
5 part per million (ppm) detection limit. The contractor selected to dispose of the
6 cables will be required to test the oil again for PCBs before purging the oil and
7 removing the cables. In the unlikely event that the contractor's tests detect the
8 presence of PCBs above the regulatory threshold of 50 ppm, additional safety
9 precautions will be warranted in connection with disposal. In all events, the oil
10 will be recycled or disposed of in accordance with applicable regulations.

11 Q18. Will the Project require special operational phase stormwater treatment
12 measures or sanitary facilities?

13 A18. No. The proposed Project will create less than the jurisdictional threshold of one
14 acre of impervious surfaces. Impervious surfaces to be constructed include select
15 portions of the new terminal station (e.g. control building, foundations, etc.) and
16 the proposed access road, which will result in approximately 0.33 acres of
17 impervious area. Therefore, based on the minor amount of impervious surfaces
18 no operational stormwater treatment measures are required or warranted for the
19 Project.

1 The Project will not need permanent sanitary waste treatment and will not
2 require on-site sanitary waste treatment or use of public waste treatment
3 facilities.

4 Q19. Will the Project require any on-site waste disposal, the injection of waste
5 materials or any harmful or toxic substances into groundwater or wells?

6 A19. No, it will not. The Project will not involve any on-site waste disposal or the
7 injection of waste materials or any harmful or toxic substances into groundwater
8 or wells.

9 Q20. What procedures will be followed in the decommissioning and removing of the
10 existing terminal station?

11 A20. VELCO and its contractors will follow the VELCO Environmental Management
12 Plan for Decommissioning and Reclamation of Electric Facilities. See Exhibit
13 Petitioner TF-5. Oil contained within the existing cable and associated reservoirs,
14 will be tested again for PCBs prior to any removal activities. Upon receipt of the
15 laboratory tests, the oil-filled reservoirs, piping, and related platforms of the
16 terminal station will be drained, cleaned, and transported to a NYPA-approved
17 disposal facility or certified facility in Vermont. The remaining terminal station
18 equipment and facilities (e.g., control building, steel, fencing, etc.) will also be

1 removed, transported, and disposed of at a NYPA-approved disposal facility or
2 certified facility in Vermont.

3 Q21. How will the cable and oil waste be tested and what precautionary procedures
4 will be used to avoid potential environmental impacts?

5 A21. Oil contained within the existing cables, will be tested for PCBs prior to any
6 removal activities. Upon receipt of the laboratory tests, the oil contained within
7 the existing submarine cables will be purged, using air, water or another
8 innocuous material, prior to removal. All oil and purging agents will be
9 carefully collected transported and disposed of in accordance with applicable
10 regulations based on the results of the laboratory tests.

11 As I mentioned earlier in my testimony, all contractors will receive VELCO's
12 environmental and safety training prior to commencing work. All significant
13 decommissioning activities associated with oil containing equipment, including
14 draining of oil from reservoirs, cable purging activities, and sectioning of cables
15 will be performed within temporary secondary containment structures. In
16 addition, as discussed above, the removal contractor will be required to develop
17 a spill prevention, containment, and contingency plan that requires specific items
18 and materials to prevent a release of OHM, explains the actions necessary to

1 contain a release if it were to occur, and mandates that the contractor maintain
2 appropriate response material onsite, in addition to other requirements.

3 After the oil within the cables has been purged, the existing cover over the
4 cables will be removed on land and within the shallows of the Lake. The
5 removal of this cover material will likely require mechanical excavation both on
6 land and within the shallow portions (to approximately 20 feet of water depth) of
7 the Lake. The cables will then be extracted from the Lake bottom utilizing a
8 barge with a hoisting system. Once on the barge, the cables will either be
9 spooled up or cut into manageable sections for recycling and/or disposal. All
10 cutting of cables will be performed within a containment structure located on the
11 barge to ensure the containment of any residual oil.

12 Q22. How will fluids and cuttings from the horizontal directional drilling be collected
13 and disposed of?

14 A22. Horizontal directional drilling (HDD) requires a sending and recovery pit at the
15 initiation point of the boring location. It is anticipated that this pit will be located
16 approximately 60 feet west of the proposed terminal station footprint. The
17 excavation of this pit may require blasting as shallow bedrock was identified
18 near this location from preliminary soil borings, however this will not be
19 confirmed until final engineering is completed by the cable installation

1 contractor. The pit will likely consist of an excavated area, where the manhole or
2 similar anchoring structure for the cables will eventually be located. From the
3 sending and recovery pit the HDD activities will then proceed subterranean to a
4 predetermined point in the Lake bottom (approximately 30 feet below the Lake
5 surface) where the drill will emerge in the Lake. The sending and recovery pit
6 will be constructed such that any drilling fluids and cutting material returning
7 through the bore hole, will be contained within the excavation. Upon completion
8 of the drilling effort, the fluid and cuttings within the pit will be collected and
9 disposed of properly.

10 At the emergent point in the Lake, a temporary containment structure will be
11 installed, which will contain any drilling fluids that may escape from the
12 emergent end of the drilling effort. This containment structure is anticipated to
13 be a cofferdam or similar structure, which will allow for the removal of any
14 drilling fluid after drilling is complete and before removal of the containment
15 structure. In addition, the cable installation contractor will develop a monitoring
16 and recovery plan for any escaped drilling fluids during the HDD efforts.

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Water Conservation & Water Supply
(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(C) & (a)(2) & (3))

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Q23. Will the Project have an undue adverse effect on water conservation?

A23. No. Upon completion of construction activities, the operation of the proposed facilities will not require the utilization of water, and proposed facilities at the site do not require a private or public water supply. As such, the proposed Project will not have an undue adverse effect on water conservation.

Q24. Will the Project burden existing water supplies?

A24. No. The proposed facilities will not use any water and will not require a water supply once installed. Minor amounts of water may be required during construction to support certain construction activities, such as dust suppression, vegetation establishment, HDD activities, oil purging of the existing cables, and/or in Lake construction activities associated with the jet sled operation. The minimal water required for these activities will be supplied by the Lake or by an existing public water source. The jet sled operation will utilize and recirculate water from the Lake.

As discussed above, the two GICWD intakes are located approximately 28 and 180 feet below the Lake surface, over 2,700 and 3,900 feet to the south of and hydrologically upgradient of Project activities. As such, the Project will not have

1 an undue adverse effect on the GICWD water supply or any other water
2 supplies.

3 **Floodways**
4 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(D))**

5 Q25. Is any part of the Project located within a floodway or floodway fringe?

6 A25. No. No streams are located with the Project area or immediate vicinity, therefore
7 no floodway or floodway fringe is located within the Project area. Although,
8 Lake Champlain is located within the Project area, the floodways criterion is
9 specific to "the channel of a watercourse," therefore by definition the floodplain
10 of the Lake would not meet the definition of the floodway criteria. Nevertheless,
11 VELCO has reviewed the Project activities for potential impacts to the floodplain
12 of Lake Champlain, which are discussed below.

13 Q26. Is any part of the Project located within a 100-year flood boundary or floodplain?

14 A26. Yes. VHB analyzed available FEMA Flood Insurance Rate Maps and data and
15 determined that the Lake's 100-year flood elevation is 102 feet above mean sea
16 level (amsl). See Exhibit Petitioner TF-4. Therefore, the 100 year floodplain of
17 the Lake would be considered to be between 98 feet amsl (the Lake's ordinary
18 high water) and 102 feet amsl (the Lake's 100 year flood elevation). The only
19 activities proposed to occur within this floodplain boundary are the HDD

1 subterranean installation of the new cables, removal of the existing cables, and
2 general access to and from the Lake.

3 Q27. Will the Project have an undue adverse effect on floodplains?

4 A27. No, it will not. Although, mechanical excavation methods may be required to
5 uncover the existing cables to facilitate removal, there will be no new fill placed
6 above grade that would displace flood waters. In addition, the proposed
7 terminal station and other above-ground facilities will be located at or above 127
8 feet amsl, over 25 feet in vertical elevation above the 100-year flood event.

9 Therefore, the Project will not restrict or divert the flow of flood waters, or
10 endanger the health, safety, and welfare of the public, riparian, or downstream
11 landowners during flooding or from potential erosion. As such, there will be no
12 undue adverse effects associated with flood events.

13 **Streams**
14 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(E))**

15 Q28. Is the Project located adjacent to or near a stream?

16 A28. No. There are no streams identified within or adjacent to the Project area. See
17 Exhibit Petitioner TF-4. Therefore, there will be no undue adverse impact on
18 streams.

Shorelines

(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(F))

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Q29. Will the Project result in any undue adverse effects on shorelines?

A29. No. Although, certain portions of the Project are, by necessity, located within the Lake Champlain shoreline, impacts to the shoreline will be minimal and temporary in nature. Shorelines are defined as the land adjacent to the waters of lakes, ponds, reservoirs, and rivers; and include the land between the mean high water mark and the mean low water mark of such waters. For Lake Champlain, this is the area between the OHW mark at 98 feet amsl and the mean low water mark located at 93.25 feet amsl. Furthermore, the shoreline criterion states that a permit will be granted whenever the following is demonstrated:

[T]he development ... of shorelines must of necessity be located on a shoreline in order to fulfill the purpose of the development ... and the development ... will, insofar as possible and reasonable in light of its purpose:

- i. retain the shoreline and the waters in their natural condition;
- ii. allow continued access to the waters and the recreational opportunities provided by the waters;
- iii. retain or provide vegetation which will screen the development or subdivision from the waters, and;
- iv. stabilize the bank from erosion as necessary with vegetation cover.

1 Similar to the required activities that must occur within the floodplain of the
2 Lake, the activities proposed to occur within the shoreline are the subterranean
3 installation of the new cables via trenchless technologies (such as HDD), the
4 removal of the existing cables and general access to and from the Lake.

5 Although mechanical excavation methods may be required to uncover the
6 existing cables to facilitate their removal, this disturbance is anticipated to be a
7 very limited area of just over 2,000 square feet. After the removal of the cables
8 and the existing terminal station are complete, the disturbed area will be restored
9 to the approximate existing grade and stabilized based on the existing conditions
10 of the shoreline to ensure bank stability.

11 In terms of public access to the Lake, the Project is located on private property
12 that does not currently provide any public access. A public access point to the
13 Lake, located to the south of the Project area, will remain accessible, as will the
14 recreational opportunities provided by the Lake.

15 There is currently substantial screening from existing vegetation along the
16 shoreline between the water and the majority of the terrestrial portion of the
17 Project. The Project does not propose to clear any vegetation along the shoreline
18 to facilitate the installation of the new cables or the removal of the existing
19 cables. However, some minor woody vegetation trimming or tree branch

1 trimming may be required to allow equipment access down to the water during
2 removal activities, this will be very limited and will not significantly reduce
3 existing screening from the Lake. Thus, the Project will, insofar as possible,
4 retain all shorelines and waters in their natural condition, allow continued access
5 to the waters and the recreational opportunities provided by the waters, retain
6 vegetation which will screen the Project from the waters, and maintain the bank
7 stability with vegetative cover. As such, the Project will not have an undue
8 adverse effect on shorelines.

9 **Wetlands**

10 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(G))**

11 Q30. Is the Project located on or near wetlands?

12 A30. No. VHB assessed the site in 2013 and 2015 and did not identify any wetlands
13 located within or adjacent to the Project area (see Exhibit Petitioner TF-4).
14 Therefore, the Project will not have undue adverse effect on any wetlands.

15 **Soil Erosion**

16 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(4))**

17 Q31. Will the Project reduce the capacity of the land to hold water so that a dangerous
18 and unhealthy condition results?

19 A31. No. The erodibility of soils is rated by the K value of each soil. Soils having K
20 values greater than 0.24 are considered by VT DEC to be more susceptible to

1 erosion. The K value of the soils with the Project site range from 0.24 to 0.49.
2 Although the K value of the soils onsite indicate that they are potentially more
3 susceptible to erosion than soils with K values less than 0.24, the slope of the site
4 is relatively flat with a slope of approximately three percent in areas where the
5 majority of the soil disturbance will occur and an overall average slope of the
6 Project site being approximately five percent.

7 The Project will create less than five acres of soil disturbance to complete the
8 required construction activities and will obtain a construction stormwater
9 discharge permit (GP 3-9020) from the VT DEC. The permit will require a site
10 specific EPSC Plan, which will include specific EPSC measures to be
11 implemented in accordance with Vermont Standards and Specifications for
12 Erosion Prevention and Sediment Control. In addition, the contractor will be
13 required to comply with the VEGM, with VELCO providing a qualified
14 environmental inspector to be onsite to perform routine environmental
15 inspections of the site and construction activities to ensure that the Project
16 remains in compliance with the EPSC Plan, the VEGM, and all environmental
17 permit conditions during construction activities.

1 **Rare and Irreplaceable Natural Areas, Necessary Wildlife Habitat, and Rare,**
2 **Threatened and Endangered Species**
3 **(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(8))**

4 Q32. Will the Project have an undue adverse effect on rare and irreplaceable natural
5 areas, necessary wildlife habitat, or rare, threatened or endangered species?

6 A32. No. VELCO engaged two outside consulting experts (VHB and Ecologic, LLC) to
7 perform a thorough review of the Project site for both aquatic and terrestrial
8 environments for Rare and Irreplaceable Natural Areas (RINA), Necessary
9 Wildlife Habitat, and Rare, Threatened, and Endangered (RTE) Species. See
10 Exhibit Petitioner TF-4. Based on a review of public and privileged data sets, as
11 well as field assessments conducted at the site between 2013 and 2015, no RINA,
12 Necessary Wildlife Habitat, or RTE species were identified within or adjacent to
13 the Project area.

14 Although, generally not considered as necessary wildlife habitat, given the
15 aquatic nature of the Project and the work required in the Lake, fish habitat was
16 also reviewed under these criteria. It is likely that several fish species utilize and
17 pass through this area of the Lake; however the habitat in this area is very similar
18 to the surrounding areas of the Lake, indicating the habitat is not unique and
19 does not provide refuge or unique characteristics that other adjacent areas would
20 not. Furthermore, given the lack of submerged aquatic vegetation, rocky and
21 gravelly shoals, large areas of boulders, steep lakebed slopes, and overall lack of

1 unique habitat to support fish spawning or refuge, this area of the Lake would
2 not be considered critical fish habitat.

3 **Greenhouse Gas Emissions and Use of Natural Resources**
4 **(30 V.S.A. § 248(b)(5))**

5 Q33. Will the Project have an undue adverse impact on the use of natural resources?

6 A33. No. VELCO and its contractors will construct this Project while minimizing the
7 use of natural resources. It is expected that a minor amount of natural resources
8 will be used to complete the project and will be mainly be limited to the minor
9 clearing of vegetation, the use of stone to surface the terminal yard and construct
10 the new access road, and the utilization of petroleum based fuels and lubricants
11 associated with the operation of gasoline and diesel powered vehicles and
12 equipment. As such, there will be no undue adverse use of natural resources.

13 Q34. With respect to the Project's impact on the environment, has VELCO given due
14 consideration to greenhouse gas impacts?

15 A34. Yes. The Project poses little, if any, greenhouse gas impacts. VELCO's proposed
16 construction activities will result in the release of minor emissions associated
17 with the operation of gasoline and diesel powered engines and equipment,
18 however these activities will be limited in nature and duration. Moreover, there
19 will be no sustained releases of greenhouses gases associated with the operation

1 of the facilities. As such, there will be no undue, adverse effect associated with
2 greenhouse gas emissions associated with the proposed Project.

3 Q35. Does this conclude your testimony?

4 A35. Yes, at this time.