



To: VGS ARNGP Phase 1 Project File

Date: August 24, 2015

Memorandum

Project #: 57563.00

From: Jeffrey A. Nelson &amp; Joshua Sky

Re: Natural Resource Assessment for Project Changes  
Vermont Gas Systems Addison Rutland Natural Gas Project –  
Phase 1

VHB has prepared this memorandum to provide our assessment of impacts to certain natural resource criteria reviewed under 30 V.S.A. Section 248(b)(5) with respect to various proposed changes to the Vermont Gas Systems, Inc. ("VGS") Addison Rutland Natural Gas Project Phase 1 ("ARNGP" or "Project") as specified in the Non-Substantial Change Summary Memo. Based on the evaluation presented below and prior review of the changes with Vermont Department of Environmental Conservation ("VT DEC") staff, VHB concludes that the proposed Project changes, while resulting in minor changes to impacts, do not alter our prior conclusions with respect to the conformance with the natural resources criteria to which the Board must give due consideration, given the applicability of past testimony and exhibits in PSB Docket 7970, as well as previously issued VT DEC permits for the Project. Importantly, all locations where these Project changes are proposed are within areas where full field investigations for natural resources have been completed and reviewed by Agency of Natural Resources ("ANR") and VT DEC personnel.

The Project Changes are presented in the Non-Substantial Change ("NSC") Summary Memorandum prepared by Mr. John Stamatov on behalf of VGS (Attachment 1 to PSB Filing) and described in more detail in the changes summary table provided as Attachment 1A. The Project changes treated in this assessment are shown on orthographic maps (Attachment 1B), the updated EPSC Plans prepared by CHA (Attachment 1C) and VHB Natural Resource Series maps (dated July 6, 2015) which are provided as Attachment 2A.

This memorandum reviews the proposed changes with respect to the specific criteria covered by the testimony of Mr. Jeffrey A. Nelson for the Project, for which due consideration is to be given by the PSB, including:

- Outstanding Resource Waters (10 V.S.A. § 1424a(d))
- Headwaters (10 V.S.A. § 6086(a)(1)(A))
- Waste Disposal (10 V.S.A. § 6086(a)(1)(B))
- Water Conservation (10 V.S.A. § 6086(a)(1)(C))
- Floodways (10 V.S.A. § 6086(a)(1)(D))
- Streams (10 V.S.A. § 6086(a)(1)(E))
- Shorelines (10 V.S.A. § 6086(a)(1)(F))
- Wetlands (10 V.S.A. § 6086(a)(1)(G))
- Water Supply (10 V.S.A. § 6086(a)(2)&(3))
- Soil Erosion (10 V.S.A. § 6086(a)(4))
- Rare or Irreplaceable Natural Areas ("RINA")(10 V.S.A. § 6086(a)(8))
- Necessary Wildlife Habitat and Endangered Species (10 V.S.A. § 6086 (a)(8)(A))

Of these, the following criteria are not applicable to the consideration of these Project changes as there is no change from VHB's earlier assessments of such:



- Outstanding Resource Waters
- Headwaters
- Waste Disposal
- Water Conservation
- Shorelines
- Water Supply

Relevant Section 248 criteria assessments, presented below, are based primarily on VHB's natural resource studies of the Project area, including the locations where Project changes are proposed. VHB's assessment also relies in part on an updated EPSC Plan set prepared by CHA (last revised June 30, 2015) and a supporting memorandum prepared by VGS providing an overall description of the proposed modifications. The Project changes included in this NSC filing were reviewed in detail with VT DEC staff at a meeting on May 22, 2015, which enabled ARNGP Project team to incorporate VT DEC input as appropriate on the proposed changes in advance of filing collateral permit amendments as well as this NSC. Questions and detailed information about the proposed changes were addressed during the meeting or during subsequent coordination with VT DEC program staff. Subsequently, on behalf of VGS, VHB submitted amendment requests that incorporate these changes to VT DEC for the following permits:

- Vermont Individual Wetland Permit No. 2012-0184, issued June 9, 2014 (Amendment request submitted June 30, 2015)
- Vermont Stream Alteration Permit No. SA 5 9029, issued June 9, 2014 (Amendment request submitted June 26, 2015)
- Vermont Permit No. 6949-INDC, issued June 9, 2014 (Amendment request submitted June 29, 2015; Revised July 29, 2015)
- Section 401 Water Quality Certification issued June 9, 2014 (Amendment request submitted June 30, 2015)

VHB anticipates VT DEC permit decisions/amendments of these permits to issue in the near future. Also, all permits remain valid for portions of the Project that do not include changes, and VGS is continuing construction within certain such areas.

The remaining relevant Section 248 criteria assessments associated with the Project changes are presented in the attached matrix, which includes a listing of the various collateral permits and their status, and notes with respect to each criterion evaluated by VHB. In addition, we are providing our evaluation below on a criterion by criterion basis for those changes which require more detailed consideration, below.

**Floodways (10 V.S.A. § 6086(a)(1)(D))**

The proposed changes will not result in any impacts that will alter VHB's prior assessment of the impact of the Project on floodways and fluvial erosion hazard ("FEH") zones. Change PH-22(2) includes the crossing of unnamed tributary to the LaPlatte River in Hinesburg (Stream 2015-SC-1) that has a watershed area of approximately 1.5 square miles and an associated mapped FEH zone. Stream 2015-SC-1 (formerly mapped as approximate stream 2013-AS-SC-CM-3) would be crossed at a location 2,350 feet upstream of the previously



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approved crossing location. The method of crossing remains open trench excavation with specific depth of burial requirements as specified in the stream alteration permit (SA-5-9029) amendment materials submitted to VT DEC on June 26, 2015. Therefore, our opinion continues to be that the Project will not permanently restrict or divert the flow of flood waters, or endanger the health, safety and welfare of the public or of riparian owners during flooding; and the Project work within a floodway fringe will not increase the peak discharge of the river or stream within or downstream of the Project area or endanger the health, safety, or welfare of the public or riparian owners during flooding.

### **Streams (10 V.S.A. § 6086(a)(1)(E))**

The proposed changes will not result in any impacts that will alter VHB's prior assessment of the impact of the Project on streams. Previously approved areas of temporary impacts to streams are affected by Project changes A-08, PH1-22(2), PH1-25B, and PH1-42. At these locations, slight changes to temporary impacts to stream features will occur. The Project continues to avoid permanent stream impacts. Stream impacts at Change A-08, previously permitted under the 401 WQC issued June 9, 2014, will reduce temporary impacts to Stream 2012-SC-PW-42 by 273 square feet ("sf"), from 473 sf to 200 sf. The remaining three changes involving streams are included in the June 30, 2015 401 WQC amendment request. Change PH1-22(2) will slightly reduce impacts to stream 2015-SC-1 (formerly 2013-AS-SC-CM-3) by 45 sf, from 249 sf down to 204 sf. Change PH1-25 will slightly increase impacts to jurisdictional ditch feature 2012-DITCH-PW-32 by 53 sf, from 9 sf to 62 sf. Change PH1-42 will slightly increase impacts to stream 2012-SC-PW-3 by 12 sf, from 87 sf to 99 sf. In summary, the proposed Project changes will result in minor changes to temporary impacts to streams, resulting in an overall decrease in impacts. The changes are permitted and/or anticipated to be permitted under the 401 WQC and/or SAP and pending amendments. Therefore, our opinion continues to be that the design and implementation measures, taken in combination with the review and conditional requirements included with Project permits, will protect the natural condition of streams, and will not result in endangerment to the health, safety, or welfare of adjoining or downstream landowners from stream channel impacts.

### **Wetlands (10 V.S.A § 6086(a)(1)(G))**

The proposed changes will not have an undue adverse effect on Class II wetlands or wetland buffers. Previously approved areas of temporary impacts to wetlands and wetland buffers are affected by Project changes PH-12, A-08, PH1-22(2), PH1-25, PH1-NAN2, and PH1-42. These changes are summarized in Table 1.



<b>Table 1: Summary of Class II Wetland and Wetland Buffer Temporary Impact Changes</b>					
<b>Change ID</b>	<b>Class II Wetland ID</b>	<b>Permitted Wetland Impacts (sf)</b>	<b>Revised Wetland Impacts (sf)</b>	<b>Permitted Buffer Impacts (sf)</b>	<b>Revised Buffer Impacts (sf)</b>
PH-12	2012-CM-88	0	0	821	1,121
	2012-CM-89	0	60	0	1,266
A-08 <sup>1</sup>	2012-PW-97	4,530	3,999	2,169	4,476
PH1-22(2)	2014/2015-CM-1 (Previously Approx. Wetlands)	3,352	4,433	7,030	8,026
PH1-25	2012-PW-85	0	172	274	1,049
PH1-NAN2	2012/2013-PW-71/72/73	2,331	2,331	10,330	10,581
	2014-CM-3 (Previously Approx. Wetlands)	2,678	2,786	721	1,693
PH1-42	2014-CM-4	0	0	0	237
<b>Overall Total (sf)</b>		12,891	13,781	21,345	28,449
<b>Change in Impacts (sf)</b>		890		7,104	

1. Revised impacts previously permitted under VWP issued in June 2014.

Thus, on a cumulative basis, the changes will result in a slight (890 sf) increase in temporary wetland impact, and a modest (7,104 sf) increase in buffer impacts but would not impact any additional wetlands that were not to be impacted as a result of the previously permitted work, nor would there be any changes to impacts to different types of wetland functions or values. Therefore, our opinion continues to be that the design and implementation measures, taken in combination with the review and conditional requirements included with the 401 WQC and VWP, will ensure that undue adverse effects to significant Vermont wetlands are avoided.

**Soil Erosion (10 V.S.A § 6086(a)(4))**

As a result of the proposed Project changes, the total area of proposed earth disturbance associated with the Project has increased from 351 acres to 368 acres. The Project EPSC Plan has been updated to capture these revisions, including adjustments to the Limit of Disturbance (“LOD”), where relevant. The Project will continue to implement appropriate Best Management Practices associated with all earth-disturbing activities. The revised EPSC Plan set was provided to ANR on June 29, 2015 as a component of an INDC permit application submittal. There would be no changes to the prior VHB testimony with respect to impacts under these criteria resulting from these Project changes. Thus, there is no change from our prior conclusions that the Project conforms to the requirements of these criteria; namely, that the Project will not cause unreasonable soil erosion or cause significant drainage or runoff problems.



**Rare and Irreplaceable Natural Areas (“RINA”)(10 V.S.A. § 6086(a)(8))**

Project Change PH1-NAN2 occurs in the vicinity of the Valley (Wet) Clayplain Forest located on LLN 138 (Latrielle) in Monkton, VT. With respect to this feature, paragraph 2.4.a. of the Memorandum of Agreement between VGS and ANR in Docket 7970, dated September 13, 2013 requires that: “VGS will field verify the extent of this feature prior to the start of construction. If the permanent VGS easement is fully outside of this feature, no change to the alignment as depicted in the construction EPSC plan dated June 28, 2013 will be required...”

During 2015, VHB conducted a field investigation to verify the boundary of the clayplain forest in this vicinity. The Natural Resource Map Series has been updated to reflect the results of the field investigation of this feature. The field investigation confirmed that the boundary of the clayplain forest is located outside of the permanent VGS easement and the above condition is satisfied with no change required to the Project alignment or the EPSC plan. Therefore, our opinion remains that this change will not impact Rare and Irreplaceable Natural Areas.

**Necessary Wildlife Habitat and Endangered Species (10 V.S.A § 6086 (a)(8)(A))**

With respect to Necessary Wildlife Habitat, two of the proposed Project changes result in activity near bat roost trees; PH1-22(2) is located in the vicinity of three bat roost trees, and PH1-41 is near two bat roost trees. These trees are located outside of the Project LOD and, per Construction EPSC Note 9, will be flagged for identification and avoidance prior to initiation of construction activities. Proposed change PH1-29 is located in the area of a mapped Deer Wintering Area. However, there would be no impact to this feature as a result of the revision.

Regarding impacts to Rare, Threatened, or Endangered (“RTE”) species, two Project changes will occur in the vicinity of field-identified rare plant populations. At one of these locations, PH1-22(2), the RTE plants are located outside the Project LOD, and per the EPSC Plan, Construction EPSC Note 9, the area will be flagged for identification and avoidance prior to any construction related activities in close proximity. At the second location, PH1-NAN2, field natural resource data have now been collected, resulting in the designation of a smaller area where this plant is found. Nonetheless the Project will continue to result in impacts to the population designated 2013-RTE-CT-83 during construction. The approved avoidance and mitigation sequence included in the Project-specific Vegetation Management Plan will be followed.

Given the above, our opinion remains that the Project revisions will not destroy or imperil necessary wildlife habitat or endangered species.

**Summary**

In summary, it is our professional opinion that the proposed Project changes do not result in any change in impacts to the criteria that we have evaluated, nor to our conclusions that the Project conforms with these natural resources criteria, to which the Board must give due consideration, as supported by previously prepared and admitted testimony and issued VT DEC permits for the Project.

**ATTACHMENTS**

- 2A: VHB Natural Resource Map Series (revision date: July 6, 2015 & August 13, 2015)
- 2B: Collateral permit and 248 Natural Resource Criteria matrix