November 4, 2010

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
Mail Code DLC, HL-II.2
888 1st Street NE, Room IA
Washington, DC 20426

RE: Central Vermont Public Service Corporation
Middlebury Lower Hydroelectric Project (FERC No. 2737 VT)

Dear Ms. Bose:

In accordance with the stipulations of Middlebury Lower’s Federal Energy Regulatory Commission (FERC) license (FERC #2737) and the FERC approved Historic Properties Management Plan, Central Vermont Public Service is filing copies of a Memorandum of Agreement signed by the Vermont Department of Historic Preservation and a Phase III end-of-fieldwork letter describing mitigation efforts at the project.

If you have any comments or require additional details regarding this project please contact me at (802)747-5594 or beth.eliason@cvps.com.

Thank you,

Beth Eliason
Environmental Engineer

Enc.
MEMORANDUM OF AGREEMENT
BETWEEN THE
VERMONT STATE HISTORIC PRESERVATION OFFICER
AND CENTRAL VERMONT PUBLIC SERVICE CORPORATION
REGARDING THE CENTRAL VERMONT PUBLIC SERVICE CORPORATION’S
MIDDLEBURY LOWER SUBSTATION REPLACEMENT
MIDDLEBURY, VERMONT

WHEREAS under the terms and conditions of article 405 of the license the United States Federal Energy Regulatory Commission (FERC) issued to the Central Vermont Public Service Corporation (CVPS), and in compliance with the Programmatic Agreement FERC executed on February 21, 2001, CVPS must assess the potential effects of a proposed undertaking to historic properties, in accordance with the Historic Properties Management Plan (HPMP) submitted to FERC and executed on March 11, 2004. CVPS plans to replace the existing substation at its Middlebury Lower Facility (undertaking); and

WHEREAS the undertaking consists of construction of a new, larger substation in the portion of the Middlebury Lower Facility currently occupied by a c. 1940 substation and will require removal of this substation; and

WHEREAS CVPS has defined the undertaking’s area of potential effect (APE) as the Middlebury Lower Facility which was determined eligible for the National Register in 1996 as part of CVPS’s relicensing process; and

WHEREAS CVPS has determined that the undertaking will have an adverse effect on extant historic properties including architectural resources within the Middlebury Lower Project. Architectural resources include the c. 1940 substation as well as two small concrete structures used to store blasting materials- a dynamite shed and a concrete cap shed, all of which are eligible for listing in the National Register of Historic Places and the Vermont State Historic Preservation Officer (VT SHPO) concurred in this determination.

WHEREAS a cultural resources survey of the project area was completed in November 2009 and one previously unknown Native American site was identified (VT-AD-1533). Native American site VT-AD-1533 is situated in the northern portion of the project area on the first level terrace above and to the east of Otter Creek. The evaluation of site VT-AD-1533 in June 2010 resulted in the determination that site VT-AD-1533 is eligible for listing in the National Register of Historic Places (NRHP) and the Vermont State Historic Preservation Officer (VT SHPO) concurred in this determination.
WHEREAS CVPS has consulted with the Vermont State Historic Preservation Officer (SHPO) pursuant to 36 C.F.R. part 800, of the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f); and

WHEREAS, CVPS has reviewed other construction/design options in and effort to avoid impacts to the cultural resources and, due to the combination of severe topographical constraints and the need to keep the existing substation energized to maintain service during construction of the new facility, has determined that adverse impact is unavoidable; and

WHEREAS, the FERC/CVPS has consulted with Native American Tribes; and

NOW, THEREFORE, CVPS and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS
The CVPS shall ensure that the following measures are carried out:

I. CULTURAL RESOURCE MITIGATION

A. Architectural Resources

1. Prior to construction, a 36 CFR 61 qualified architectural historian shall record the substation to be demolished, as well as two small concrete structures used to store blasting materials- a dynamite shed and a concrete cap shed that will also be demolished. The documentation will be completed in accordance with the Division for Historic Preservation’s Photographic Documentation Requirements for Historic Structures. Recorded materials shall be archived at the Division for Historic Preservation and at an appropriate local archive to be agreed upon by the VT DHP and CVPS.

B. Archaeological Resources

1. Mitigation of Adverse Effect to Site VT-AD-1533

CVPS will perform an archaeological phase III data recovery effort at site VT-AD-1533 and provide documentation of that effort. A data recovery plan has been prepared the details of which have been agreed upon by the VT SHPO and is included as Attachment A to this MOA. The phase III data recovery will include excavation of a sample of the Native American site, VT-AD-1533.

2. Site VT-AD-1533, as defined within the APE, measures approximately 875 m² with a discrete “core” area of roughly 150 m². The phase III mitigation effort recommended for the site includes the excavation of 30 0.5 m x 0.5 m shovel test and up to 75 m² of unit excavation, totaling 82 m². This represents approximately 9.0% of the total site area, however the mitigation effort will be concentrating in the site “core” area, with as much as 60 m² excavated, thereby achieving 40% data recovery for this specific portion of the
site. It should be noted that when the combined phase I and II effort is considered in total with the proposed phase III effort, the excavated portion of the site (104 m²) represents as much as 12% of the total site area and as much as 45% of the "core" area.

3. All archaeological investigations will be completed in accordance with the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation Projects (48 FR 44734-37) and the VT SHPO’s Guidelines for Archaeological Studies in Vermont (VT SHPO 2002).

4. Archaeological Phase III Data Recovery Documentation will include the following:

   a. End-of-Field Letter Report: An archaeological end of field report will be prepared by the archaeological consultant that describes the fieldwork that has been completed at VT-AD-1533 and that it conforms to specifications in the data recovery plan. Once the end of field report has been reviewed and accepted by the VT SHPO, construction may commence.

   b. Draft Data Recovery Report: A draft archaeological data recovery report will be prepared that adheres to VT SHPO’s Guidelines (VT SHPO 2002) and will be submitted within one year following completion of phase III field work.

   c. Final Data Recovery Report: A final data recovery report will be prepared that incorporates comments from the VT SHPO.

5. Public Education and Outreach
   In accordance with the VT SHPO Guidelines (VT SHPO 2002), public education opportunities coordinated in association with the archaeological phase III mitigation of the Middlebury Lower Substation Upgrade Project are designed to enhance the public’s knowledge of the project and archaeological resources being investigated. Public education efforts will include the following activities.

   a. Posting of the archaeology project on Vermont’s Archaeology Museum web site and contacts about field work volunteer/visitation opportunities with local historical societies, local libraries, home school groups, local educators and other interested groups;

   b. Preparation of applicable historic context;

   c. Creation of exhibits about the project on Vermont’s Archaeology Museum web site;

   d. Public presentation(s) highlighting the results of the combined phase I-III archaeological investigations.
6. **Curation and Curation Standards.** CVPS shall ensure that the materials and records resulting from the activities prescribed by this MOA are curated in accordance with 36 CFR Part 79.

C. **Protective Measures Required During Construction**

Archaeologically sensitive landforms exist directly north of the APE of the Middlebury Lower Project Substation Replacement Project. The VT-AD-1533 site landform extends north of the property line and this area is considered sensitive for other possible significant Native American sites. This sensitive area extends approximately 50 to 70 m northward beyond the APE before dropping off into a broad, marshy wetland. This area should be avoided during construction and protective fencing should be placed along the northern APE boundary line to prevent potential adverse impacts to this area. Staging of construction equipment, topsoil removal, grading, scraping, cutting, filling, stockpiling, logging or any other type of ground disturbance is prohibited north of the APE and within this sensitive area as shown on Attachment B.

II. **DISPUTE RESOLUTION**

A. **CONFIDENTIALITY.** The MOA parties acknowledge that historic properties covered by this MOA are subject to the provisions of section 304 of the Act, relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with said section.

B. **RESOLVING OBJECTIONS**

1. In accordance with the HPMP, should any MOA party object to the manner in which the terms of this MOA are implemented, to any action carried out or proposed with respect to the implementation of the MOA, or to any documentation prepared in accordance with and subject to the terms of this MOA, the objecting party shall notify the Federal Energy Regulatory Commission (FERC) and FERC immediately shall notify the other parties to this MOA of those objections, and shall consult with the objecting party and with the other parties for no more than 14 days to resolve the objection. FERC shall determine when its consultation efforts reasonably will commence. If the objection is resolved through such consultation, the action subject to dispute may proceed in accordance with the terms of that resolution. If, after initiating such consultation, FERC determines that the objection cannot be resolved through consultation, FERC shall forward all documentation relevant to the objection, including FERC's proposed response to the objection, to the Advisory Council on Historic Preservation (Council), with the expectation that the Council will, within thirty (30) days after receipt of such documentation, do one of the following:
a. advise FERC that the Council concurs in FERC's proposed response to the objection, whereupon FERC will respond to the objection accordingly. The objection thereby shall be resolved; or

b. provide FERC with recommendations, which FERC will take into account in reaching a final decision regarding its response to the objection. The objection thereby shall be resolved; or

c. notify FERC that the objection will be referred for comment, pursuant to 36 CFR 800.7(c), and proceed to refer the objection and comment. FERC shall take the resulting comment into account, in accordance with 36 CFR 800.7(c)(4) and section 110(1) of the Act. The objection thereby shall be resolved.

2. Should the Council not exercise one of the foregoing options with 30 days after receipt of all pertinent documentation, FERC may assume the Council's concurrence in its proposed response to the objection and proceed to implement that response. The objection thereby shall be resolved.

3. FERC shall take into account any Council recommendation or comment provided in accordance with section C.1 above, with reference only to the subject of the objection. FERC's responsibility to carry out all actions under this MOA that are not the subjects of the objection will remain unchanged.

4. At any time during the implementation of the measures stipulated in this MOA, should an objection pertaining to such implementation be raised by a member of the public, FERC shall notify the MOA parties in writing of the objection and take the objection into consideration. FERC shall consult with the objecting party and, if the objecting party so requests, with the other MOA parties for no more than fifteen (15) days. Within ten (10) days following closure of that consultation period, FERC will render a decision regarding the objection and notify all consulting parties hereunder of its decision in writing.

5. FERC shall provide all MOA parties, the Council when the Council has issued comments hereunder, and any parties that have objected pursuant to section C.4 above, with a copy of its final written decision regarding any objection addressed pursuant to this stipulation.

6. In reaching its decision under this part II.C, FERC will take into account any comments from the consulting parties, including the objecting party, regarding the objection. FERC's decision regarding the resolution will be final.
7. FERC may authorize any action subject to objection under section C of this stipulation to proceed after the objection has been resolved in accordance with the terms of section C.

C. AMENDMENTS

Any MOA party may propose that this MOA be amended, whereupon the MOA parties will consult for no more than 30 days to consider such amendment. FERC may extend this consultation period. The amendment process shall comply with 36 CFR 800.6(c)(1) and 800.6(c)(7). This MOA may be amended only upon the written agreement of the signatory parties. If it is not amended, this MOA may be terminated by any signatory party in accordance with section E of this stipulation.

D. TERMINATION

1. If this MOA is not amended as provided for in section D of this stipulation, or if any signatory party proposes termination of this MOA for any other reasons, the signatory party proposing termination shall, in writing, notify the other MOA parties, explain the reasons for proposing termination, and consult with the other MOA parties for at least 30 days to seek alternatives to termination. Such consultation shall not be required if FERC proposes termination because the Undertaking no longer meets the definition set forth at 36 CFR 800.16(y).

2. Should such consultation result in an agreement on an alternative to termination, then the parties shall proceed in accordance with the terms of that agreement.

3. Should such consultation fail, the signatory party proposing termination may terminate this MOA by promptly notifying the other MOA parties in writing. Termination hereunder shall render this MOA without further force or effect.

4. If this MOA is terminated hereunder, and if FERC determines that the Undertaking nonetheless will proceed, then FERC either shall consult in accordance with 36 CFR 800.6 to develop a new MOA, or request the comments of the Council pursuant to 36 CFR Part 800.

E. DURATION OF THE MOA

1. Unless terminated pursuant to section E of this stipulation, or unless it is superseded by an amended MOA, this MOA will be in effect following execution
by the signatory parties until the MOA parties, determine that all of its stipulations have been fulfilled satisfactorily. This MOA will terminate and have no further force or effect on the day that FERC notifies the other MOA parties in writing of its determination that all stipulations of this MOA have been fulfilled satisfactorily.

2. The terms of this MOA shall be fulfilled satisfactorily within two (2) years following the date of execution by the signatory parties. If FERC determines that such requirement cannot be met, the MOA parties will consult to reconsider its terms. Reconsideration may include the continuation of the MOA as originally executed, amendment of the MOA, or termination. In the event of termination, FERC will comply with section E.4 of this stipulation, if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

3. If the Undertaking has not been implemented within two (2) years following execution of this MOA by the signatory parties, this MOA shall terminate automatically and have no further force or effect. In such event, CVPS shall notify the other MOA parties in writing and, if it chooses to continue with the Undertaking, shall reinitiate review of the Undertaking in accordance with 36 CFR Part 800.

F. EFFECTIVE DATE. This MOA will take effect on the date that it has been fully executed by CVPS and the SHPOs.

EXECUTION and implementation of this MOA shall evidence that CVPS has taken into account the effects of this Undertaking on historic properties in order to resolve (avoid, minimize, or mitigate) any adverse effects on historic properties.

SIGNATORIES:

Vermont State Historic Preservation Officer

[Signature] Date 8/20/10
Giovanna Peebles, State Historic Preservation Officer

Central Vermont Public Service Corporation

[Signature] Date 8/18/10
John Greenan, Principal Environmental Engineer

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Archaeological Phase III Data Recovery at Native American Site VT-AD-1533
within the Proposed Central Vermont Public Service
Middlebury Lower Substation Upgrade Project
Middlebury, Addison County, Vermont

Research Design
and
Mitigation Plan

prepared for:

Central Vermont Public Service
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Rutland, Vermont 05701

prepared by:

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and

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July 20, 2010
Archaeological Phase III Data Recovery at Native American Site VT-AD-1533 within the Proposed Central Vermont Public Service Middlebury Lower Substation Upgrade Project Middlebury, Addison County, Vermont

Research Design and Mitigation Plan

I. INTRODUCTION

This research design and mitigation plan has been prepared by the Northeast Archaeology Research Center Inc. (NE ARC), on behalf of Central Vermont Public Service (CVPS) for archaeological phase III data recovery at Native American archaeological site VT-AD-1533 located within the proposed Middlebury Lower Substation Upgrade project. The project includes the construction of a new substation to be located to the north of the existing substation, the construction of a new gravel drive, and relocation of a 46kV transmission line in an area of roughly 9000 m2. The project is located in the town of Middlebury, Addison County, Vermont (Figure 1).

Archaeological phase I survey of the project area was completed by the NE ARC (see letter report 12/8/2009), resulting in the identification of the site. It was recommended that archaeological phase II testing be conducted in order to determine the significance of the site with regard to the National and State Registers of Historic Places (NRHP and State Register); and to determine potential project effects to the site. The NE ARC conducted the archaeological phase II testing on behalf of CVPS during May and June, 2010. As a result of this work, Native American archaeological site VT-AD-1533 was determined to be a significant cultural resource and likely to be eligible for the NRHP and State Register. Further, it was determined that the site could not be avoided by project construction, therefore mitigation of adverse effect through archaeological phase III data recovery was recommended for the site.

The archaeological phase III data recovery proposed herein has been designed to recover a percentage of archaeological deposits given that the entirety of the site area within the APE is likely to be adversely affected by project construction. The mitigation plan was developed through consultation between the Vermont Division for Historic Preservation (VT DHP), the NE ARC and CVPS. The plan outlined below includes a justification of State Register and NRHP eligibility for the site as well as a research design that provides the framework within which the archaeological studies will be performed. A detailed work plan is also presented.

The work proposed herein is required in order to meet regulatory requirements including, but not limited to, Section 106 of the National Historic Preservation Act and its implementing regulations. This work must meet the requirements mandated under guidelines determined by the Vermont Division for
II. PROBLEM STATEMENT

The National Park Service (National Park Service 2000:19) has presented formal criteria for evaluating a site’s eligibility for the NRHP, as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, building structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
(b) that are associated with the lives of persons significant in our past; or
(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) that have yielded, or may be likely to yield, information important in prehistory or history. [36 CFR§ 60.4]

The state of Vermont utilizes the same criteria as the National Park Service in terms of evaluating a site’s eligibility for the State Register (VTSHPO 2002). Associated criteria include an assessment of a site’s overall integrity, the specific data sets documented, the applicable historic context(s), the identification of research questions that are considered important and the site’s potential to answer those questions. The National Park Service states that an archaeological site must also “possess integrity of location, design, setting, materials, workmanship, feeling and association” and further states that integrity is the “ability of a property to convey its significance” (NPS 2000:35). In terms of site VT-AD-1533 as the focus of this study, integrity of location, design, materials and, association are the most important aspects in the consideration of integrity for the site to be eligible under Criterion D. Measures of integrity of archaeological sites include the presence of intact cultural features, identifiable activity areas with temporally diagnostic material remains and associated ecofacts. In terms of the integrity of association, the measure of association between the pertinent data sets and the important research questions is germane.

The following discussion outlines the overall significance of the site in terms of aspects of relevant historic contexts, archaeological integrity, existing data sets, research potential and specific research questions of particular and general research interest. This discussion is meant to provide the
basic context(s) and overall research design and framework that will guide the archaeological mitigation and data recovery field and analysis work.

III. SITE OVERVIEW AND EXTANT DATA SETS

Native American site VT-AD-1533 is situated in the northern portion of the project area on the first level terrace above and to the east of Otter Creek. The site setting is interesting, on a narrow landform between the base of a high steep, rock embankment and Otter Creek. The site is located immediately downstream of one of the major sets of falls on Otter Creek (Paper Mill Falls). The rock embankment is overhanging in certain areas and is similar to a “rock shelter”, which is a rare site type for Vermont and the northern New England region.

The combined archaeological phase I survey and phase II testing effort included the excavation of a total of 79 0.5 m x 0.5 m shovel test pits and two 1.0 m x 1.0 m test units within the site area, with test pits placed at a 5.0 m grid over the site area and closer 2.5 m interval testing in the vicinity of test pits positive for Native American cultural material. Testing was limited by natural and project related boundaries. The site is bounded on the west by a steep downhill slope leading to the Otter Creek and on the east by the 3-5 m high dolomitic bedrock ledge. This outcrop is essentially vertical with areas of overhanging bedrock. Testing was bounded to the north by the project boundary and on the south by the existing substation (Figure 2). The site may extend northward, beyond the project boundaries, but this has not been determined.

A total of 18 test pits and both units proved positive for Native American artifacts. Preliminary field counts indicate a total of 662 pieces of lithic debitage, five lithic tools (including cores), two fragments of calcined bone, and 24 pieces of fire-cracked rock. A single cultural feature was identified as well. Artifacts were recovered over a total area of roughly 25 m x 35 m, or 875 m$^2$. The largest concentration of Native American artifacts was identified in the eastern portion of the site within a “core” area of approximately 10 m x 15 m, or 150 m$^2$. A low density scatter of artifacts was identified in the western portion of the site. The highest density of artifacts, within the “core” area, was recovered from phase I test pit T4 P2 and the adjoining test unit N386 E400. A total of 550 pieces of lithic debitage and a single fire-cracked rock were recovered from these units, amounting to 83% of the lithic debitage recovered from the site to date. Vertically, the Native American cultural material was recovered primarily from 0 to 30 cm below ground surface within the ‘Ap’ plow zone. The remaining artifacts were recovered from the ‘Ap/C’ interface and the ‘C’ subsoil.
The vast majority (n=658, 99%) of the lithic debitage thus far recovered from the site is quartzite with the remaining four specimens composed of a milky quartz material. The quartzite ranges in quality from fine to coarse grained material, with the majority consisting of the fine grained variety. The color range of the quartzite is primarily light to dark gray, although a fair amount show signs of reddening and a few specimens have a yellow hue. It is unclear at this point if the reddish coloring of some of the debitage is the result of intentional heat treating of the lithic material, or possible a naturally occurring quality of the material. Additionally, several pieces of lithic debitage exhibit cobble cortex. The initial analysis of the lithic debitage indicates that a range of activities including biface production, thinning and finishing/refurbishing was being engaged in by the inhabitants of the site.

Of the five lithic tools recovered from site VT-AD-1533 two are quartzite, two are rhyolite and one is dolomite. Of the two quartzite tools, one is a large flake that may have been utilized as a cutting implement, and the second is an intentionally modified large flake. One edge of the modified flake has been straightened and sharpened through the practice of pressure flaking or shearing, resulting in a large hand held blade or knife. The two rhyolite tools are conjoining fragments of a single lithic core. The rhyolite is tabular in shape and weathered a buff color, several long thin flakes or blades have been removed from the material. The rhyolite tool represents the only occurrence of this lithic material at the site to this date and was recovered 15 m west of the high density portion of the site. The dolomite tool is a naturally occurring lithic material from the site area and shows signs of differential wearing, possibly from use as an abrading stone.

A single Native American cultural feature (Feature 1) was identified within test pit N392 E402.5 and adjoining 1.0 mx 1.0 m test unit N392 E403, approximately 6.0-7.0 m north of the highest density units. The feature is comprised of a faintly visible soil anomaly visible at the base of the ‘Ap” and extending approximately 20 cm into the subsoil. In cross-section, Feature 1 appears as a basin-shaped depression. Feature sediment was retained and brought the NE ARC laboratory. Floatation and subsequent paleo-botanical analysis and radio-carbon dating is pending.

IV. SITE SIGNIFICANCE AND RESEARCH POTENTIAL/GOALS

Archaeological site VT-AD-1533 is considered significant in that it contains “intact” archaeological deposits representing a single component Native American encampment. Remains are preserved in both a plowed context, within the ‘Ap’ soil horizon, and beneath the plow zone within an intact cultural feature. As very likely representing a single component encampment, artifacts can be specifically related to discrete activities, separable, spatially from each other. The range and type of
remains present allow definition, and comparison of the specific activities that occurred at this site location. Of note, a cultural features has been identified the site, further indicating the potential significance, given the potential for radiocarbon dates, seasonality, and general plant and animal use among other issues. Calcined bone and fire-cracked rock has been recovered, indicating that there is potential for additional cultural features such as fire hearths to be present at the site. High densities of artifacts have been recovered the site, allowing for more targeted research questions regarding technology and cultural practices of the Native American inhabitants in the region. With the proposed mitigation effort focused on the eastern portion of the site area, it is possible that a range of research topics for site VT-AD-1533 will be addressed.

Research topics that the archaeological deposits at the site within the Middlebury Lower Substation Upgrade project area may directly address are numerous and include aspects of Native American Adaptation, Chronology, Technology, Exchange/Trade, Settlement System and Subsistence System, (Thomas 1991). Data sets preserved at the site, which will help address these topics, include cultural features, faunal remains, carbonized floral remains for paleobotanical identification and radiocarbon dating, lithic debitage and lithic tools, fire-cracked and heat-altered rock. The spatial analysis and attribute analysis of these varied cultural materials could enable investigation of a number of research questions considered important for our continued exploration of past Native American societies. These research topics can be thought of individually and/or overlapping within a framework of overarching cultural historical, anthropological and archaeological concerns.

V. PROJECT EFFECTS AND RECOMMENDATIONS

The proposed Middlebury Lower Substation Upgrade project includes the construction of a new substation to be located to the north of the existing substation, the construction of a new gravel drive, and relocation of a 46kV transmission line. The APE for the project is approximately 9000 m2. The current project plans call for the construction of four new 46kV circuit breakers, a control building, the placement of new utility poles and ditching in the high density portion of the site area, resulting in significant ground disturbance within the site area. Discussion with CVPS indicates that site avoidance through project re-design is not possible; therefore the entirety of the site area will be adversely affected by project construction.

Site VT-AD-1533, as defined within the APE, measures approximately 875 m2 with a discrete “core” area of roughly 150 m2. The phase III mitigation effort recommended for the site includes the excavation of 30 0.5 m x 0.5 m shovel test and up to 67.5 m2 of unit excavation, totaling 75 m2. This
represents approximately 8.0% of the total site area, however the mitigation effort will be concentrating in the site “core” area, with as much as 60 m² excavated, thereby achieving 40% data recovery for this specific portion of the site. It should be noted that when the combined phase I and II effort is considered in total with the proposed phase III effort, the excavated portion of the site (96.75 m²) represents as much as 11% of the total site area and as much as 45% of the “core” area.

VI. WORK PLAN

Field Work

All field work will follow the Vermont Division for Historic Preservation (VT SHPO 2000) guidelines and field work will be overseen by Ellen R. Cowie, Ph.D. and Robert N. Bartone, M.A. both of whom meet the Secretary of the Interior’s qualification criteria. NE ARC field supervisory personnel have extensive experience in northern New England Native American archaeology and first-hand experience with the Middlebury Lower Substation Upgrade project.

Although no human burials are known from the project area, in the case of potential identification of human burials, all excavation will cease and individuals from the Division for Historic Preservation, CVPS, as well as interested Native American parties will be immediately notified. In general, procedures will follow the Advisory Council on Historic Preservation’s policy statement on Treatment of Human Remains and Grave Goods (1998).

Archaeological field work will first entail the reestablishment of site-wide arbitrary metric grid, as initially established by the NE ARC during archaeological phase II testing. The establishment of an arbitrary vertical grid will be necessary to maintain stratigraphic and vertical relationships over the entire site area. The excavation of phase III data recovery test units will employ a standardized, systematic methodology with the removal of sediment by 10 cm arbitrary levels within natural strata using hand-held shovels or trowels. All sediment will be passed through ¼” hardware cloth. Given the extant clayey sediments known from the Middlebury Lower Substation Upgrade project area, all sediment will be water screened in the field following the use of a deflocculating substance (baking soda) to break up the fine sediment particles. This method was successfully employed previously during similar phase III excavations in clayey soils and proved quite effective. An adequate “sediment pond” will be established using hay bales and sediment cloth to ensure capture of all sediment and avoidance of sediment reaching the river.

Vertical control will be maintained using a transit and stadia rod or total station, prism and data collector. Notes, scale plan-view maps and profiles will be recorded for each excavation unit. The
excavation records minimally will include an overall unit summary and elevation summary, as well as unit-level records and unit-level catalogues for each 10 cm level within each stratum in each unit.

Blocks of field provenience numbers, continuing the sequence of “pn” designations initiated during the phase I survey and phase II testing, will be assigned to a particular test pit or excavation unit for cultural remains from each 10 cm arbitrary excavation level, or any other more discrete provenience. For instance, all artifacts classes (e.g., lithic flakes, calcined bone fragments, etc.) from a level will share a unique “pn” for that particular unit and level. This unique “pn” number therefore identifies all associated cultural remains from a common provenience. Discrete provenience numbers will be assigned to recognizable tools and tool fragments and other potentially diagnostic artifacts, which will be plotted in situ. Provenience inventory forms will also be completed for each unit to record artifact and provenience information. Ongoing field work will be documented in digital photographic format.

All work associated with the archaeological mitigation work will be carried out with serious consideration for both NE ARC employee and public safety. All excavations will follow OSHA regulations in that personnel will not be working in excavation units that are deeper than they are wide. For excavation units left open at night, caution tape will mark all excavation areas. Given the non-depositional setting at the site excavations are not expected to exceed 60 cm in depth.

As discussed above, total of 30 0.5 m x 0.5 m test pits and 67.50 m$^2$ of 1.0 m x 1.0 m unit excavation, totaling 75 m$^2$, will comprise the mitigation effort at site VT-AD-1533. This work will be undertaken by a field supervisor, an assistant, and nine field technicians and is expected to take 20 days to complete.

**Laboratory Work**

All cultural material recovered in the field will be transported back to the laboratories of the NE ARC. In the laboratory, nonorganic artifacts recovered from dry screening in the field will be washed, catalogued using a format developed by the NE ARC and directly entered into a Microsoft Access database, which will be incorporated into GIS based maps to facilitate analysis and interpretation. Select artifact classes, such as faunal remains will not be washed, but dry-brushed. Likewise, organic artifacts potentially recovered from processing of feature sediments will be carefully cleaned as appropriate, sorted and catalogued with select samples analyzed. Following the methods used to process Native American artifacts, nonorganic Euroamerican artifacts will be washed while organic artifacts/ECOFacts such as faunal remains will be dry-brushed as will certain metal artifacts.

Feature sediment will be processed using the flotation method, to recover both heavy and light fraction materials. The recovered material will be examined for subsistence remains and other select
ecofacts including floral and faunal remains. This will occur in the beginning stages of laboratory work in order to isolate floral and faunal samples given that, if identified, these will need specialized analyses.

Select samples (up to 10 samples) of carbonized floral remains will be submitted to a paleobotanical consultant for analysis and some samples will be submitted for radiocarbon dating. As many as four radiocarbon dates may be submitted, assuming that standard dating can be used for all; if AMS dating is employed, it will generally cost as much as two standard dates and thus the overall number of radiocarbon dates will be less. In addition, faunal remains recovered from flotation of feature sediments will be sent to a zooarchaeological consultant for detailed identification and analysis.

Laboratory activities will commence with the initial inventory and processing of all cultural material recovered during field work. All artifacts will be cataloged and certain artifact classes will receive additional detailed analyses. Detailed artifact analyses will follow with particular attention to lithic artifacts and floral and faunal remains. Upon completion of detailed artifact analyses, spatial analysis of archaeological deposits using GIS software will be conducted.

Report preparation activities are expected to take several months to complete given the nature of the archaeological deposits and the possible recovery of a significant number of artifacts and possibly cultural features. In addition, the analysis of organic samples prior to processing for radiocarbon dates may add time to the report preparation schedule.

All cultural material in conjunction with field records, photographs and other associated documents will be temporarily curated at the NE ARC for ultimate curation in Vermont. The NE ARC is cognizant of the National Park Service collections standards detailed in 36 CFR 79.

VII. PUBLIC OUTREACH

In accordance with the Vermont State Historic Preservation Office’s *Guidelines for Conducting Archeology in Vermont* (2002), public education opportunities coordinated in association with the archaeological phase III mitigation of the Middlebury Lower Substation Upgrade project are designed to enhance the public’s knowledge of the project and archaeological resources being investigated. Public education efforts will include several activities. These include creation of exhibits about the project on Vermont’s *Archaeology Museum* web site, and a public presentation(s) highlighting the results of the combined phase I-III archaeological investigations. Once the project is scheduled, the NE ARC will post information on the *Archaeology Museum*, informing the public about the project and how they can learn more. Although it is unlikely that school will be in session during the field work, historical societies, home school groups, local educators and other groups will be contacted and offered the opportunity for
on-site visits and other involvement, as appropriate. In addition applicable VT DHP Historic Contexts will be updated, to incorporate the findings of the study.

**VIII. SCHEDULE**

The NE ARC is in a position to begin work this summer, depending on the timing of authorization to proceed. CVPS has indicated a construction date of September, and all field work should be completed by mid-September to accommodate the scheduling needs of the project. Completion of Laboratory work, analysis and write-up of the results will follow the field work. The timing of the submission of a draft technical report will be determined based upon CVPS scheduling needs but likely will occur by May 2010 after the various specialized (e.g., radiocarbon, zooarchaeological) analyses have been completed. The final report will be submitted within 60 days of receipt of comments from CVPS and the Vermont Division for Historic Preservation.

**IX. CONCLUDING SUMMARY**

Native American site VT-AD-1533 in the Middlebury Lower Substation Upgrade project area is being considered for mitigation efforts due to the occurrence significant cultural resources and preservation of important evidence of Native history in Vermont and the broader region. However, impact to the site is not avoidable. The plan presented here work will involve the data recovery of up to 11% of the total site area and as much as 45% of the densest/richest portion of the site, which will effectively mitigate the adverse effects of project construction to the site. Further, this plan has the potential to add to local and regional archaeological research and enhance public knowledge and understanding of Vermont’s Native American past.
REFERENCES CITED

National Park Service


Thomas, Peter A.

VTSHPO
Figure 1. Topographic map showing the location of the proposed Central Vermont Public Service (CVPS) Middlebury Lower Substation Upgrade Project and the location of Native American site VT-AD-1533 in Middlebury, Addison County, Vermont.
Figure 2. Project plan for the proposed CVPS Middlebury Lower Substation Upgrade Project showing Native American site VT-AD-1533, phase I survey transects and all archaeological excavations, Middlebury, Addison County, Vermont.
Figure 3. Archaeological testing for the proposed CVPS Middlebury Lower Substation Upgrade Project showing Native American site VT-AD-1533, positive and negative phase I and II test pits and artifact counts, Middlebury, Addison County, Vermont.
Attachment B
RE: Archaeological Phase III Data Recovery at Native American Site VT-AD-1533 in the Middlebury Lower Hydroelectric Project End-of-Field Letter

Dear Tim:

We write to inform you of the completion of the archaeological phase III data recovery at Native American site VT-AD-1533 within the proposed Central Vermont Public Service (CVPS) Substation Replacement at the Middlebury Lower Hydroelectric Project located in Middlebury, Addison County, Vermont. The Northeast Archaeology Research Center, Inc. (NE ARC) conducted the field work over a six week period between August 4th – September 10th. The NE ARC completed all excavations as outlined in the Phase III Research Design and Data Recovery Plan with 75 square meters of 1 m x 1 m test unit excavation and 11 0.5 m x 0.5 m test pits excavated at the site. Three cultural features were identified over the course of the phase II/III field work. On the basis of the recovery of a temporally diagnostic projectile point (Otter Creek type), we know the site was occupied during the early portion of the Late Archaic period, ca. 6,000 – 5400 years B.P. We have initiated laboratory work on the artifacts and feature sediment samples recovered during field work and have already identified faunal and floral remains from one of the features. The setting of the site directly adjacent to a rock escarpment and the identification of a large hearth feature next to the rock face, suggests that the occupants of the site were taking advantage of the bedrock for shelter. The site setting, its probable single component occupation and the artifacts and features recovered all suggest that the information gathered from the site will make an important contribution to our understanding of Native American lifeways in Vermont and the broader region.

The Public Education and Outreach Program associated with the phase III field work was a great success with over 100 visitors to the site and public presentation given by NE ARC staff at the Middlebury Public Library. The NE ARC will continue the PE & O efforts in the short term with periodic postings to the Vermont Archaeology Museum web site.

As indicated in the data recovery plan, we expect to submit a draft phase II/III report by June 2011. Please let us know if you have any questions and thank you for the opportunity to conduct this study.

Sincerely,

Ellen R. Cowie, Ph.D., Director
Northeast Archaeology Research Center, Inc.

cc: Scott Dillon, VT DHP
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