



Society for Industrial Archeology · New England Chapters

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EDITORIAL

EDITORIAL	1
SPECIAL FEATURE	2
Gas Manufacture: An Era Ended	
SPECIAL FEATURE	3
Industrial Archeology in Rhode Island: A Resource Management Perspective	
SECRETARY'S REPORT, SNEC	6
SECRETARY'S REPORT, NNEC	7
CURRENT RESEARCH IN NEW ENGLAND	8
CONNECTICUT	8
MASSACHUSETTS	8
NEW HAMPSHIRE	9
HELP WANTED	10
MEETINGS AND ANNOUNCEMENTS	10
RECENT PUBLICATIONS	11
BOOK REVIEW	11

This issue of the Newsletter is fortunate to contain two articles that cover aspects of industrial archeology in depth. One, by Geoffrey Moran, is a critical analysis of industrial surveys that have been conducted in the State of Rhode Island, while the second, by Ed McKenzie, is an overview of the gas industry in New England. Moran's article sets forth ways in which more worthwhile surveys may be conducted in the future, while McKenzie presents interesting

but little-known facts about an important industry that affects all of us here in New England. Both articles are clearly relevant and informative.

It will be noticed that no "President's Report" from either Chapter appears in this issue. These were dropped because of space limitations but will reappear in future issues. Also, there are fewer "Current Research" entries than usual, and members are urged to send in more reports (and photographs) for the next issue!

David Starbuck



The Toelles Road Bridge in the towns of North Haven and Wallingford, Connecticut. This bridge is available for relocation, subject to covenant restrictions. See "The Toelles Road Bridge" on page 8.

Both the Southern and Northern New England Chapters are eager to accept new members! If you would like to join and receive the Newsletter, please fill out the membership application on the back page and send it in.

SPECIAL FEATURE

Gas Manufacture: An Era Ended:

Among the industries of this region which are over 100 years of age are the gas utilities. During much of their history they were primarily engaged in the manufacture of gas, then secondly in its distribution for home, business, and street lighting use. Today they purchase nearly all of their needs from the two major pipeline companies which bring natural gas from Southern gathering fields. A relatively small quantity is gasified from liquid propane gas (LPG) and liquid natural gas (LNG) which is brought in by tanker, rail and truck.

Although archeologists are, or will one day be, interested in the vast part of the industry which is buried in the earth along streets and across fields and woodlands, perhaps to the present-day industrial archeologist it is that which once stood prominently and not too prettily above ground which is of most interest.

Gone now are the vast industrial yards of pipes, cylinders, chimneys, piles of coke and cinders, chemical pits and coal piles that were, for over fifty years, accepted as part of the life support system of our cities and larger towns. There is a dwindling number of people who remember the dust, the smoke, the noisy machinery and the flaming retorts in which the coal was "cooked" to release the gas.

In New Hampshire and Maine only 2 or 3 of the old companies have maintained their identities, the others having been put together into the networks of larger companies. (Manchester Gas Co. published its history in 1977.) As long as coal could be shipped in, by rail or barge, there was no need of piping outside the thickly-settled towns nor for inter-company tie lines.

The SIA's Northern New England Chapter has published information on the Concord Gas Company's round brick building which contained a gasholder (SNEC/ NNEC-SIA Newsletter, Vol. 1(2):

5-6). Standing next to an exposed metal holder, it is still a part of the city's skyline as one passes by on Interstate 93. Such survivors are rare. Economics over the last decade brought salvage crews with their cutting torches to turn most of the huge holders into scrap iron. The amount of fuel which could be stored in a company's holder would only equal a few hours of use, and most have been declared impractical and too costly to maintain and operate.

A later storage phenomenon, a steel sphere known as a "Horton-sphere," was erected by some companies about 1925. Few of these 57 ft.-diameter "gas balls," built by Chicago Bridge and Iron Works, can be found today.

Artifact Collection: Presently stored at Springfield, Massachusetts, there is the good beginning of a collection of gas-using appliances and fixtures, some dating to the decade after the Civil War.

Assembled by one of our Society members, it is called the Colonel Charles H. Tenney Memorial Collection for two reasons; it was Col. Tenney who put together, developed and managed many gas companies in New England during the latter part of the 19th and early part of the 20th centuries, and it is Col. Tenney's grandson, Charles H. Tenney II, who is Chief Executive Officer of the Bay State Gas Company and its subsidiary

Northern Utilities, Inc. Our member has had access to the historic files and the cooperation of company officers while an employee for several years.

Items from the collection have been exhibited in such places as the Storowtown Village Museum and in special show-room and lobby displays in many cities. They are available for exhibition or study in this Society's area through special arrangements which can be made through the Society. Items include cooking equipment, water heaters, refrigerators, parlor heaters, fireplace heaters, flat-irons, lighting fixtures, and other household appliances during the 60 to 80 years of their general use in New England. One item of particular interest is a projector which casts a post-card picture onto a screen, using a gas flame as the illumination source.

"Gas" in Another Form: The generation of gas from gasoline was a more short-lived utility, associated with the providing of light and heat during the dark years before coal-gas or electricity were generally available for domestic use. This was either done at a central location for common use, or was built into specific appliances.

Several public buildings and some homes and stores were equipped with the pressurized tanks, the compressors, the piping and fixtures for using

The joint Newsletter of the Southern and Northern New England Chapters of the Society for Industrial Archeology is published twice each year, in April and October, and receipt of the Newsletter is by membership in either of the Chapters.

The design of the Newsletter is the creation of Albert Gregory, Graphic Designer.

This issue of the Newsletter is indebted to Herbert Darbee and Al Daloz for their financial assistance.

Editor

David R. Starbuck

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Helena Wright, Program

Coordinator

Herbert Darbee, Secretary

William Goodwin, Treasurer

Northern Chapter Officers

David Starbuck, President

John Colony III, Program

Coordinator

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"gasolene" (as it was often spelled) principally for lighting but also for cooking and for ironing. In Plaistow, New Hampshire a few years ago some artifacts were turned up during excavation work on the old town hall water system. Historic investigation revealed that the 1898 structure had indeed been fitted out with such a gas-lighting system, long since covered over and forgotten.

In the Tenney collection of artifacts, mentioned above, there is a complete schematic of just such a system, also some household appliances with self-contained gasoline supply, compressor and generator, much like Coleman-type camping stoves and lanterns of today.

It might seem to us now to be living dangerously were we to pour gasoline into the laundry iron, then work up pressure with a removable pump, fire it up, and proceed to press out a pair of trousers. Perhaps strong soap was not wholly to blame for the laundress' red knuckles.

As recently as forty years ago, one could buy "modern" enamelled kitchen ranges which required filling of a tank with gasoline then pressurizing by a hand pump attached to the side. Campers will find this not too alarming, but devastating results could, and sometimes did, happen from the handling of gasoline indoors.

Anyone needing archeological or historical information concerning either the gas or electric industries in New England may contact Ed McKenzie, 49 College Road, Manchester, NH 03102.
Ed McKenzie

SPECIAL FEATURE

Industrial Archeology in Rhode Island: A Resource Management Perspective:

With a recently published HAER inventory for the entire state, and "in-depth" or "broad-brush" reports by the Historical Preservation Commission (HPC) for most municipal units, the problem of identifying and protecting industrial archeological resources might appear to be so well in hand

that further work or worry over this category of resource would be unnecessary. Such complacency would be dangerous for several reasons. In the first place, inventory data and designated significant structures in the above studies are almost invariably associated with standing structures. Two important categories of industrial resources are usually ignored: industrial sites which exist only in ruins or primarily in the "archeological" context; and machinery or engineering elements of those sites which may be otherwise carefully described and researched in their historical and structural aspects.

The extent to which the sample described in existing survey efforts reflects the composition of the total population of industrial resources remains a problem to be reckoned with if we are to be confident that our resources are accurately identified, and a representative sample of all categories fully described or protected for future investigation. Unfortunately, none of the existing surveys or inventories explicitly state research bias or selection criteria. Additionally, it must be recognized that many forms of industrial activity of former significance which were listed in 19th century census reports (such as furniture making, fisheries, sperm oil processing, or shoe making) are simply not represented today by any distinguishable historic fabric.

HAER Inventory: The publication in 1978 of "An Inventory of Historic Engineering & Industrial Sites" was not the first time a federal recording agency described the state's industrial resources. Nevertheless, in spite of certain site-specific studies by HABS and two broader regional surveys, Gary Kulik was basically left with a clear field of study when he undertook the HAER inventory for Rhode Island. The historical introduction by Kulik, a superb 25-page essay on the general social, economic, and technological background, is espec-

ially valuable for providing evaluative context for the 298 inventory entries. However, it is the term "inventory" itself that provides the only problem with this work, one shared, incidentally, with all HAER inventories.

"Inventory" usually implies a comprehensive, abbreviated listing of all the objects investigated within a designated study area, without any culling or selection process. In this way, inventories of such a population have permanent value since the initial count has already been made, and a sample for additional study or management can be selected directly from the inventory. This is clearly not the utilization of the term in HAER inventories, where the abbreviated length of the entry based on the research format (HAER card) is the governing factor. This particular use of "inventory," potentially misleading as it is for future researchers, need not impose an insurmountable handicap providing that the criteria for selection in the "inventory" are made explicit.

It is clear that Kulik's breadth of historical understanding and detailed knowledge of many surviving structures admirably equipped him to select sites for the Rhode Island inventory. But it is just as clear that in a report with contributions from several other sources, a selection process with considerable variability was operating in the Rhode Island inventory. The principal author has acknowledged this and has informally provided some understanding of the selection process.

The preface indicates the over-all selection methodology as one designed to "represent the varied industrial fabric of Rhode Island," with particular attention to early sites and those with significant engineering or technological associations. In terms of "ruins," Kulik acknowledged general adherence to HAER precedent, with only three sites representing

this category. He readily admits to using "common sense" in the selection of lighthouses, bridges, dams, and major utilities, among other categories of industrial sites.

However trusting we may be in Kulik's discrimination and "common sense," even that criterion broke down in certain instances, especially among entries prepared by other contributors. Such variability could hardly be avoided, however, since no individual could be fully conversant with the range of industrial and engineering sites for any state, even one the size of Rhode Island.

In spite of the persistent problem of inclusiveness, the Rhode Island "inventory" is the outstanding single source for industrial sites. While the student of a particular category of industrial resources may still be required to complete his own inventory in many areas, he or she can already see the light at the end of the tunnel. Historical Preservation Commission State-Wide Survey: The final product of the Historical Preservation Commission survey efforts, analogous to a HAER recording project on an individual structure, is nomination to the National Register of Historic Places. These nominations generally contain more detailed description of the structure and its historical background than the HAER entries. National Register status also affords a level of protection to such properties from federal undertakings. It is in the vital interest, then, to ensure that outstanding industrial engineering sites, as well as representative examples from all categories, are listed on the National Register.

Assuming that the HAER inventory does include both outstanding and representative examples, it would be useful to compare those categories of resources listed in HAER with the National Register nominations. Whereas HAER contains 298 entries, only 121 industrial sites were nominated to the National Register as of October 1980.

The way these numbers distribute among the various HAER-designated resource categories can be seen in Table 1. In only one category, "specialized structures," do National Register entries outnumber HAER entries, probably because excep-

Table 1.
A Comparison of Industrial Resources in the HAER Inventory and National Register

	HAER	N.R.
BULK PRODUCTS (includes all textile mills, saw and grist mills, etc.)	126	34
BRIDGES (and viaducts)	55	7
TRANSPORTATION (includes lighthouses, railroad stations, breakwaters, etc)	30	19
BUILDING TECHNOLOGY (Quonset Point, early reinforced concrete, State House dome)	6	2
SPECIALIZED STRUCTURES (warehouses, dams, power canals, forts, town pound, carousels, etc.)	29	32
EXTRACTIVE INDUSTRIES	8	4
MANUFACTURING (machine shop, etc.)	37	20
UTILITIES (pumping station, gasometer)	15	3
TOTAL:	298	121

tional, unusual, or picturesque structures such as town pounds, Revolutionary War forts, and carousels are traditionally conspicuous candidates for National Register nomination.

Three categories would appear to be insufficiently represented on the National Register. Whereas National Register total entries are only 40% of the HAER totals, the National Register contains only 13% of the bridge totals listed in HAER. Kulik felt the HAER survey was over-represented with bridges. In addition, the State Department of Transportation will undertake a complete survey of bridges in the near future, out of which an "Historic Bridge" thematic group nomination to the National Register would be a likely by-

product. Bridges would not be the ignored or endangered industrial resource as appeared at first glance.

"Building technology" is a category of industrial resource comparatively underrepresented on the National Register. In the near future, however, one or more early, reinforced, concrete factories in the Providence jewelry district, already listed in HAER, will be nominated to the National Register as one product of the Providence industrial sites survey in preparation by the HPC.

The "utilities" category remains significantly underrepresented on the National Register. A thematic group nomination based on HAER entries should be considered by the Historical Preservation Commission in order to adequately protect this industrial resource.

And finally, "Bulk Products," the HAER group which includes textile mills, would appear to be comparatively underrepresented on the National Register. Only after careful scrutiny will it be known whether 34 nominations, most of which are textile mills, come close to adequately representing that type of industrial site in the state. Because Rhode Island's textile mills are the centerpiece of industrialization, HAER entries should be checked against National Register listings, and any outstanding sites should be the subject of nominations as a thematic group, with explicitly-stated reasons for inclusion in order to avoid redundancy. Of special importance would be those few mills which contain early power systems and machinery, and/or with supporting structures such as machine shop, power canal, or picker house still surviving. Kulik notes such components where they exist in several of his entries, a very important contribution of his inventory. Those industrial sites within which engineering elements and the industrial process are best represented should be the foremost objects of preservation.

The major printed sources on industrial resources are the reports and publications of the state-wide survey performed by the Historical Preservation Commission. Underway since 1969 and with a projected completion date of 1983, the survey includes in-depth studies for 17 cities and towns and broadbrush survey, or preliminary reports, for 15 others. These studies, and other special reports of the Commission, contain a wealth of material on individual sites within the context of their community's development. All the Historical Preservation Commission survey reports contain a text followed by an inventory, with entries for in-depth studies being fuller than the preliminary reports.

A comparison of the inventories of the Historical Preservation Commission and HAER publications is important to establish the relative inclusiveness of published inventory sources for individual communities and for the state as a whole. Therefore several Historical Preservation Commission studies were compared to the HAER inventory for this purpose. The in-depth reports for Central Falls and Woonsocket each contain several sites not found in HAER, although the HPC entries contain less detail than HAER. These omissions in the HAER inventory are generally consistent with Kulik's selection process which was not inclusive for mills built after the Civil War, highly selective for bridges, and usually omitted dams which were not directly associated with a surviving significant industrial site. The preliminary reports prepared by HPC for two rural communities, Scituate and Richmond, also appear to be far more comprehensive than HAER in their listing or inventory of industrial "sites" which are no longer structurally extant but contain potentially significant information of power systems and technology within the archeological context.

The in-depth and preliminary reports of the Historical Preservation Commission significantly

supplement the HAER inventory for the state. Not only will a greater number of late 19th and 20th century structures be found in the Historical Preservation Commission reports, but an additional category of industrial resources almost entirely omitted from HAER: the industrial site which lacks surviving structures.

It should be noted at this point that the Historical Preservation Commission archeology program has for several years recognized the deficiency in the survey and protection of abandoned or ruined industrial sites or mill villages. No understanding of the impact of industrialization on the society and history of Rhode Island can be complete without including the rural mill communities which sprang up throughout the state during the 19th century wherever a head of water could be exploited.

During the summer of 1979, an Historical Preservation Commission study team focused on the abandoned rural mill locations of Parris Brook, Sodom, and Hallsville in Exeter, and Hillsdale in Richmond. These industrial resources were listed on the National Register in December 1980, as historical and archeological districts, marking an important first step in preserving a representative sample of this category of industrial resource which exists only in the archeological record.

Another important product of the HPC state-wide survey is the Providence Industrial Sites Survey by Lisa Fink, to be published in 1981. This survey focuses exclusively on extant industrial and manufacturing sites with a primary goal being their preservation through reuse. Other categories of industrial sites are thus not treated in this survey. In common with other products of statewide survey, this report is especially strong on historical information and architectural description, and rather weaker on technological or engineering components of the sites. Nevertheless, this report forms an evaluative context within

which to focus preservation efforts on significant structures in the state's major center of industry.

Conclusion: Rhode Island benefits from several other studies, in addition to the HAER inventory and HPC statewide survey, that cumulatively represent a considerable base of information on industrial resources.

One of the major problems facing an agency committed to protecting the full range of significant industrial resources in the state is the process of selection and evaluation. Unless research methodologies are explicitly stated, comparability becomes very difficult. Not all industrial resources can be inventoried or saved, and time and funding must be targeted with care on those properties worthy of protection.

As importantly, it must be recognized that special competency is required to understand or evaluate industrial resources. It is unreasonable to expect an architectural historian to "re-tool" himself into an industrial archeologist during the course of a survey. Indeed, it is scarcely less possible for any single individual to be fully conversant over the entire range and diversity of such a technically complex subject. And finally, even industrial archeologists must recognize the value and potential of industrial resources in below-ground or archeological contexts.

As preservation priorities become more selective and competitive during the 1980s, it is vitally necessary for the Historical Preservation Commission to take an unbiased evaluation of the progress achieved in the statewide survey, acknowledge the relative deficiency in industrial resource survey and protection efforts to date, and develop a new and strengthened commitment to achieve programmatic parity for this category of cultural resource. Unless such a commitment is made, industrial resources will continue to re-

ceive incomplete and fragmentary survey and protection treatment.

Geoffrey P. Moran

SECRETARY'S REPORT, SNEC

The spring meeting was held on April 11, 1981 in Holyoke, Massachusetts. Assembled to the number of 96, including 2 children, the Chapter and guests gathered in mid-morning on the upper floor of the "Wherehouse?", a former commercial structure adjacent to the west bank of the Connecticut River and to the Holyoke Water Power Company's hydroelectric generating station. The interior walls, ceilings, and staircases of the building are covered with an amazing collection of old photographs, signboards, tools, machines, and casting patterns documenting the city's industrial past, with a kitchen and dining area on the upper floor which caters to parties, receptions, and similar gatherings. Over refreshments the Chapter was oriented as to the day's activities, and then divided into groups of manageable size to begin a tour of the power station with its currently active turbine and 15,000 kilowatt generator. Of great interest were the excavation and concrete work underway for a second installation in response to problems of energy for power generation, and the elaborate provisions for assisting the upriver shad runs to spawning grounds in the upper reaches of the Connecticut. The flow of water over the long dam here at the first of three levels in the canal system was awesome.

Returning to the "Wherehouse?", the group enjoyed a sit-down luncheon that, introduced by salad and onion soup, was a more elaborate affair than the Chapter is accustomed to, and equally appreciated. At 2:30 P.M. Thomas Dyer of the Massachusetts Department of Environmental Management and Janet Johnson and Edward Zimmer, Institute for Conservation Archaeology, Harvard University,

presented an automatic slide show and narrative of the history of Holyoke's settlement and industrial development, and plans for its Urban Cultural Park, for which Mr. Dyer is principal planner.

President Betsy Woodman brought the meeting to order, and the lengthy minutes of the annual Chapter meeting, November 1, 1980 at Slater Mill, were read by Secretary Herb Darbee and accepted by vote. Called on for his report, Treasurer Bill Goodwin noted the 30-month savings certificate in the amount of \$1000, with \$578 in our bank account. It was moved, seconded and voted to accept the report.

The President called for a report on progress of plans for the national SIA meeting at Hartford. Matt Roth noted that a few changes in the program had developed since last fall, the Pratt and Whitney firm having revoked its permission to see production of its fan jet engines in view of layoffs of some 600 workers. But the company's plant for die-sinking, gauges, and hand tools will be visited. We shall also be admitted to the Ball and Socket firm, manufacturers of buttons, using machine tools from various Waterbury industries. The annual banquet will be held at the headquarters hotel, the Sonesta, no other nearby suitable site having been identified. The Lost Hubcap Band from Providence will entertain, its fee coming within the limits of the Chapter's financial resources.

Matt noted that the Southern New England Chapter is listed as both host and co-sponsor of the meeting since there is no local organization to serve in the second capacity. He listed the staff who are assembling the program and a number of tasks necessary to make it effective. There are stringent requirements to be met during the Thursday evening reception at the Old State House. Among the needed jobs and persons are the setting up of chairs and tables, two people at the

door to count attendance, folding and removal of chairs afterward, and final cleanup. During the Friday tour the host facilities will provide most of what is needed, but there will be distribution of box lunches and cleanup. The Sunday tour will be similar to the Friday.

Steve Victor then addressed himself to the Saturday paper sessions, noting that among persons needed to assist is a chairman to introduce the speakers and to time their presentations and, preferably from the local area, two persons for each of the three sessions on Saturday, May 9. Help will be needed to set up audio-visual equipment twice during the day.

President Woodman then noted with regret that she cannot be present at the meeting, expecting to be in Greece at the time, and wished success to the event. She asked whether anyone were here today who had participated with Geoffrey Moran in an April 4-5 project at the Lawton Mill site in Exeter, Rhode Island. A donation of \$250 had been made for Chapter members to dig there for any remains of early mills. Since Geoff was not on hand, Helena Wright recommended that the matter be tabled until the November meeting.

Steve Victor reported that the Gardner Machine Works at Gardner, Massachusetts (SNEC/NNEC-SIA Newsletter, Vol. 1(2): 2), closed in 1978, had been sold. The Hagley Museum in Delaware secured some of the equipment; a blacksmith in Harvard, Massachusetts took some of the tools; some pieces went to decorate a restaurant; and the rest was sold for scrap, the auctioneers realizing some \$15-20,000. Perhaps another time it will be possible to preserve such a notable record of the industrial past.

Peter Stott reviewed the meeting that was held on November 29, 1980 at the Charles River Historic Industries museum building for discussion of an inventory of historic industrial sites in the Greater Boston area. At present 797 such sites have been

identified, of a total of perhaps 850. Anyone interested in such a listing is invited to support it and offer assistance. It will cover 86 towns, including Boston.

Under announcements, Betsy Woodman stated that David Starbuck, editor, has delayed the next issue of the Newsletter to receive additional information. Bill Goodwin having laid out a map with red dots showing the home locations of members in the Southern New England Chapter, it is evident that the great concentration is in the Boston area, leading to a proposal that one Chapter meeting each year be held in that vicinity and the second one elsewhere. This will be discussed this coming fall.

The President expressed appreciation to Program Coordinator Helena Wright for having taken a preliminary dry run of this day's tour and for setting up the outstanding noon meal at the "Wherehouse?", the most exceptional to date for the Chapter. On November 7 the fall meeting of the Southern Chapter will be at the Charles River Historic Industries museum, Waltham.

The tradition of reviewing candidates for office in the national organization was noted, Patrick Malone of this Chapter having been nominated for vice-president in competition with Larry Lankton. Pat's work and contributions to the organization over the past 10 years were noted, and it was asked that members support Pat by vote at the Hartford meeting or by mail ballot. Among candidates for other offices on the Board were David Starbuck and other persons.

An inquiry had been received concerning the recording of an 1804 snuff mill at Byfield on the North Shore of Massachusetts, the objective being to record this last water-powered mill of its kind in the country before it is converted to a residence. President Woodman stated that she would like to enlist as many members as possible to record or do measured drawings for

that purpose.

It was thought necessary to take note that under the Reagan Administration's proposals \$105 million would be appropriated to preserve national parks, but funds for other preservation projects would be cut to \$5 million, assigned to the National Trust for Historic Preservation. Members were urged to undertake a letter-writing campaign to the Senators and Congressmen asking restoration of some of the reduced funding. Peter Stott said that all state historic preservation programs set up in 1966 will close or be severely cut back. It is important to write to members of Congress that this is misguided since relatively little money produces a great return. They need such letters to show to other members if they themselves are already informed on preservation matters.

The meeting adjourned at 3:35 P.M.

Herbert Darbee

SECRETARY'S REPORT, NNEC

The spring meeting was held on May 16, 1981 in Harrisville, New Hampshire. Chapter President David Starbuck opened the meeting and expressed thanks to Historic Harrisville and Chic Colony for acting as hosts. It was decided to hold the business meeting first then hear the report of the advocacy subcommittee.

Christine Fonda gave an informal treasurer's report. She will have a written report for the annual meeting in the fall. There was \$342.24 in the account in October 1980. Donations and dues have totaled \$237, and the cost of this meeting is expected to be ca. \$150-200.

David Starbuck gave a brief report on the national SIA meeting in Hartford.

The next item was the Concord Gasholder project. This is the most intact gasholder in the country and was toured by the NNEC-SIA in 1980. Eric DeLony, the acting chief of HAER, wants to record it this summer, prob-

ably on July 27-29, 1981. Some local funding must be raised to finance the project. There was a request for volunteers, and Chris Closs, Bill Taylor, Herb Darbee, and Bob Talbot expressed interest. The recording project may require getting up on the roof. Chris Closs volunteered to lend some extra office space. A suggestion was made to request assistance from the Concord Fire Department to get access to the upper parts of the structure.

David Starbuck asked if anyone would like to tour or do research on the Simplex Wire and Cable Co. in Newington. Starbuck also reported that the SNEC/NNEC-SIA Newsletter has been slow to put together but should be ready in 2 weeks to a month.

Discussion was next held on the fall meeting. As the first three have been in New Hampshire, it would seem that the next should be in Vermont or Maine. Dick Borges suggested the Royal River Brick Co. in North Yarmouth, Maine. The facility was bought by Richard Hossman in 1977 to manufacture brick needed for restoration work. It has its own clay pits and pug mill. Bricks are hand-moulded, water-struck, and air-dried. A kiln is then built of the dried bricks and fired with wood. The steps of the process and the breaking of the kiln will be available for view.

Dave Warden suggested some sites in Vermont, including a kiln and a woolen mill which burned in 1880. The sites are 50 miles north of White River. It was suggested that late fall would be best for the meeting as there is no foliage.

Dick Borges mentioned that fall is also best for the brickyard. It was voted to hold the fall meeting in Maine with a tour of the brickyard and to have the spring meeting in Vermont.

It was suggested that the Program Coordinator could use some assistance, and he was authorized to acquire volunteers. Chic Colony will coordinate the meeting with Dick Borges and with

help from anyone else who lives in Maine. Discussion was next on the date of the meeting, and it was voted to hold the meeting on October 3rd.

The final item of business was the proposed relocation of Route 101 to the north of Dublin and its impact on Historic Harrisville. David Starbuck reported that the problem was discussed at the national SIA meeting in Hartford, and support for Historic Harrisville was voiced by Robert Vogel. A motion of whether the Chapter should discuss the problem and get involved was voted and passed. The subcommittee report prepared by Peer Kraft-Lund and Dave Warden was presented, and a copy is to be placed in the Chapter records.

Chic Colony reported that some progress had been made, and that the State and Federal people were beginning to recognize the impact on Harrisville and its setting. Three letters of support have been filed to extend the boundaries of Historic Harrisville into the area of the proposed highway. There has been a petition with 250 signatures in Dublin not to build the highway at all. The draft of the environmental impact statement is due in the fall, and the State is doing the EIS.

David Starbuck requested comments or a motion. Concerns were expressed that the problem was a complicated one; that we were not all that familiar with the issue; that it was an issue over which arguments had been going on for five years; there is the question of whether any actions should be by individuals or the group; and whether any statement should come from the national organization.

Peer Kraft-Lund suggested that the subcommittee report (stating that there is an adverse impact) be accepted. A motion was presented and passed that the report be accepted and that the Executive Committee appoint a subcommittee to draft a statement. The action by NNEC-SIA is to be independent of Historic Harrisville. The state-

ment will include the visual impact and potential impact from blasting. It should recognize alternative views, since too partisan a statement may be rejected out of hand.

Rick Monahan, architect for Historic Harrisville, made a brief presentation with slides of some of the restoration work that has been done here.

The group then toured the water turbine room at the Filtrine Plant, and the carding and spinning facilities at Harrisville Designs. Chic Colony explained the processes at Harrisville Designs where the cards and spinning machines were demonstrated.

John Jordan

CURRENT RESEARCH IN NEW ENGLAND

CONNECTICUT

The Toelles Road Bridge:

The Connecticut Department of Transportation is seeking parties interested in obtaining the Toelles Road Bridge located in the towns of North Haven and Wallingford and moving it to a new location.

The steel Warren Truss type bridge, which was constructed in 1898, has a span of 114' and a travelway width of 14'. The structure is eligible for listing in the National Register of Historic Places.

The recipient of the Toelles Bridge must agree to rehabilitate and maintain the structure in accordance with the Secretary of Interior's "Standards for Rehabilitation".

The Toelles Road Bridge may be transferred subject to the above restrictive covenant regarding the property's preservation. All relocation and maintenance cost will thereafter be the responsibility of the transferee.

Sealed bids indicating relocation plans and preservation commitments shall be submitted in duplicate no later than 10 A.M., November 23, 1981, to Mr. James Sullivan, Director of Environmental Planning, Connecticut Department of Trans-

portation, 24 Wolcott Hill Road, Wethersfield, CT 06109.

The Department of Transportation reserves the right to reject any or all bids, and to waive any and all defects of said bids.

If additional information is required, contact Mr. James Sullivan at (203) 566-5704.

Maribeth McCarthy Demma

MASSACHUSETTS

Old Sturbridge Village:

John Worrell is investigating ceramic production in central New England and testing technical assumptions through historic reproduction with potters in the museum. Extensive excavations at the production shop and kiln site of Hervey Brooks, an early 19th century redware potter in Goshen, CT, have provided the basic data for the broader research into earthenware manufacture in rural contexts. Survey of four other sites in the Goshen area, along with that of ancillary sites (clay pits, brick kilns, the neighborhood crafts production and agricultural network) is being set in an historical framework provided by documentary evidence. Other sites removed from Goshen but sharing temporal and economic parameters (i.e., late 18th-early 19th century agricultural communities in New England) have been investigated archeologically for comparative data. These include two in Woodstock, CT (an 18th-19th century site worked by Thomas Bugbee and an 18th century kiln site of an unknown potter in Yale Forest), both of which had been severely disturbed.

A more productive recent investigation has been focused on the site of the pottery of James Moore in Brimfield, MA. The site was active between 1785 and 1818. The founding stone pad for the kiln and surrounding work space was excavated, providing extensive technical and contextual information. The kiln itself, rebuilt at least once, was of an unusual design, having a rectangular shape and

eccentric fire chamber. Details of materials used in production, glazing, stacking and firing are being analyzed, compared with those from the other sites examined, and will be tested in the museum.

John Worrell

Old Sturbridge Village:

The museum is undertaking a new hydro-power project for the generation of electricity. It will utilize a 19th century mill dam system, part of which had been rebuilt in the 1930s. The penstock installation, however, will be in a sizable earth and stone embankment which appears to have remained untouched since its 19th century construction. In order to gain information about this historic feature, excavation and recording of structural detail will be undertaken by Ted Penn, John Worrell and Charles Pelletier prior to disruption late this year. This historic detail will be coupled with modern technical detail to chronicle the history of water-power utilization at the site from the beginning to the present.

John Worrell

Sturbridge Lead Mine: An archeological survey of the earliest natural deposit of any sort to have been mined by Anglo-Americans in the dark interior of New England has recently been conducted by Linda Ammons and Charles Pelletier. Graphite had long been mined by the natives for paint when they showed it to the first white man in 1633, and it had a history of utilization sporadically extending to the late 19th century. Evidences of changes in mining techniques appear throughout the extent of this property, now owned by the Trustees of Reservations. The survey and mapping of features was conducted for the Sturbridge Historical Commission as part of a National Register nomination.

John Worrell

Boston: According to an article clipped from the Boston Globe (March 8, 1981) by Helena Wright,

the Northern avenue drawbridge, which spans Boston's Fort Point Channel, is in the center of a complex harborfront controversy. As the article states:

"The issue centers around the proposal to make the current swing bridge a fixed bridge, which would make it impossible for any sizable vessels to navigate the channel.

"The proposal has locked the large financial interests of channel abutters and users in a struggle with Northern avenue businessmen as well as the Boston Redevelopment Authority and Massachusetts Port Authority, waterfront development planners and investors.

"At stake is not only the future of the old, city-operated drawspan, but the development of both Northern avenue, where hotels and condominiums are envisioned, and the channel itself where abutters have other, marine-oriented ideas. The wooden-planked drawbridge connects downtown Boston and South Boston. Legally it exists as a privilege for land traffic, a right for shipping.

"To the defenders of the need for a drawspan, the bridge is an irreplaceable historic landmark through which world-girdling sailing vessels and freighters once sailed en route to berths as far inland as Brighton via the now filled Roxbury Canal. With the channel's shipping being reborn, they say, the bridge must be retained and repaired."

Lawrence: An article in the Lawrence Eagle-Tribune (August 17, 1981), submitted by Betsy Woodman, describes the dedication of the Lawrence Hydroelectric Project. This is located at the site of the Great Stone Dam on the Merrimack River, and the new facility cost some \$28 million. As the article notes:

"Developed by Lawrence Hydroelectric Associates, the project is the largest of its kind in New England in 100 years. The hydro company estimates the project will generate enough electricity for 17,000

homes, annually displacing 7 million gallons of oil it would take to produce the same amount of energy through conventional means."

Lowell: An article clipped from the National Fisherman (September 1980, pp. 68-69) by Philip Platt describes the launching of two new passenger boats for use at the Lowell Urban Historical Park. Entitled "32' Aluminum Launch to Carry Tourists at New Historical Park," the article notes:

"The Moody, and its twin, the James B. Francis, launched June 20, are the first boats built by Payne & Franklin for use in government service as passenger launches. Actually, the boats represent a series of firsts both for the two partners and for the City of Lowell, Mass., to which the Moody and the Francis will be delivered.

"Back in February, Payne & Franklin was commissioned by Spindle City Marine, contractors to the National Park Service, to construct the two craft (at a cost of \$60,000) for use as tourist launches at the country's first national cultural park -- the Lowell Urban Historical Park. The boats will ferry tourists through the five-and-a-half miles of century-old manmade canals in the new park. These waterways were once the hub of commercial-industrial power and transport in the former industrial town, and the two launches are named for two prominent engineers who designed and helped build the canals."

NEW HAMPSHIRE

Temple: Between 1975 and 1978 excavations were conducted at the New England Glassworks in Temple, New Hampshire by Boston University. The site, dating from 1780 to 1782, included industrial structures and a small workers' village of at least 3 houses. The excavation was one of the most extensive ever undertaken at an industrial site in

this country, and artifact analysis has continued from 1978 to the present. The project completion report has now been submitted to the granting agency, the New Hampshire State Historic Preservation Office. As documented in the report, this factory produced the first crown window glass manufactured in America, as well as bottles of several sizes, small vials, and possibly glass tubing. With the completion of writing and analysis, efforts are now being made to preserve and exhibit the site itself. Funds are also being sought for publication of the final monograph.

David Starbuck

Brown Company Photographs:

The Institute for New Hampshire Studies at Plymouth State College has one of its interns working on a large collection of Brown Company (Berlin, N.H.) photographs which chronicle and document many of the activities of that corporation during the first two-thirds of this century. Now housed at the Farm and Forest Museum, the Museum and the Institute are working cooperatively to construct an inventory of the collection in order to determine its scope, its condition, and how such a collection can be used by historians, industrial archeologists, preservationists, and others. The work is in part funded by the New Hampshire Historic Preservation Office.

William Taylor

HELP WANTED

American Breweries: I am working on a book on beer in the U.S. and have become interested in the ethos and role of the brewer. It seems to me that the grand design of the brewery was one of the ways the brewer made a statement about himself and perhaps also about beer.

I found a reference to Otto Wolf Co., Breweries and Allied or Auxiliary Buildings (1906, Philadelphia), but the only copy seems to be in the Free

Library of Philadelphia, whence I have not been able to borrow it.

An important source for brewery architecture is, of course, the trays, lithographs, calendars and other advertising material of the brewing industry, and eventually I will probably hunt up this sort of thing. In the meantime, I was hoping that someone might already have done some work on the subject. Please contact Lowell Edmunds, Dept. of Classical Studies, Boston College, Chestnut Hill, MA 02167.

Boston Society of Civil Engineers Section, American Society of Civil Engineers: From the early colonial days in Massachusetts, and in other New England states as well, there were mills of various types run by waterpower, either stream or tidal. They were relatively small with simple machinery.

After 1800 and the arrival of the Industrial Revolution, there followed many mills of increasing size, still largely dependent on waterpower. There is no question that this change was brought about primarily by the introduction of new methods and much-more-complex machinery that required greatly-increased power.

We are seeking information as to whether there was a concurrent engineering development in the power production. If this development came first, it made the manufacturing developments possible; if it occurred in response to the manufacturing demand, it was still a significant factor in the overall change. Were canal or other waterway developments a factor? Was the development of large, higher-speed iron gears to replace the old slow-speed wooden gears the engineering breakthrough? Were there major changes in water-wheel design at this time?

We would appreciate any help you can give us in connection with this interesting question, as well as information on the pioneering sites. Please contact H. Hobart Holly, 106 Oak

Street, Braintree, MA 02184.

MEETINGS AND ANNOUNCEMENTS

The Second Textile History Conference: In November of 1980 Merrimack Valley Textile Museum hosted its Second Textile History Conference. Twenty-nine speakers and one hundred other historians from across the United States and England gathered at Boston University's Osgood Hill Conference Center for three days of papers, discussions, films and informal interchanges fueled by this unusual concentration of specialists. Sessions were organized around A.F.C. Wallace's Rockdale, factory villages, southern textile towns, industrial relations in New England textile cities, cotton technology, and cotton industry economics.

In general, the Conference reflected the high level of interest among scholars in the textile industry. While labor history could serve as the rubric for much of this attention, participants brought numerous approaches and perspectives. Relationships between technological developments and labor history have begun to receive more attention, while research in business and economic history also has demonstrated increased concern for the impact on (and of) the working class. The new labor history, characterized by study of industrial capitalism from the bottom up, encourages and benefits from a wide variety of interests. Thus studies of immigration, paternalism, and technological change contribute to efforts to better understand the lives of those involved in the industry.

The breadth of approaches also encouraged attendance by a diverse audience. Academics from several disciplines (archeology, anthropology, history, economics), museum or "public" historians, private sector researchers, and a variety of other educators and interested parties attended.

The Conference was videotaped, and papers were requested

from the speakers. Attendees praised the quality of the work displayed and enjoyed the opportunity to discuss their shared interests.

Larry Gross

The Lowell Conference on Industrial History: May 21-22, 1981. The Conference dealt with the topic of "The Relationship of Government and Industry in the United States." Two of the sessions were chaired by SNEC-SIA members Michael Folsom (Charles River Museum of Industry) and Helena Wright (Merrimack Valley Textile Museum).

SHA National Meeting: January 7-9, 1982. The 1982 Annual Meeting of the Society for Historical Archaeology will meet in Philadelphia, PA. There will be many papers dealing with historic technology and industrial archeology.

NNEC Spring Meeting: May 22, 1982. The Chapter will tour Ben Thresher's Mill in Vermont.

RECENT PUBLICATIONS

Hadingham, Evan. 1981. Archaeology and Early Industry at the Shaw Site, Central Massachusetts. Cambridge: Institute for Conservation Archaeology, Harvard.

Hindle, Brooke. (ed.) 1981. Material Culture of the Wooden Age. Tarrytown: Sleepy Hollow Press.

Hudon, Paul. 1981. Industrial Archaeology: An Overview. In Harvard Business School Bulletin, January/February: 104-107, 115.

Lovett, Robert W. 1981. Business Records and Baker Manuscripts and Archives Department. In HBS Bulletin, January/February: 20-23.

Phillips, Charles. 1981. From HAER to NAER and Beyond. History News, Vol. 36(10):15-17.

Renner, Charlotte. 1981. Devoted to Bricks. In Historic Preservation, Vol. 33(2): 48-52.

Rosebrock, Ellen Fletcher.

1981. Lowell, Massachusetts: A Case Study. In HBS Bulletin, January/February: 109-114, 128.

Starbuck, David R. (ed.). 1981. Canterbury Shaker Village: An Historical Survey Volume 2. Durham: University of New Hampshire. See Chapter V, "Archeology and Landscape."

BOOK REVIEW

David Jeremy. Transatlantic Industrial Revolution: The Diffusion of Textile Technologies between Britain and America, 1790s-1830s. (Cambridge: MIT Press. 1981)

David Jeremy's new book, long awaited, has at last arrived and has been greeted with the acclaim it deserves. Jeremy discusses in great depth early New England textile technology and textile machine builders. His book is massive, in the grand tradition of the English dissertation, and is recommended to all with an interest in early textile technology. But it is important for more than its factual content. Jeremy uses a technique of great interest and importance to industrial archeologists. I think Jeremy has solved the most pressing problem of IA theorists: "What is IA good for?"

Industrial archeology has been the perennial underachiever. Everyone agrees that it has great potential. Industrial archeologists have gone to the far ends of industrial society to report in fine detail the remains of material culture. Techniques have been honed, sites have been recorded. And all the while, the theoretically inclined have been hoping for an answer to the "So What?" question raised on the inside cover of each issue of IA. We all agree that the examination of the physical remains of the past should help us answer general questions, the "Big Questions".

The usual answer attempts to fit IA into the theories established by other archeologists. Archeology, we nonarcheologists are always reminded, is a branch of anthropology. In Diane New-

ell's formulation, IA is a "human science." The great works of recent archeology are held up for our inspection, as well as the works of Henry Glassie. The greatest industrial archeologist of all, Lynn White, pays homage to Alfred L. Kroeber's Anthropology. We too could make our archeology tell us things about people, the mantra goes. But still, there is no single work of IA to which we can point and say "We have fulfilled our potential."

Jeremy's book, I believe, shows us the way. The book is not IA in any normal sense -- there are no standing buildings measured in excruciating detail, no HAER-style perfectly lit photographs, no digging, not even UTM coordinates. Jeremy may well be surprised to see his book reviewed here. But in his examination of the artifact to answer the "Big Questions" of American industrial history, he has set a style and a standard which we would be well advised to consider.

A "Big Question" of 19th-century American industrial history is the Habakkuk question. Simply put, to what extent were labor shortages (and other factor endowments) the cause of "labor-saving" inventions? The debate has raged for 20 years, with no real answer. Jeremy asks the question and gives an answer in a most direct way: he looks at the machinery, he operates it, and he compares it. He is able to determine the effect of innovation. All the multiple regressions of the economic historian give way to a bit of industrial archeology.

Transatlantic Industrial Revolution is not a manifesto for IA. It is a quiet example. Jeremy takes on the "Big Questions," and one of the resources he uses for answering them is the material remains of industry. Jeremy has done for the economic history of technology what Merritt Roe Smith and Anthony Wallace did for the social history of technology. It seems simple. But it may serve to remind the IA community that the questions

David R. Starbuck
Editor, SNEC/NNEC-SIA Newsletter
Archaeological Research Services
University of New Hampshire
Horton Social Science Center
Durham, N.H. 03824



Granite workers' Social Labor
Party Hall in Barre, Vermont.
(This building is now a tomato
packery!) Courtesy of Robert
Vogel and Steven Lubar.

come first. Moreover, and to
the credit of the IA community,
it shows that the study of in-
dustrial archeology is a good
way to answer the "Big Questions."
Steven Lubar

CONTRIBUTORS TO THIS ISSUE

Herbert Darbee, Maribeth M.
Demma, Lowell Edmunds, Larry
Gross, H. Hobart Holly, John
Jordan, Steven Lubar, Ed Mc-
Kenzie, Geoffrey Moran, Philip
Platt, David Starbuck, William
Taylor, Betsy Woodman, John
Worrell, and Helena Wright

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