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January 10, 2006

RECEIVED

TOWN OF HARPSWELL

Kristi Eiane, Town Administrator
Town of Harpswell
P.O. Box 39
Harpswell, ME 04079

Re: Fuel Depot General Building Condition Assessment – Harpswell, Maine

Dear Kristi:

Woodard & Curran visited the former Navy Fuel Depot (hereinafter called the "Depot") on December 12, 2005 to observe the condition of the on-site building facilities and the water tower. We appreciate Bill Wells taking the time to meet with us and show us around the facility. We also visited the Town Hall to collect any data available in the community's file that might aid in our evaluation. As it turned out, the file did not include design drawings or specifications for any of the facilities but did include the following items which we requested and received copies of:

- Estimates provided by R.A. Webber & Sons for the removal of the facilities
- Results of asbestos testing by Environmental Management, Inc.
- A letter to Bill Wells from Naji Akladiss with MDEP dated November 12, 2005
- An email to Bill Wells from Bruce Hackett describing estimated costs for cleanup of mercury debris from mercury light lights and ballasts within the buildings.

In many cases, building codes vary depending on the use of the structure so our review of the Depot buildings are intentionally void of reference to specific codes since a future use has not been determined. Instead, we have focused on the general condition of the buildings, any remaining inherent value, and barriers to their continued use. As indicated in the Scope of Work, our tasks did not include any assessment of past or present site remediation and cleanup efforts nor did we comment on the condition of the pier. Both of these items, along with others, have the potential to influence the future use or value of the site and therefore the buildings.

As indicated, original building drawings and specifications were not available so the exact age of the buildings could not be determined. Reportedly, the buildings were constructed in the 1950's so that would make them approximately 55 years old. There are eleven structures on the 118.5 acre site consisting of ten buildings and a water tower. The majority of the buildings are steel framed masonry with brick façade and flat roofs. The water tower is a painted steel tower with suspended steel tank.

Our site walk included external inspections of all the buildings (see Figure 1 – Site Sketch attached) with access to the interior of six of the ten. Building 170, which is associated with the water tower, Building 161, and the two small block buildings were all locked and inaccessible.

Roof Systems

At the time of our inspection, there was snow cover so the exterior condition of roofs could not be verified. Bill Wells indicated he was unaware of any significant maintenance or repair that had taken

place in the recent past and inspection of the underside of the roofs seemed to support that assessment. According to Bill and the Fuel Depot Committee meeting notes, some minor repair of the guard shack roof was completed in 2002 but that is reportedly the only repairs that have occurred since the Town voted to accept the Depot properties in 1997. Visual evidence from the building interiors indicates that most of the roofs have experienced varying degrees of leakage over time.

The design life of most commercial roof systems is 25 years or less. In the event that repairs are initiated, current building codes generally require a structural assessment of the roof framing system prior to making the repairs if more than 25% of the roof will be impacted. Although there was no obvious visual evidence of structural fatigue or failure of the roof framing systems, changes in Building Code since the Depot facility was constructed would normally require structural upgrades. With or without structural upgrades, rust is present on the metal roof deck and depending on the severity this condition would require either replacement or repair. Repair would include sanding, priming and painting with a rust-inhibiting paint system.

Concrete foundations and slabs

Most foundations are concrete with floating concrete slabs. The exception is Building 130 which consists of steel framing with no building skin and a foundation of reinforced concrete with an integral slab. Due to snow cover, it was difficult to see all of the foundations from the exterior but where visible they appeared to be in fair condition with three exceptions.

- In the northwest corner of the guard shack, the floating slab has cracked and dropped from its original elevation as much as 4-inches. The foundation walls seem to be undisturbed but apparently the compaction of the fill within the foundation may not have been adequate and allowed this settlement to occur.

- A similar condition exists in Building 158 with a crack running across the front of the garage with obvious settlement on the westerly side near the doors. In this case, the crack extends up to the roof framing through the concrete masonry unit (CMU) walls.

- The third foundation issue we observed is associated with Building 130. The foundation is deteriorating due to exposure to the corrosive coastal environment attacking the reinforcing steel within the concrete. Reuse of the framing is unlikely due to incompatibility with current building manufacturer systems and the damage caused by long term exposure.

Windows and doors

Windows and doors in the buildings have either been destroyed by vandals or the environment. The exception is the overhead doors in Building 126, Building 158 and Building 159. We observed two types of windows; most aluminum frame double glazed. Other windows are single glazed wood frame. The aluminum frames do not include a thermal break and would therefore not meet energy code requirements even if they were repaired. The windows should be boarded up to secure them from vandals and the broken glass removed for safety reasons.

Electrical/Mechanical Systems

Several of the buildings never had heating systems and in others the mechanical rooms were locked and inaccessible. The design life of a commercial boiler according to the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) would be approximately 30 to 35 years. Assuming all the boilers are original equipment, they are well beyond their design life.

Electrical and plumbing systems have also suffered from vandalism and neglect. Demolition of items related to the fuel depot systems and equipment is recommended to insure the safety of the public. This includes the diesel generators in the generator building which are likely no longer of any value. Reportedly, the engine fluids were drained when they were decommissioned at the direction of the Maine Department of Environmental Protection (MDEP) which would have left them susceptible to condensation and rust.

Lighting has been mostly destroyed and would need to be replaced. The lighting has tested positive for mercury bulbs and ballasts so hazardous material clean-up is required regardless of the use.

Paint and Asbestos

Additional testing should also be completed to evaluate the paint on the buildings. Many Department of Defense facilities of this age were painted with paints that were high in lead content. Asbestos has also been detected in the generator building on the mechanical systems so additional hazardous clean up would be necessary.

An environmental contractor has estimated a range of $1,800 to $2,400 for the clean up.

Water Tower, Control Building & Water Supply

The water tower and Building 170 were not accessible during our visit due to the locked fence around the perimeter but the building is constructed of CMU with a flat roof similar to most of the other buildings on site and it is assumed that it is in similar condition. The water tower, which provided pressure and flows for domestic water supply and fire flows for emergency response, appears to be in good condition. We estimate the tank volume to be approximately 250,000 gallons.

We learned from Bill Wells that the clean up and monitoring efforts have included significant restrictions by the MDEP regarding the volume that can be pumped daily from the well for fear that removal of large volumes of water may cause the migration of contaminates into the bedrock fractures beneath. The maximum daily pump volume is 450 gallons.

Conclusions

In conclusion, some general observations can be made about the ten buildings and the water tower located around the Depot property. The one positive we noted was that the external, structural appearance of the buildings was in many cases good. On the negative side, the buildings are over 50 years old and the have been unheated, un-maintained, and vandalized for more than ten years. Accordingly, most of the internal systems are outdated, unserviceable and in violation of current Building Code. The HVAC, electrical, water supply, plumbing and flooring are in a state of disrepair. Foundations are cracked and spalling in some of the buildings, while they appear in satisfactory condition in others. The presence of lead paint is

probable and certain building components have tested positive for asbestos and mercury. Windows and doors are largely broken or deteriorated and those that are not would need energy efficient replacements. The roofs leak and would likely require complete replacement. A structural analysis will be necessary before they can even be replaced which would probably lead to structural upgrades.

Therefore, given the extent of deterioration, the cost to renovate the buildings from their current state of disrepair would be significant. Roofs alone, assuming moderate structural upgrades, would likely total more than $300,000 in repair costs. Given the current state of the building systems, the roofing cost would likely be only a fraction of the overall rehabilitation costs required to return the buildings to a serviceable condition. By the same token, maintaining the status quo is a liability to the Town, ultimately resulting in future demolition of the buildings with the future cost of demolition continuing to increase as the buildings' value further diminishes.

Some of the buildings could have limited value for uses such as cold storage. Several have overhead doors and are currently in use by the Town for this purpose. To continue this use, clean up of broken glass and securing the openings is necessary to protect the public. Depending on the use, re-roofing may also be necessary to insure a water tight building envelope. Regardless of the direction the Town chooses to pursue with the buildings, clean up of the hazardous materials should occur at the earliest possible time. Quotes have already been received to provide those services and therefore budgeting for the effort will be straightforward.

Analysis of the water tower is unique, as it serves as basic infrastructure and water supply for all the on-site buildings. With a restricted water supply extraction rate of 450 gallons per day, any future facility development would be limited to uses with minimal water demands. Therefore, the water tower with its approximately 250,000 gallons of capacity, could provide some valuable water storage to low demand facilities. Visual inspection would indicate that the tower is in fair condition. However if the ultimate use of the site does not include buildings or water usage, the tower would serve no purpose and should be removed along with the buildings.

If specific uses are identified, we would be happy to investigate the code upgrades further and help establish budgetary costs. In the mean time, we hope this information is helpful in deciding the future of the buildings on the site.

Sincerely,

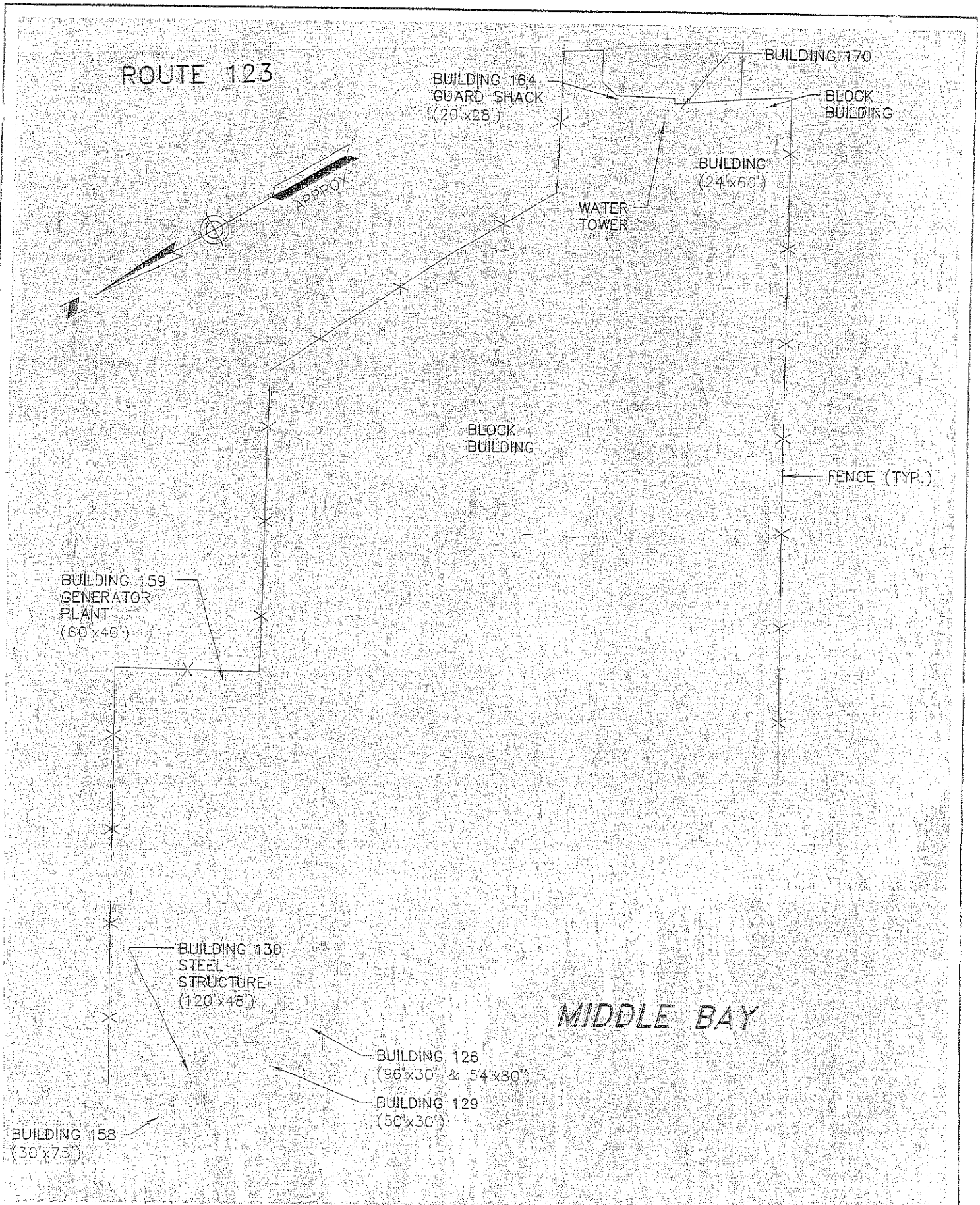
WOODARD & CURRAN INC.

James D. Wilson, P.E.
Project Manager

JDW/jiv
990014.17

Attachment

cc: Randy E. Tome, P.E.



WOODARD & CURRAN Engineering · Science · Operations	FUEL DEPOT SITE SKETCH	TOWN OF HARPSWELL, MAINE	JOB NO. 940014.17 DATE JAN. 2006 SCALE N.T.S.
	DESIGNED BY JMW	BUILDINGS CONDITION ASSESSMENT	FIGURE 1