

## M E M O R A N D U M

To: Chuck Hodgknsn  
Scott Seaver

From: David Handlin

Date: January 12, 2012

Re: Middle Line Project  
Moisture in Basement of 3BR Unit, Site 5

Cc: Frank Fenner  
Warren Doty  
John Garrahan  
Michael Josefek

John Garrahan and I visited the site yesterday and met with the tenant, Steve Broderick.

There is moisture high up on the wall in several corners of the basement. By far the most pronounced is at the north east corner.

There is a substantial rain today. I asked Mr. Broderick to check the basement during and after the rain to see if there is any evident moisture penetration attributable to the rain.

Let's assume for now that that is not the case and that the moisture is instead condensation.

It has been suggested that, since this is the only unit without a bulkhead, the moisture is somehow related. The bulkhead in the other units has an insulated door. However, it may be that the weather stripping around the door allows for a certain amount of air passage and thus allows indoor, wet air to escape. Thus the moisture problem does not exist in the other five units.

Although we are not ruling out this line of reasoning completely, it seems to us inadequate. If that were the case, the condensation would appear uniformly along the top of the interior foundation walls, the top of the wall being the coldest portion of the wall. Instead, there must be something about the corners, and the northeast corner in particular that is particularly cold. When warm air hits it condensation is the result.

When we went outside, we noticed that the amount of exposed concrete at the north east corner was substantially greater than elsewhere, and greater than our drawings and specifications showed. It may well also be that the insulation in the ceiling was not properly packed in the corners.

We therefore suggest the following: The contractor bring the grades up to the required height in all corners and at the same time bring the insulation up to just below finished grade. While doing this, the contractor should check that the insulation is properly joined at the corners, so that the corners are fully protected.

We also suggest that the contractor take down a portion of the ceiling at the north east corner for inspection to see whether the insulation in that area is properly installed.

We have already suggested to the Town that a de-humidifier be installed. Assuming again that the moisture is condensation, it certainly cannot hurt to remove moisture from the air.