Following our conference call on 10/22/15, we would like to propose making the following changes so that the Oneida/Vilas lidar datasets will pass your QC process and be accepted by the USGS per our agreement for use in the National Map. You will see this is a very good data set and it seems its just the formatting issues we need to resolve.

DEM
We are providing a sample DEM tile in .img format for each county. The tiles are in Oneida Co and Vilas Co coordinates. Please see if you can load them in Global Mapper to perform your QC. We are willing to have the DEMs reformatted to .img if this is a viable solution. We will have Ayres produce a county-wide DEM or DEM tiles that are clipped to the project boundary to avoid the tinning across 90 degree turns in the boundary overlap area.

Metadata
We will have the swath .xml and project .xml created per base specification 1.0. The vertical tested accuracies will be reported in the swath and project .xml. We ask that you provide us samples of each metadata type and how to test it so we can make sure it meets your requirements. We also ask that you provide the 4 errors that will be acceptable based on the difference between versions 1.0 and 1.2.

Vertical Accuracy
We will have the accuracies reported according to FVA at 95% confidence level and SVA/CVA at 95th percentile for each county. Our accuracy reporting will be based on testing of independent control against the point cloud. We will convert the checkpoint control data from .txt to .shp so that you can use it for testing the DEMs. We will provide calibration points in .shp format as well. We do not expect a need for relaxed accuracies for these projects. The vertical accuracy report for Vilas Co will be provided to you (we thought it was on the original hard drive you received).

Coordinate System
We would ask that you work with us on accepting our data in Wisconsin County Reference System (WISCRS) county-specific coordinate systems. Our BAS proposal to the USGS stated the the data would be in WISCRS. The data was converted to WISCRS coming out of the calibration process, and a second copy was not processed out in State Plane Coordinates or UTM according to our contractors Ayres/Quantum. WISCRS is a well-defined coordinate system which is recognized in Global Mapper and ArcGIS. We can assist in the coordinate system definition in Global Mapper if that helps you successfully load and QC the DEM and LAS files.

I have spoken with Zach Nienow at Ayres, and he has confirmed that there is another WI lidar dataset that will be delivered to USGS in WISCRS yet this year. The Lincoln Co dataset is being delivered in WISCRS-Lincoln Co coordinates to USGS. The Lincoln Co project is partially funded by 3DEP. The USGS agreement for the Lincoln Co datasets specifies WISCRS delivery. In addition, the Ayres/Quantum team is collecting lidar this fall in WI that is partially funded by 3DEP, and the project partners have specified WISCRS deliveries.

From our perspective, the lidar data being produced in WI is unique. We are one of a few states in the country that have county-specific coordinate systems. This means that we (the counties) who are taking the lead on contracting and justifying the projects to our constituents require the use of WISCRS. It's critical that the lidar data match our fundamental GIS data layers. We do not rely on SPC or UTM as our primary coordinate system. The commonly used GIS and LiDAR processing software in the Industry recognize the WISCRS.

LAS errors
The LAS errors noted in your report are caused by areas with a high density of inland lakes. In some cases, lakes make up the entire tile. In other cases, there is a large lake along the tile edge, but it is not a gap in the data.

Screenshot from Global Mapper when loading .img in WISCRS – Oneida Co: