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Linking People & Technology for Business Results

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Adam Kramer  
Director, Minneapolis Water Works  
250 South 4<sup>th</sup> Street  
Room 206  
Minneapolis, MN 55415-1330

Subject: Final Updated MWW SCADA Historical System (OMS) Resolution

Dear Adam,

EMA offers this Letter of Agreement (LOA) to close out the OMS amendment to our SCADA contract. This LOA is based on a series of meeting and correspondence with MWW discussing current status and problems with the OMS/E-ops data reporting system. EMA has agreed to work with MWW staff on issues that have been raised concerning the OMS application

EMA proposes the following actions that would be provided under the previous contract amendment and that, once completed, would close out that scope of work: EMA understands that all work herein will be coordinated with and approved by the MWW OMS implementation team and that all work will be provided at no additional cost to the City.

2. **Restart OMS Activities:** EMA proposes to resolve the following items under the previous amendment.
  - a. At the City's request, EMA will facilitate a 2-hour follow-up session following the site visit, at MWW, to discuss WLSSD information that MWW can use.
  - b. Report development. EMA will meet with plant supervisors and managers to review their reporting requirements and identify data needs. EMA will take a proactive role in insuring that this data be captured in the manner, which best supports E-Ops rollup and report functionality. PLC data totalizers will be considered and implemented if deemed necessary. This effort is in support the data management effort below.
  - c. EMA will review with the PCS committee the data logging options offered by Cimplicity HMI. EMA will work with the MWW to develop best practices in the logging of operational data with considerations on data use, data value, rollup needs, totalized need and reporting and database size. This effort is in support the data management effort below
3. **Resolve Technical Issues:** EMA proposes to resolve the following items under the previous amendment.
  - a. **Data Management:** EMA has proposed a conversion from 1 minute to 15-minute data intervals as the raw e-ops table data. This option reduces by 1/15 the volume of the E-ops database. This option is currently under review. MWW requests the following considerations with this effort

- i. EMA will work with MWW to establish data entry best practice protocols. These protocols, based on production, consumption and process considerations, must bring data into e-OPS with the appropriate time constraints that support the rollup capabilities of E-ops.
    - ii. These data entry protocols will be implemented by EMA within the FFP and FSP SCADA projects.
    - iii. EMA will develop data entry protocols in ladderlogic. EMA will assist with logic implementations and modifications throughout the pumping facilities.
  - b. **Security Model:** The current security model does function properly. EMA will assist MWW in developing policies, practices and procedures in this area following the training listed below.
  - c. **Cimplicity Redundancy:** EMA will provide technical assistance. The software is a product of GE and solutions must ultimately be secured from GE. EMA will contact GE and discover their position and plans in this area, recommend a solution, and support in its resolution.
- 3 **E-OPS Upgrade:** EMA will upgrade MWW to version 1004. This upgrade adds important data integrity functionality and new features. These new features will be reviewed with MWW prior to the upgrade to determine MWW usage.
4. **Training:** EMA will conduct additional training as follows:
- a. **System Administrator:** On e-OPS functions estimated at 1 week.
  - b. **Users:** Six ½ day classes on user features.
  - c. **Supervisors/Managers:** Two 2-hour classes.

EMA agrees that it will submit for review and approval a training syllabus for each of the three training classes. MWW's intent is to utilize a train the trainer type training development plan. For "Users" training, EMA will conduct the first three with MWW conducting the last three.

Best regards,

EMA, Inc.



George A. Mathes  
President, CEO