*Stage IIIb – Elaboration: Requirements Modeling and Analysis*

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1. **Architecture of SOAP**

The SOAP system has a model view controller (MVC) architecture. This type of architecture has a three layer structure. The model view of the program represents how the system implements its logic. It gives the overall structure of the program and performs the processing, validating, associating or other tasks related to handling data. The view layer of the system deals with what the user can see when they are interacting with the system. It is responsible for using the information available to produce what is needed for the presentational interface of the application. Lastly the controller layer is responsible for making the connections between the model and view layers.

The model layer in the SOAP project consists of the data shown in the tables and graphs throughout the system. It is responsible for processing of the data for the different chemicals and facilities into the corresponding tables. This layer takes care of the overall logic processes that occur in the program at any given time. The view layer of the system is generated from a ctp file for each of the pages. Each of the files provide the exact code for the visual representation of the data that the user will see. Furthermore, the controller layer deals with the connections between the model and view layers in SOAP. There is a controller file for each of the modules in the project which makeup the layer. This layer of the project is responsible for action between each of the view and data models.

1. **Documentation of the Code**

Pages documented:

Chemicals view file

Chemical index file

Chemical controller file

Chemical model file

Facilities view file

Facilities index file

Facilities controller file

Facilities model file

diagrams.jpg