2012

Drexel University
CS 492

Tejprakash Gill
John Haas
Patrick Lockner
Phil Maconi
Jonathan Monteiro
Alex Rybak

[HEPHAESTUS ACCEPTANCE TEST PLAN]
## Contents

1. INTRODUCTION ......................................................................................................................... 2
   1.1. Background ......................................................................................................................... 2
   1.2. Structure of the Document ................................................................................................. 2
   1.3. References ......................................................................................................................... 2
   1.4. Glossary ............................................................................................................................... 2
2. TEST APPROACH .................................................................................................................. 2
   2.1. Introduction ......................................................................................................................... 2
   2.2. Test Objectives .................................................................................................................... 2
   2.3. Test Structure ...................................................................................................................... 3
3. TEST ASSUMPTIONS AND EXCLUSIONS .......................................................................... 3
   3.1. Introduction ......................................................................................................................... 3
   3.2. Assumptions ....................................................................................................................... 3
   3.3. Exclusions .......................................................................................................................... 3
4. ENTRY AND EXIT CRITERIA ............................................................................................... 3
   4.1. Introduction ......................................................................................................................... 3
   4.2. Entry Criteria ....................................................................................................................... 3
   4.3. Exit Criteria ........................................................................................................................ 4
5. TESTING PARTICIPANTS ..................................................................................................... 4
   5.1. Introduction ......................................................................................................................... 4
   5.2. Roles and Responsibilities ................................................................................................. 4
   5.3. Training Requirements ....................................................................................................... 4
   5.4. Problem Reporting ............................................................................................................. 4
   5.5. Progress Reporting ............................................................................................................. 4
6. TEST CASES ......................................................................................................................... 4
   6.1. Priority 1 Tests ...................................................................................................................... 4
   6.2. Priority 2 Tests ...................................................................................................................... 9
7. Traceability Matrix ............................................................................................................... 11
1. INTRODUCTION

1.1. Background
This document provides the plan for the testing activities required before the Hephaestus system can be accepted as fulfilling its requirements. Hephaestus is a web-based portal that contributes to materials research by providing researchers with a centralized tool focused on data storage, analysis, and collaboration.

1.2. Structure of the Document
- **Section 2**: Describes the overall approach to the acceptance test plan
- **Section 3**: Describes in more detail the individual issues covered or not covered by the acceptance test plan
- **Section 4**: Describes the criteria which have to be satisfied before the system can be accepted
- **Section 5**: Describes the roles and responsibilities of the team members involved in the acceptance test plan process
- **Section 6**: Describes the test cases used during the acceptance testing process

1.3. References
1. Hephaestus Software Requirements Specification

1.4. Glossary
**Functional Requirements**: Define how the system works and what it can do

**Integration Test**: A test that the different systems within the software work together properly.

**Nonfunctional Requirements**: Defines criteria that can be used to judge the operation of a system as opposed to individual system behaviors.

**SRS**: Details the agreed upon requirements of the system

**System Test**: An end-to-end test that verifies that the system meets its requirements.

**Unit Test**: A procedure built into the source code that tests whether individual components work properly.

2. TEST APPROACH

2.1. Introduction
This section describes the overall approach that will be taken within the acceptance test plan for Hephaestus. It specifies particular techniques and tools that will be used as well as any constraints that may apply.

2.2. Test Objectives
The acceptance test plan will serve as a way for the client to verify that the Hephaestus system meets the requirements specified in the software requirement specification.
2.3. **Test Structure**

The acceptance test plan will consist of a set of comprehensive system tests against the Hephaestus system. The test cases will be selected and agreed upon by both the developer and the client. It will be considered sufficient to test whether the requirements from the SRS have been met. The tests will be designed to verify multiple requirements at once, based on the assumption that all individual requirements have already been individually tested by the development team.

The tests will be divided into categories based on requirement priority. Each priority level will have an individual sign-off, in addition to the overall acceptance sign-off.

3. **TEST ASSUMPTIONS AND EXCLUSIONS**

3.1. **Introduction**

This section provides details about the assumptions made prior to testing as well as those features or aspects of the system that will not be tested.

3.2. **Assumptions**

It is assumed that the Hephaestus system has already passed a comprehensive suite of unit tests and integration tests. The acceptance testing will cover the functional requirement of the system as described by the Software Requirements Specification document.

3.3. **Exclusions**

The acceptance testing will not cover requirements related to the internal structure of the system source code. It will also not cover any requirements that are not Priority 1 or Priority 2.

4. **ENTRY AND EXIT CRITERIA**

4.1. **Introduction**

This section lists the criteria that must be satisfied before the acceptance test plan can begin as well as the criteria that must be met before it can be considered completed.

4.2. **Entry Criteria**

The acceptance test plan can begin after the following preconditions have been met:

- Hephaestus passes all unit tests
- Hephaestus passes all integration tests
- Hephaestus passes all system tests
- The system setup has been verified as conforming to the specifications in the SRS
- A copy of the most recent version of the SRS has been received and signed off
- Consent of the project leader has been obtained
- Consent of the client has been obtained
- Consent of the test team leader has been obtained
4.3. **Exit Criteria**
The acceptance test plan can be considered successful once all of the **Priority 1** requirements have been verified. If any **Priority 1** tests fail, the acceptance testing must be considered a failure and retried once the issues have been fixed.

5. **TESTING PARTICIPANTS**

5.1. **Introduction**
This section describes the roles and responsibilities of team members conducting the acceptance testing. It also specifies the procedures for reporting on problems discovered during the tests and on the progress of the acceptance test plan.

5.2. **Roles and Responsibilities**
The following roles have been designated as required by the acceptance test plan:

- Test Team Leader: Coordinates individual tester efforts
- Tester: Responsible for executing some subset of the acceptance test plan
- Project Leader: Coordinates individual developer efforts
- Developer: Responsible for fixing issues that are discovered during testing
- Client Representative: Responsible for signing off on the test results

5.3. **Training Requirements**
All parties involved in the acceptance testing process should be familiar with the user interface of Hephaestus as well as its documentation and requirements.

5.4. **Problem Reporting**
All problems discovered during testing by any party must be reported to the project leader and placed in the team’s bug tracker ([https://snuffleupagus.cs.drexel.edu/redmine/](https://snuffleupagus.cs.drexel.edu/redmine/)).

5.5. **Progress Reporting**
Progress on the acceptance test plan must be reported daily by the Test Team Leader. The reports must be sent to the Project Leader and specify which tests have passed, which have failed, and which have yet to be completed.

A final report must be compiled for the client’s representative at the end of the testing.

6. **TEST CASES**

6.1. **Priority 1 Tests**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>TC1 - Account Creation and Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Traceability</td>
<td>3.3.1.1, 3.3.1.1.2, 3.3.1.2, 3.3.1.2.1, 3.3.1.3</td>
</tr>
<tr>
<td>Preconditions</td>
<td>A user account named <a href="mailto:test_existing_account@hephaestus.com">test_existing_account@hephaestus.com</a> must already exist. A user account named</td>
</tr>
<tr>
<td>Test Name</td>
<td>TC2 - Basic Group Interactions</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Requirements Traceability</td>
<td>3.3.2.1, 3.3.2.1.1, 3.3.2.1.2, 3.3.2.1.3</td>
</tr>
<tr>
<td>Preconditions</td>
<td>A group named ‘group1’ exists in the system. A group named ‘group2’ does not exist in the system. The tester is logged in to one account.</td>
</tr>
</tbody>
</table>
| Actions            | 1. The tester must visit the group creation page.  
2. The tester must fill out information to create a group named ‘group1’.  
3. The group creation must fail due to a non-unique group name  
4. The tester must fill out information to create a group named ‘group2’.  
5. The group creation must succeed, with the tester being brought to the group’s profile.  
6. The tester must edit the group’s biography, website URL, and research interests and verify that the changes are saved.  
7. The tester must access the group’s wall and attempt to post a message. |
| Post Conditions    | The group has been created and a message has been posted by the group’s owner. |

<table>
<thead>
<tr>
<th>Test Name</th>
<th>TC3 - Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Traceability</td>
<td>3.3.2.1.4, 3.3.2.1.5, 3.3.2.1.6, 3.3.2.1.7</td>
</tr>
<tr>
<td>Preconditions</td>
<td>The tester must have access to an account that owns a group. The tester must have access to an account that is not a part of the group. The tester</td>
</tr>
</tbody>
</table>
must have access to a second account that is not a part of the group.

**Actions**

1. The tester must visit the group administration page while logged in as the group’s owner.
2. The tester must invite the first account that is not a member of the group to the group.
3. The tester must log in to that account and reject the invitation.
4. The tester must verify that the account is not a part of the group.
5. The tester must log in to the group owner account and resend the invitation.
6. The tester must log in to the invited user account and accept the invitation.
7. The tester must verify that the current user is in the group.
8. The tester must post a message to the group’s wall as that user.
9. The tester must verify that the member account cannot edit the group profile.
10. The tester must verify that the member account cannot access the group administration page.
11. The tester must select to leave the group.
12. The tester must verify that the account can no longer access the group’s wall.
13. The tester must switch to the second account that is not a part of the group.
14. The tester must request acceptance into the group.
15. The tester must switch to the owner’s account and deny the request.
16. The tester must switch back to the requesting account and request a second time.
17. The tester must switch to the owner’s account and approve the request.
18. The tester must access the administration page and promote the new member to administrator.
19. The tester must switch to the new administrator account and verify that the group profile can be edited and that the administration page can be accessed.

**Post Conditions**
The group contains two members, the owner and the third account. Both members have the role of administrator.

**Test Name**
TC4 - Basic User Interactions

**Requirements Traceability**
3.3.2.2.*, 3.3.2.3.*, 3.3.2.4.*

**Preconditions**
The tester must have access to two different user accounts. Both users must be following each other.

**Actions**

1. The tester must log in to the first user account and access their profile.
2. The profile must have editable fields for affiliation, location, biography, website, and research interests.
3. The tester must set each field and verify that the information is saved.
4. The tester must erase each field and verify that they no longer
show data.
5. The tester must access the second user’s wall and attempt to post a message.
6. The message must be posted successfully.
7. The tester must delete the message and verify that it is removed.
8. The tester must unfollow the second user.
9. The tester must verify that the second user’s wall can no longer be seen or posted to.
10. The tester must follow the second user.
11. The tester must verify that the wall is once again visible and able to be posted to.
12. The tester must post a message to the wall.
13. The tester must switch accounts to the second user and access that user’s wall.
14. The tester must be able to delete the message that was posted on the wall.

Post Conditions
Both users are still following each other. Both users have empty walls.

Test Name
TC5 – Social Search

Requirements Traceability
3.3.2.6.*

Preconditions
The tester must be logged in to an account. There must be an account with name ‘Test’ and a group with name ‘Group’. There must also be a group with name ‘Test2’.

Actions
1. The tester must search for ‘Test’ using the social search bar

Post Conditions
The search results page must display both ‘Test’ and ‘Test2’. Each of the results must link to their respective profile pages.

Test Name
TC6 – Sample Uploading, Viewing, and Editing

Requirements Traceability
3.3.3.1, 3.3.3.1.1, 3.3.3.1.3, 3.3.3.1.4, 3.3.3.1.5

Preconditions
The tester must be logged in to an account. The tester must have access to a 2D TIFF sample. The tester must have access to a 3D RAW sample. The tester must have access to PDF file.

Actions
1. The tester goes to the sample upload page
2. The tester specifies that they want to upload TIFF images
3. The tester fills out all required attributes
4. The tester selects the PDF file to upload
5. The upload fails, displaying a message stating that the file type is unsupported.
6. The tester completes steps 1-3 again.
7. The tester selects the TIFF sample.
8. The tester selects that they want to receive an email notification upon completion.
10. The tester specifies that they want to upload a RAW sample.
11. The tester fills out all required attributes.
12. The tester specifies that they do not want to receive an email upon completion.
13. The tester selects the RAW file to upload.
14. The upload completes successfully.
15. The tester verifies that both samples can be accessed and downloaded through the system.

**Post Conditions**

The TIFF and RAW samples were added to the system. The tester received an email stating that the TIFF file completed its upload step. The tester did not receive an email stating that the TIFF file completed its upload step.

---

**Test Name**

TC7 – Sample Editing and Deletion

**Requirements Traceability**

3.3.3.2, 3.3.3.3.*

**Preconditions**

The tester must be logged in to an account. The account must have already uploaded two samples.

**Actions**

1. The tester goes to the sample page for the first sample.
2. The tester clicks the edit button next to the attribute list.
3. The tester modifies each field.
4. The tester hits save.
5. The tester goes to the second sample.
6. The tester chooses to delete the sample.
7. The tester cancels the deletion confirmation and the sample is not deleted.
8. The tester chooses to delete the sample.
9. The tester confirms the deletion.

**Post Conditions**

The first sample has new values saved into its attributes. The second sample is no longer in the system.

---

**Test Name**

TC8 – Sample Sharing

**Requirements Traceability**

3.3.3.5.*

**Preconditions**

The tester must have access to four accounts. The first account must have uploaded two samples. The second account must be in a group.

**Actions**

1. The tester verifies that only the first account can see the two samples.
2. The tester goes into the sharing settings for the first sample.
3. The tester shares the first sample with the group that the second account belongs to.
4. The tester also shares the first sample with the third account.
5. The tester goes into the second sample’s sharing settings.
6. The tester chooses to make the sample public.

**Post Conditions**

The first three accounts can see the first sample. All four accounts can see the second sample.

---

**Test Name**

TC9 – Sample Segmentation and Analysis

**Requirements Traceability**

3.3.3.6.*, 3.3.4.1, 3.3.4.1.1, 3.3.4.1.2, 3.3.4.2, 3.3.4.2.1, 3.3.4.2.2, 3.3.4.2.4, 3.3.4.2.5, 3.3.4.2.6

**Preconditions**

The tester must be logged into an account. The tester must have access to three segmentation maps for a sample that the account has already access to. The first map must have less than ten colors. The second map must...
must have more than ten colors. The third map must have dimensions that are not equal to the sample dimensions.

<table>
<thead>
<tr>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The tester goes to the sample page.</td>
</tr>
<tr>
<td>2. The tester chooses to upload a segmentation map for that sample.</td>
</tr>
<tr>
<td>3. The tester uploads the first map.</td>
</tr>
<tr>
<td>4. The tester is prompted to enter phase names for each color.</td>
</tr>
<tr>
<td>5. The tester uploads the second map.</td>
</tr>
<tr>
<td>6. The tester is not prompted to enter phase names for each color.</td>
</tr>
<tr>
<td>7. The tester uploads the third map.</td>
</tr>
<tr>
<td>8. The upload fails and displays an error message about mismatched dimensions.</td>
</tr>
<tr>
<td>9. The tester goes back to the sample page and verifies that the first two segmentation maps have been associated.</td>
</tr>
<tr>
<td>10. The tester chooses to run analyses on the sample.</td>
</tr>
<tr>
<td>11. The tester selects two point statistics, specifying that the first segmentation map be used.</td>
</tr>
<tr>
<td>12. The tester runs the analysis.</td>
</tr>
<tr>
<td>13. The tester chooses to run chord length distribution on the sample.</td>
</tr>
<tr>
<td>14. The tester specifies the parameters required by the analysis.</td>
</tr>
<tr>
<td>15. The tester runs the analysis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first two segmentation maps were associated with the sample. The tester receives emails with links to the completed analysis results that can be downloaded as raw data or as image visualizations. The emails specify which sample and analysis they refer to.</td>
</tr>
</tbody>
</table>

### 6.2. Priority 2 Tests

<table>
<thead>
<tr>
<th>Test Name</th>
<th>TC10 - Account Creation Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Traceability</td>
<td>3.3.1.1.1</td>
</tr>
<tr>
<td>Preconditions</td>
<td>A user account named <a href="mailto:test_new_account@hephaestus.com">test_new_account@hephaestus.com</a> must not already exist.</td>
</tr>
<tr>
<td>Actions</td>
<td>1. The tester must fill in information for ‘<a href="mailto:test_new_account@hephaestus.com">test_new_account@hephaestus.com</a>’</td>
</tr>
<tr>
<td>Post Conditions</td>
<td>The tester must receive an email confirming the account creation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Name</th>
<th>TC11 – User Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Traceability</td>
<td>3.3.2.5</td>
</tr>
<tr>
<td>Preconditions</td>
<td>A user must have access to an account that is following four other users, Each of those users must have posts on their wall.</td>
</tr>
<tr>
<td>Actions</td>
<td>1. The tester must log in to the account and access the user’s stream.</td>
</tr>
<tr>
<td>Post Conditions</td>
<td>All posts to the other five accounts must appear on the user’s stream in reverse chronological order.</td>
</tr>
</tbody>
</table>

| Test Name | TC12 – ANG Sample Uploading |
### Requirements Traceability

**Preconditions**
The tester must be logged in to an account. The tester must have access to an ANG format sample.

**Actions**
1. The tester goes to the sample upload page
2. The tester specifies that they want to upload ANG samples
3. The tester fills out all required attributes
4. The tester selects the ANG file to upload

**Post Conditions**
The ANG sample is uploaded successfully and can be accessed.

### Test Name

**TC13 – Sample Visualization**

#### Requirements Traceability

3.3.3.1.2, 3.3.3.4.1, 3.3.3.4.2, 3.3.3.4.3

#### Preconditions

The tester must be logged in to an account that has access to a 2D sample and a 3D sample.

#### Actions

1. The tester goes to the 2D sample page.
2. The tester verifies that image visualization of the sample is present.
3. The tester goes to the 3D sample page.
4. The tester verifies that they are able to scroll through a series of 2D slice images.
5. The tester verifies that they are able to switch the visualization to a 3D Paraview model.

#### Post Conditions

Both samples can be visualized. The 3D sample can be visualized by both 2D slices and a Paraview model.

### Test Name

**TC14 – Additional Analysis Options**

#### Requirements Traceability

3.3.4.1.3, 3.3.4.1.4, 3.3.4.2.3

#### Preconditions

The tester must be logged into an account. The tester must have access to a sample.

#### Actions

1. The tester goes to the sample page.
2. The tester chooses to run analyses on the sample.
3. The tester selects RVE set analysis, specifying that the first segmentation map be used.
4. The system estimates the time that it will take to run the analysis.
5. The tester runs the analysis.
6. The tester chooses to MKS analysis on the sample.
7. The system estimates the time that it will take to run the analysis.
8. The tester specifies the parameters required by the analysis.
9. The tester runs the analysis.

#### Post Conditions

The MSK and RVE set analysis tools both function successfully. The system gives estimated time to completion for the analyses.
7. Traceability Matrix

As can be seen in the traceability matrix below, all requirements that do not have a corresponding test case in the acceptance test plan are **Priority 3**.

<table>
<thead>
<tr>
<th>TC1</th>
<th>TC2</th>
<th>TC3</th>
<th>TC4</th>
<th>TC5</th>
<th>TC6</th>
<th>TC7</th>
<th>TC8</th>
<th>TC9</th>
<th>TC10</th>
<th>TC11</th>
<th>TC12</th>
<th>TC13</th>
<th>TC14</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.1.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.1.1</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.1.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.2.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.4</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.6</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.1.7</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.2.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.2.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.4</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.3.6</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4.2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4.3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4.4</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.4.5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.6</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.2.6.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>3.3.3.1</td>
<td>3.3.3.1.1</td>
<td>3.3.3.1.2</td>
<td>3.3.3.1.3</td>
<td>3.3.3.1.4</td>
<td>3.3.3.1.5</td>
<td>3.3.3.2</td>
<td>3.3.3.3</td>
<td>3.3.3.3.1</td>
<td>3.3.3.4</td>
<td>3.3.3.4.1</td>
<td>3.3.3.4.2</td>
<td>3.3.3.4.3</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
</tbody>
</table>