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| **Item Number** | **Discussion** | **Comments/Notes** |
|  | **Program Functionalities:** |  |
| 1 | Want to reward solutions with test package start dates closer to available start dates. | Emphasis on larger test packages (top 25%?). |
| 2 | Use calendar dates instead of end days. |  |
| 3 | Ability to expand each test package to see associated work package finish dates. | Click on test packages for pop-ups containing data. |
| 4 | Program to display how many iterations the algorithm completed. | Final program to be set to optimal standards. |
| 5 | Export to Excel functionality and button added to interface. |  |
| 6 | Add the ability to run the program based on ISO completion dates along with work package completion dates. | Add an “ISO complete date” column to “FIWP to ISO” import tab. |
| 7 | Optimal solutions should be able to be replicated with minimal differences. |  |
| 8 | Add a work package percent complete option to the user inputs section. |  |
| 9 | Ability to save and import schedules for review – optimize solutions from baseline schedule. |  |
|  | **Additional Questions and Comments:** |  |
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Following are the user inputs:

1. No. of working hours per day
2. No. of working days per week
3. Allowed variation in resource (%)
4. Max project duration (weeks)
5. Max people per activity per day (R max)
6. Min people per activity per day (R min)

The genetic algorithm used in the software minimizes 2 factors:

1. Project end date/week: This is when the last hydrotest is scheduled.
2. Max man-hours required in any day/week

Following are the rules/constraints for the testing schedule:

1. Variation in resource: For the 1st half of the schedule, if the resource level decreases more than the "*Allowed variation in resource (%)*", then there is a penalty associated with it. Similarly, there's a penalty for increase in resource in the second half of the schedule. However, due to the structure of current algorithm, this penalty works more like a constraint than a penalty. This means that the solutions that do not satisfy "*Allowed variation in resource (%)*" are discarded.
2. Max project duration: This also works as a constraint. Solutions that do not satisfy "*Max project duration (weeks)*" are discarded.