Introduction

DEQ permits specify several different methods for calculating excess thermal load (ETL) limits. ETL limits may be expressed as an absolute limit for a given time period, or a calculated limit using flows, temperatures, or other parameters. Typically, the absolute limit is based on the low-flow critical case and is listed as Option A, while the calculated flow-based limit is listed as Option B (and sometimes Option C when temperature or other parameters are included). An example is shown below:

**Option A – No stream flow monitoring**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Thermal Load during…</td>
<td>Shall not exceed a rolling seven-day average of…</td>
</tr>
<tr>
<td>April 1–June 30</td>
<td>274 million Kcals/day</td>
</tr>
<tr>
<td>July 1–August 31</td>
<td>238 million Kcals/day</td>
</tr>
<tr>
<td>September 1–October 31</td>
<td>208 million Kcals/day</td>
</tr>
</tbody>
</table>

**Options B and C – Stream flow monitoring needed to comply with thermal limits**

The thermal limit may be calculated on a daily basis when river flows are reported by using the formulas provided in your permit. While *Option A* will have the same limit throughout the listed time period, *Options B and C* will have a different calculated limit every day. Depending on the permit conditions, a permittee can choose which option they wish to use.
What does this look like in NetDMR?

NetDMR is designed for parameters that have the same limit throughout the listed time period. In the example below, the excess thermal load limit is 274 million kcal/day. Instructions on how to enter data are provided below. Data entry will vary depending on the option selected and whether the limit was exceeded.

Option A

When Option A is chosen, data entry is straightforward. Calculate the ETL for each day of the reporting period and enter the maximum ETL value for the month into NetDMR as you would with any other parameter. If the thermal limit was exceeded, enter the number of days the limit was violated in the # of Ex. box.

### Option B or C

NetDMR requires a single limit and does not have provisions for calculated limits. NetDMR does however, allow the permit holder to submit a special report with these calculations.

The following examples show how to enter the ETL depending on whether the thermal limits are exceeded.

#### Maximum ETL is Less Than the Option A Limit

If the maximum calculated ETL is less than the Option A thermal limit, enter the maximum calculated ETL value as you typically would. You do not need to submit a special report in this case.

### Table Examples

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NODI List</th>
<th>Quantity or Loading</th>
<th># of Ex.</th>
<th>Freq. of Analysis</th>
<th>Smpl. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 51405</td>
<td>Excess Thermal Load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value 1</td>
<td>Mkcal/day</td>
<td></td>
<td>01/01</td>
<td>CA</td>
<td></td>
</tr>
<tr>
<td>Value 2</td>
<td>Million kilocalories per day</td>
<td>Daily</td>
<td></td>
<td>CALCTD</td>
<td></td>
</tr>
<tr>
<td>NODI: v</td>
<td>NODI:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enter the maximum calculated ETL for the reporting period.
### Maximum ETL is greater than the Option A limit but less than the Option B or C limits

If the maximum calculated ETL is greater than the Option A thermal limit but less than the calculated thermal limit for at least one of the other Options, enter NODI code 3 and attach a special report with the ETL limit calculations showing compliance with the Option. This will indicate that you are in compliance with the permit limits.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NODI Code</th>
<th>Quantity or Loading</th>
<th># of Ex.</th>
<th>Freq. of Analysis</th>
<th>Smpl. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Thermal Load</td>
<td>51405</td>
<td>Smpl. = 3</td>
<td></td>
<td></td>
<td>CA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Req. &lt;= 274 7 Day Average</td>
<td></td>
<td></td>
<td>CALCTD</td>
</tr>
</tbody>
</table>

Enter NODI code 3 when the maximum calculated ETL is greater than the Option A limit but less than one of the other limits. Attach report demonstrating compliance.

### Maximum ETL is greater than the Option A, B, and C limits

If the maximum calculated ETL is greater than the Option A thermal limit and greater than the calculated thermal limits for all other Options, enter the maximum calculated ETL value. This will show as a violation in NetDMR. Indicate the number of days that the thermal limit was exceeded in the # of Ex. box. You must also submit a special report with the ETL limit calculations.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NODI Code</th>
<th>Quantity or Loading</th>
<th># of Ex.</th>
<th>Freq. of Analysis</th>
<th>Smpl. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Thermal Load</td>
<td>51405</td>
<td>Smpl. = 303</td>
<td>7</td>
<td></td>
<td>CA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Req. &lt;= 274 7 Day Average</td>
<td></td>
<td></td>
<td>CALCTD</td>
</tr>
</tbody>
</table>

Enter the maximum calculated ETL here if it exceeds the thermal limits for all Options

Indicate the number of days during the reporting period that the thermal limit was exceeded.
What supporting information do I need to include?

In all cases, include the daily ETL values on the attached daily data sheet. A sample ETL section is shown below.

<table>
<thead>
<tr>
<th>Eff Temp Max (°C)</th>
<th>7-Day Avg River (cfs)</th>
<th>Load Limit (Mkcal/d)</th>
<th>7-Day Avg ETL (Mkcal/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.8</td>
<td>24.1</td>
<td>1855</td>
<td>108</td>
</tr>
<tr>
<td>24.0</td>
<td>24.1</td>
<td>1851</td>
<td>109</td>
</tr>
<tr>
<td>24.0</td>
<td>24.1</td>
<td>1850</td>
<td>108</td>
</tr>
<tr>
<td>24.2</td>
<td>24.1</td>
<td>1848</td>
<td>106</td>
</tr>
<tr>
<td>24.3</td>
<td>24.1</td>
<td>1845</td>
<td>105</td>
</tr>
<tr>
<td>24.1</td>
<td>24.0</td>
<td>1843</td>
<td>102</td>
</tr>
<tr>
<td>23.7</td>
<td>24.0</td>
<td>1842</td>
<td>99</td>
</tr>
<tr>
<td>23.6</td>
<td>24.0</td>
<td>1842</td>
<td>96</td>
</tr>
<tr>
<td>23.7</td>
<td>24.0</td>
<td>1846</td>
<td>94</td>
</tr>
<tr>
<td>24.2</td>
<td>24.0</td>
<td>1846</td>
<td>97</td>
</tr>
<tr>
<td>24.7</td>
<td>24.1</td>
<td>1861</td>
<td>100</td>
</tr>
<tr>
<td>24.9</td>
<td>24.1</td>
<td>1874</td>
<td>105</td>
</tr>
<tr>
<td>24.9</td>
<td>24.2</td>
<td>1887</td>
<td>112</td>
</tr>
</tbody>
</table>

Summary of the ETL reporting process

Calculate ETL using the formula specified in your permit

Does the ETL meet the Option A limit?
  - No
    - Enter the ETL value into NetDMR
    - Indicate number of days the limit was exceeded
    - Submit a special report with the ETL limit calculations
  - Yes
    - Calculate ETL limits using the formulas provided in your permit for Option B and C

Calculate ETL limits using the formulas provided in your permit for Option B and C

Does the ETL meet the Option B or C limits?
  - No
    - Enter calculated ETL value into NetDMR
  - Yes
    - Enter NODI code 3
    - Attach a special report with the ETL limit calculations

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deginfo@deq.state.or.us.