**RECORD OF REVISIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rev** | **Date** | **Description** | **POC** | **RM** |
| 0 | 9/17/2014 | Initial issue. Supersedes forms associated with Section I Rev 3. | Ari Ben Swartz,*ES-EPD* | Larry Goen, *ES-DO* |
| 1 | 4/15/2015 | Removed signatures from forms and incorrect citations from FM10 | Ari Ben Swartz,*ES-EPD* | Larry Goen, *ES-DO* |

**Contact the Standards POC for upkeep, interpretation, and variance issues.**

|  |  |
| --- | --- |
| **Chapter 17** | [**Pressure Safety POC and Committee**](http://engstandards.lanl.gov/ESM_Chapters.shtml#esm17) |

This document is online at <http://engstandards.lanl.gov>

**Pressure Safety Forms FM01 - FM10**

1. The appended forms are samples, provided to illustrate the minimum information required[[1]](#footnote-1).
2. The information shall be managed as a record and must comply with LANL P1020-1 *Laboratory Records Management*, and P1020-2, *Laboratory Document Control*. Normally this information will be placed in the PSCS database and then EDMS.
3. Any spreadsheet-based or individual Word forms posted online with this chapter may be used in lieu of these samples.

|  |  |
| --- | --- |
| FM01 | Pressure System Certification Status Form |
| FM02 | PRV Recall Summary Sheet |
| FM03 | Code Non-Compliance Log |
| FM04 | Minor Non-Compliance Log |
| FM05 | Flexible Pressure Element Visual External Examination |
| FM06 | Tubing and Piping Data Sheet |
| FM07 | Pressure System Component List |
| FM08 | Relief Device Placement Verification Record |
| FM09 | Thrust Consideration Data Sheet |
| FM10 | System Schematic |

Additional direction on how the forms are used, and what is specifically required to document a pressure system, is provided in the following attachments to ADMIN-1:

|  |  |
| --- | --- |
| ADMIN-1-2 | Form Directions |
| ADMIN-1-3 | Existing (Legacy) Pressure System Documentation Requirements |
| ADMIN-1-4 | New Pressure System Documentation Requirements |

| **Pressure System Certification Status Form**(Place this form in pressure system documentation package when completed) |
| --- |
| System ID No.: |       | Excluded System: | Yes [ ]  No [ ]  |
| Other System Identification Name (or Number): |       |
| System Location (TA-BLDG-Room): |       -      -      (Not applicable if mobile) |
| Mobile System “T” Number: |       (Not applicable if mobile) |
| System Contents (N2, AR, etc.): |       (Do not list if Classified) |
| System Fluid Category ( FS1, FS2, FS3 ): |       |
| System Design Pressure: |       |
| System Design Temperature Minimum |       |
| System Design Temperature Maximum |       |
| PRD Set Pressure(s) |       |
| Applicable ASME B&PVC Section for System: |       | Applicable B31 Code for system: |       |
| System Owner: |       | Phone/Pager: |       |
| Last Re-certification (MM/DD/YY): |       |
| Next Re-certification (MM/DD/YY): |       |
| Reviewer Name: |       |
| Notes: |  |
| Approval Signature List: |  **Printed Name & Z # Signature Date** |
| FOD PSO Certification |             |  |  |
| CPSO Certification |             |  |  |

| **PRV Recall Summary Sheet** |
| --- |
| System Name and ID No.: |       |
| **Pressure Relief Device Component Number** | **Manufacturer** | **Model Number** | **MAWP(PSIG)** | **Set Pressure (PSIG)** | Test date | **Due Date** | **PRV Test Lab Report #** | **Flow check procedure or Calculation Number** |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |

| **Code Non-Compliance Log\*** |
| --- |
| System ID No.: |       |
| System Description |       |
| Page       of       |  |
| **Description** | **Code Requirements****(Section, Chapter & Paragraph)** | **Closure & Rationale** | **Closure date & LANL PSO Signature & Z #** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Minor Non-Compliance Log[[2]](#footnote-2),[[3]](#footnote-3)**

| System ID No.: |       |
| --- | --- |
| System Description |       |
| Page       of       |  |
| **Description** | Requirement**(LANL Document, Section & Paragraph)** | **Closure & Rationale** | **Closure date & Initials** |
| **Owner** | **FOD PSO** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

| System ID No.: |       |
| --- | --- |
| Date of Inspection |       | FOD PSO Signature & Z # |  |
| **Component****Number** | MAWP | Integrity | Are Flex Hose Restraints used**Yes or No** | **Flex Hose Restraint** |
| ACCEPTABLE(good condition, no visible flaws) | UNACCEPTABLE (Describe)(kinks, frayed, crushed, etc.) | ACC | **UNACC** |
|  |       |       |       |  | [ ]  | [ ]  |
|  |       |       |       |  | [ ]  | **[ ]**  |
|  |       |       |       |  | [ ]  | **[ ]**  |
|  |       |       |       |  | [ ]  | **[ ]**  |
|  |       |       |       |  | [ ]  | **[ ]**  |
|  |       |       |       |  | [ ]  | **[ ]**  |

**Tubing and Piping Data Sheet1**

| System ID No.: |       | Drawing # |       | Date |  |
| --- | --- | --- | --- | --- | --- |
| **Components that tubing/Piping section is located between.****(eg. MV-4 & PI-3)***This is N/A if all piping/tubing is the same size and type throughout entire system* | Tubing Material**(SS, CU, CS, etc.)** | Tubing Spec./Grade**(316-A26, 304L-A358, etc.)** | **OD (in.)** | **ID (in.)** | **Seamless** | **Max Operating Temp °F** |
|  |  |
|  |       |       |  |  | [ ]  **Yes** | [ ]  **No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |
|  |       |       |  |  | **[ ]  Yes** | **[ ]  No** |  |

| **Pressure System Component List \*** |
| --- |
| Pressure system documentation package I.D. Number: |       |
| System Location (TA-BLDG-Room): |       -      -      |
| **Component I.D.** | Manufacturer | **Model Number** | **Material (316S.S., Brass, etc.)** | **MAWP** | **Soft Goods Material(s)1** | **Code Stamp (U, UV,etc.)2** | **Listed Item (Y/N)** | **Code of Item** |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |
|       |       |       |       |       |       |       |  |  |

| **Relief Device Placement Verification Record[[4]](#footnote-4)**This form is to be maintained in the pressure system documentation package. |
| --- |
| 1) Perform system review. Identify placement of all components in the pressure system in relationship to a pressure relief device. Can any components be isolated from a pressure relief device? (i.e., can a valve be closed which blocks flow path to a relief device?)  |
| Yes [ ]  No [ ]  |
| List below all the components that can be isolated from a pressure relief device. ( attach sheets as necessary) |
| a) |       | b) |       | c) |       | d) |       |
| e) |       | f) |       | g) |       | h) |       |
|  |
| 2) Is the MAWP, of any of the identified components, less than the system source supply pressure? |
| Yes [ ]  No [ ]  |
| If yes, list components below, and re-design system to provide over pressure protection for the listed components. |
| **Component I.D.** | **Manufacturer** | **Model** | **MAWP (psig)** |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |

|  |
| --- |
| **Thrust Consideration Data Sheet[[5]](#footnote-5)** |
| Use for all manual valves, nozzles, relief devices, solenoid valves, (etc.) in a system that discharge to the ambient surroundings. |
| **Component Identification String** | **Fluid** | **I.D. of nozzle/tubing at discharge (inches)** | **Maximum source pressure (psig)** | **Maximum surge or sustained thrust (lbf)** | **Type of restraint Mechanism ( if any installed)** | **Maximum loading restraint can withstand [[6]](#footnote-6) (lbs)** |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |

Sketch the pressure system

| **System I.D. Number** | **Relief Device Component I.D.** | **Sketcher/Evaluator Name** | **Date** |
| --- | --- | --- | --- |
|  |  |  |  |
|  |
|  |

1. As such may be revised for format or to reduce required information with POC and Standards Manager approval as an admin change. [↑](#footnote-ref-1)
2. Examples of minor non-compliances are: Relief device past recall due date, in-service inspections past due date, chipped paint, lack of flex-hose restraints, leaking fittings, surface anomalies, identification tags, schematics do not match physical layout, mud dauber nests in relief valve discharge ports. [↑](#footnote-ref-2)
3. For ML-1 or ML-2 initiate an NCR [↑](#footnote-ref-3)
4. This data sheet accomplishes the requirements of ASME B31.3, Paras. 301.2.1 & 301.2.2 [↑](#footnote-ref-4)
5. This data sheet accomplishes the requirements of ASME B31.3, Paragraph 301.5.5, 322.6.2 & Appendix G [↑](#footnote-ref-5)
6. As determined by manufacturers’ documentation, finite element analysis, calculations, catalog description, etc. [↑](#footnote-ref-6)