**CHANGE HISTORY (≤ LAST 5 REV-MODS)**

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>H-3</td>
<td>01/10/2018</td>
<td>Maintenance Request</td>
<td>Changed Hydrosep to water Purification System.</td>
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<tr>
<td>H-2</td>
<td>03/07/2017</td>
<td>Engineering purchased a different model of eyewash station.</td>
<td>Updated procedure title, scope, and record sections.</td>
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<tr>
<td>H-1</td>
<td>06/09/2016</td>
<td>Address Environmental PER WRPS-PER 2016-0490</td>
<td>Updated Data table 1 to address Environmental Signature/Time issues.</td>
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<tr>
<td>H-0</td>
<td>04/22/2015</td>
<td>Periodic Review</td>
<td>Add Steps 3.3.1, 5.1.24. Reword Steps 4.2.1, 5.2.48.1, Records Section 5.6, 12th bullet at Section 4.1. Struck Warnings at Section 3.1, and pages 10 &amp; 12, struck 11th bullet at 4.1, Struck Critical Steps at 5.2.26 and 5.2.41.</td>
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<tr>
<td>G-7</td>
<td>11/19/2014</td>
<td>CHAMPS Removal</td>
<td>Removed reference to CHAMPS, updated records statements and removed next periodic review date.</td>
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**Table of Contents**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>PURPOSE AND SCOPE</td>
<td>3</td>
</tr>
<tr>
<td>1.1</td>
<td>Purpose</td>
<td>3</td>
</tr>
<tr>
<td>1.2</td>
<td>Scope</td>
<td>3</td>
</tr>
<tr>
<td>2.0</td>
<td>INFORMATION</td>
<td>3</td>
</tr>
<tr>
<td>2.1</td>
<td>General Information</td>
<td>3</td>
</tr>
<tr>
<td>3.0</td>
<td>PRECAUTIONS AND LIMITATIONS</td>
<td>3</td>
</tr>
<tr>
<td>3.1</td>
<td>Personnel Safety</td>
<td>3</td>
</tr>
<tr>
<td>3.2</td>
<td>Radiation and Contamination Control</td>
<td>3</td>
</tr>
<tr>
<td>4.0</td>
<td>PREREQUISITES</td>
<td>4</td>
</tr>
<tr>
<td>4.1</td>
<td>Special Tools, Equipment, and Supplies</td>
<td>4</td>
</tr>
<tr>
<td>4.2</td>
<td>Field Preparation</td>
<td>4</td>
</tr>
<tr>
<td>5.0</td>
<td>PROCEDURE</td>
<td>5</td>
</tr>
<tr>
<td>5.1</td>
<td>Weekly Inspections</td>
<td>5</td>
</tr>
<tr>
<td>5.2</td>
<td>Quarterly Inspections</td>
<td>8</td>
</tr>
<tr>
<td>5.3</td>
<td>Restoration</td>
<td>14</td>
</tr>
<tr>
<td>5.4</td>
<td>Acceptance Criteria</td>
<td>14</td>
</tr>
<tr>
<td>5.5</td>
<td>Review</td>
<td>14</td>
</tr>
</tbody>
</table>
ENCON, GUARDIAN, or BRADLEY Portable Eyewash Station
Inspection/Maintenance

5.6 Records ......................................................................................................................... 14
Data Table 1 - Quarterly Inspection Results........................................................................ 15
1.0 PURPOSE AND SCOPE

1.1 Purpose

This is a procedure to perform inspection and maintenance on Portable Eye Wash/Safety Shower Stations to acknowledge the recommendations identified in TFC-ESHQ-S-STD-19.

1.2 Scope

This procedure applies to portable 10-gallon (38 liter), 13 gallon (49.4 liter), and 15 gallon (56.7 liter) eyewash/safety showers; eyewash only - 01103002, eyewash/drench hose - (ENCON) 01104002, or (Bradley) S19-788, drench hose only - 01101002, heated eyewash – 01103004, to portable 5 gallon (19 liter) - Z358.1-1990, (Guardian) G1562, 15 gallon portable eyewash/drench hose unit, and (Guardian) G1562HTR, 15 gallon portable eyewash/drench hose unit with Heated Orange Insulation Jacket.

2.0 INFORMATION

2.1 General Information

If vendor information is needed, be aware that ENCON Safety Products is now known as Vallen Corp/ENCON Safety Products.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Review MSDS for safe handling of chemical products used in this procedure.

3.1.2 Exercise back and foot safety by using a hand-cart or other help to move and handle these units. (Approximate weight for a 13 gallon tank is 108 pounds.)

3.2 Radiation and Contamination Control

This procedure is not to be performed within a Radiological Contamination Area, High Radiation Area, Airborne Radioactivity Area, or Soil Contamination Area.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

- 5-gallon catch bucket, graduates marked at 1 and 2 gallon or flow-meter device to divert water to a drain
- Sleeving
- Plexiglas gauge
- Tags (similar to fire extinguisher tags), shop stock
- Household bleach, Store Stock #38-0580, GHS-SDS and/or MSDS #012915A
- Supply of potable water for flushing and cleaning
- Supply of clear clean potable water for final filling (i.e. bottled water, carboy of water from power plant, filtered drinking water)
- Oil free air (portable oil less air compressor or bottled grade D breathing air with oil free regulator)
- Spare replacement portable eye wash unit if available
- 8-ounce bottle Hydrosep or sperian water purification solution. Suggested Vendor: Lab Safety Supply Inc., P.O. Box 1368, Janesville, WI 53547-1368, GHS-SDS and/or MSDS #021669 or GHS-SDS and/or MSDS #025356A
- Latex or Nitrile gloves
- Potable water hose (i.e., white hose with blue stripe)
- 5.0 micron water filter
- Other tools, equipment and supplies as identified by Shift Manager/OE/FWS/User.

4.2 Field Preparation

4.2.1 **OBTAIN** release from Shift Manager prior to beginning performance of this procedure.
5.0 **PROCEDURE**

5.1 **Weekly Inspections**

**Inspect Eyewash Station**

NOTE - All weekly inspections are performed as part of the quarterly inspections when performing the quarterly inspections.

5.1.1 IF performing quarterly inspections, **GO TO** Section 5.2.

5.1.2 CHECK pressure gauge for proper pressure (gauge in the green).

5.1.3 ENSURE flow will be directed to either a drain or a catch container.

5.1.4 ACTIVATE eyewash station.

5.1.5 CHECK valve opens within one second.

5.1.6 CHECK valve stays open without the use of the operator’s hands and water remains flowing until valve is intentionally closed.

5.1.7 CHECK water temperature is tepid (moderately warm or lukewarm).

5.1.8 ALLOW water to run for approximately 15 seconds to ensure proper flow.

5.1.9 REPLACE dust covers on eyewash nozzles.
5.1 Weekly Inspections (Cont.)

Inspect Drench Hoses

5.1.10 REMOVE drench hose nozzle from holding bracket.

5.1.11 VISUALLY INSPECT the hose and the nozzle for damage or wear.

5.1.12 SQUEEZE drench hose handle to confirm drench hose valve goes from OFF to ON in one second or less and water velocity is non-injurious to the user THEN

RELEASE the handle to stop water flow.

5.1.13 CHECK the hose and fittings upstream of the handle for leaks.

5.1.14 IF any damage, wear, or leaks are found, REPAIR/REPLACE them, OR

IF individual components/fittings cannot be repaired or replaced, REPLACE the entire unit.

5.1.15 OPEN relief valve to bleed pressure from unit.

5.1.16 OPEN AND REMOVE lid.

5.1.17 IF water is not clear or algae is present, GO TO Section 5.2.
5.1 Weekly Inspections (Cont.)

NOTE - Hydrosep is formulated to accept new potable water after each test for a 3 month period.

5.1.18 USING one of the following, FILL tank with potable water to fill line.
• Potable water hose with 5.0 micron water filter
• Bottled water
• Carboy of water from power plant
• Filtered drinking water.

5.1.19 REPLACE lid.

5.1.19.1 ALIGN seal.

5.1.19.2 LOCK lid.

5.1.20 ENSURE relief valve is CLOSED.

5.1.21 UTILIZING oil free air (e.g., oil free air compressor or bottled grade D breathing air with oil free regulator), PRESSURIZE unit until pressure falls within green area of gauge.

NOTE - Pressure will drop slightly after filling due to cooling of compressed air.

5.1.22 ALLOW approximately 20 minutes for pressure to stabilize.

5.1.22.1 IF additional air is required, ADD air until pressure falls within green area of gauge.

NOTE - Eye wash station must be tagged similar to fire extinguishers.

5.1.23 ENSURE inspection tag is present.

5.1.23.1 SIGN AND DATE inspection tag.

5.1.24 AFTER completing the Weekly Inspections, SIGN AND DATE the associated weekly PM Data Sheet(s).

5.1.25 IF required conditions are achieved, GO TO Section 5.3.
5.2 Quarterly Inspections

NOTE - Industrial Safety has determined the only time an eye wash unit can be removed from its designated location is when it is being replaced with an equivalent, fully serviced unit.

5.2.1 IF a spare eye wash unit is not available, LEAVE un-serviced unit in place until an equivalent, fully serviced unit becomes available.

5.2.1.1 NOTIFY FWS AND RECORD discrepancy in comment section of Data Table 1.

5.2.2 IF a spare eye wash unit is available, REPLACE eye wash with equivalent, fully serviced unit.

5.2.2.1 ENSURE access to replacement eye wash is free of any impediments.

5.2.2.2 ENSURE pressure falls within green area of gauge.

5.2.3 TRANSPORT unit to be serviced, to Maintenance Shop.

5.2.4 PRIOR to performing maintenance, ENSURE the unit is in a controlled environment (i.e., indoors).

Inspect Eyewash Station

5.2.5 CHECK pressure gauge for proper pressure (gauge in the green).

5.2.6 ENSURE flow will be directed to either a drain or a catch container.

5.2.7 ACTIVATE eyewash station.

5.2.8 CHECK valve opens within one second AND RECORD results on Data Table 1.

5.2.9 CHECK valve stays open without the use of the operator’s hands and water remains flowing until valve is intentionally closed AND RECORD results on Data Table 1.

5.2.10 CHECK water temperature is tepid (moderately warm or lukewarm) AND RECORD results on Data Table 1.
5.2 Quarterly Inspections (Cont.)

5.2.11 **CHECK** water velocity is non-injurious to the user **AND**
**RECORD** results on Data Table 1.

5.2.12 **USING** the Plexiglas gauge, **CHECK** both eye wash streams cover the area between scored lines when the gauge is lowered no more than 1.5 inches below the streams peak **AND**
**RECORD** results on Data Table 1.

**Inspect Drench Hoses**

5.2.13 **REMOVE** drench hose nozzle from holding bracket.

5.2.14 **VISUALLY INSPECT** the hose and the nozzle for damage or wear
**RECORD** results on Data Table 1.

5.2.15 **SQUEEZE** drench hose handle to confirm drench hose valve goes from OFF to ON in one second or less and water velocity is non-injurious to the user **THEN**
**RELEASE** the handle to stop water flow.

5.2.15.1 **RECORD** results on Data Table 1.

5.2.16 **CHECK** the hose and fittings upstream of the handle for leaks.

5.2.17 **IF** any damage, wear, or leaks are found, **REPAIR/REPLACE** them,

**OR**

**IF** individual components/fittings cannot be repaired or replaced, **REPLACE** the entire unit.

5.2.18 **RECORD** results on Data Table 1.
5.2 Quarterly Inspections (Cont.)

Flow Verification

5.2.19 TAPE plastic sleeving around eyewash nozzles to funnel flow into a 5 gallon bucket.

5.2.20 CHECK that it takes less than 2 minutes and 30 seconds to fill the bucket to the 1-gallon graduated line AND RECORD results on Data Table 1.

5.2.20.1 CHECK water output can be maintained for 15 minutes.

5.2.21 REMOVE plastic sleeving from eyewash nozzles.

5.2.22 EMPTY the contents of the bucket down the drain.

5.2.23 REPLACE dust covers on eyewash nozzles.

5.2.24 OPEN relief valve to bleed pressure from unit.

5.2.25 OPEN AND REMOVE lid AND DRAIN unit.

5.2.26 RINSE AND CLEAN interior of unit using approximately one ounce household bleach solution, along with one gallon potable water AND FILL to fill-line with 10 to 1 solution.

5.2.27 REPLACE lid.

5.2.27.1 ALIGN seal.

5.2.27.2 LOCK lid.
5.2 Quarterly Inspections (Cont.)

5.2.28 ENSURE relief valve is CLOSED.

5.2.29 UTILIZING oil free air (e.g., oil free air compressor or bottled grade D breathing air with oil free regulator), PRESSURIZE unit, until pressure falls within green area of gauge.

5.2.30 FLUSH solution through eyewash nozzles and hoses for 10 to 15 seconds AND

ALLOW to stand for one to two hours.

5.2.31 AFTER one to two hours, EMPTY unit using drench hose and eyewash nozzles.

5.2.32 OPEN relief valve to bleed any remaining pressure from unit.

5.2.33 REMOVE lid AND

DRAIN unit.

5.2.34 USING one of the following, FILL unit with potable water to "Fill Line":

- Potable water hose with 5.0 micron water filter
- Bottled water
- Carboy of water from power plant
- Filtered drinking water.

5.2.35 REPLACE lid.

5.2.35.1 ALIGN seal.

5.2.35.2 LOCK lid.

5.2.36 ENSURE relief valve is CLOSED.

5.2.37 UTILIZING oil free air (e.g., oil free air compressor or bottled grade D breathing air with oil free regulator), PRESSURIZE unit until pressure falls within green area of gauge.

5.2.38 FLUSH through eyewash nozzles and hose until tank is empty, or pressure is relieved.
5.2 Quarterly Inspections (Cont.)

5.2.39 REPEAT Steps 5.2.33 through 5.2.38 at least three times, OR

UNTIL no bleach odor is present in reservoir and hose.

5.2.40 IF required conditions are achieved, OPEN relief valve to bleed pressure from unit.

5.2.40.1 OPEN AND REMOVE lid.

5.2.41 IF concentrated form of water Purification Solution comes in contact with eyes, FLUSH eyes with water.

NOTE - One bottle of Hydrosep will preserve from 5 to 20 gallons of water.

5.2.42 FILL unit approximately half full with potable water AND

ADD a full 8-ounce bottle of water Purification Solution.

5.2.43 CONTINUE filling with potable water to "Fill Line".

5.2.44 REPLACE lid.

5.2.44.1 ALIGN seal.

5.2.44.2 LOCK lid.
**5.2 Quarterly Inspections (Cont.)**

5.2.45 **ENSURE** relief valve is CLOSED.

5.2.46 **UTILIZING** oil free air (e.g., oil free air compressor or bottled grade D breathing air with oil free regulator), **PRESSURIZE** unit until pressure falls within green area of gauge.

**NOTE** - Pressure will drop slightly after filling due to cooling of compressed air.

5.2.47 **ALLOW** approximately 20 minutes for pressure to stabilize.

5.2.47.1 **IF** additional air is required, **ADD** air until pressure falls within green area of gauge.

**NOTE** - Eye wash station must be tagged similar to fire extinguishers.

5.2.48 **ENSURE** inspection tag is present.

5.2.48.1 **IF** inspection tag is not already labeled “Quarterly,” **LABEL** tag as Quarterly **AND**

**SIGN AND DATE** the inspection tag.

5.2.49 **IF** a spare unit was put into service at Step 5.2.1, **COVER** serviced unit with a plastic bag to maintain cleanliness **AND**

**STORE** for future use.
5.3 Restoration

5.3.1 ENSURE access to eye wash station is free of any impediments.

5.3.2 REPORT any deficiencies and/or probable cause of early failure to FWS for corrective action.

5.3.3 ENSURE floor has been cleared of all spilled water.

5.4 Acceptance Criteria

Comparison and verification of data in applicable steps of the procedure satisfies the Acceptance Criteria for this procedure.

5.5 Review

5.5.1 INFORM FWS test is complete.

5.5.2 The FWS MUST REVIEW AND ENSURE the following:

5.5.2.1 IDENTIFY AND GENERATE work requests needed as a result of this procedure.

5.5.2.2 RECORD any work request number(s) in Comments/Remarks section of Data Sheet.

5.6 Records

This procedure is performed within a work package, as such, the procedure in its entirety will be maintained as a record per the Work Control process.

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
## ENCON, GUARDIAN, or BRADLEY Portable Eyewash Station
### Inspection/Maintenance

#### Data Table 1 - Quarterly Inspection Results

NOTE - This Data Sheet shall be copied as often as needed to record data for each eyewash station serviced.

<table>
<thead>
<tr>
<th>UNIT NUMBER</th>
<th>Pass</th>
<th>Fail</th>
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<tbody>
<tr>
<td>Eyewash Valve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyewash valve opens within one second</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyewash valve stays open without the use of the operator’s hands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyewash Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water remains flowing until valve is intentionally closed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water temperature is tepid (moderately warm or lukewarm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water velocity is non-injurious to the user</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both eye wash streams cover the area between the plexiglas gauge scored lines when the gauge is lowered no more than 1.5 inches below the streams peak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyewash Flow</td>
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<tr>
<td>Less than 2 minutes and 30 seconds to fill a bucket to one gallon</td>
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<tr>
<td>.4gpm for 15 minutes</td>
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</tr>
<tr>
<td>Drench Hose</td>
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</tr>
<tr>
<td>No visual damage or wear to drench hose or nozzle</td>
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<tr>
<td>Nozzle opens within one second</td>
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<tr>
<td>No visual leaks at hose, nozzle, or fittings during discharge</td>
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Comments:

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