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## **SECTION 23 51 23`**

### **ClosureTurf® HDPE PRESSURE RELIEF VALVE SPECIFICATION**

#### **PART 1: GENERAL**

##### **SUMMARY**

A. Section Includes:

Specifications for the Pressure Relief Valve Component of the patented ClosureTurf® and HydroTurf® System.

##### **RELATED SECTIONS**

- Section 31 23 13** - Subgrade preparation (Upper 6 inches of subgrade only)
- Section 01 42 00** - References and Definitions
- Section 01 60 00** - ClosureTurf® Product Specification
- Section 01 60 00** - ClosureTurf® MicroDrain® Product Specification
- Section 01 60 01** - ClosureTurf® MicroSpike® Product Specification
- Section 01 73 19** - ClosureTurf® Installation Specification
- Section 31 05 16** - ClosureTurf® Sand Infill Specification
- Section 03 49 01** - Alternate HydroBinder® Infill Specification
- Section 23 51 23** - ClosureTurf® HDPE Pressure Relief Valve Specification

#### **PART 2: PRODUCTS**

##### **2.01 DESCRIPTION**

- A. The Pressure Relief Valves are a required component of the ClosureTurf® system on any project where gas is expected to accumulate under the geomembrane. Their function impedes air

intrusion into an operating gas system and allows for fugitive gas to vent if a malfunction in the primary gas collection system occurs.

1. Pressure Relief Valves are designed to convey a maximum of 50 SCFM (Standard Cubic Feet Per Minute) under 1 inch of water column.
2. Design Engineer will be responsible for designing the correct amount of Pressure Relief Valves required for the site.

## **2.02 MATERIALS**

- A. Pressure Relief Valves are supplied with the ClosureTurf® System (up to 1 (one) per acre) and consist of:
  1. A manufactured HDPE Surficial Foot welded to a Flat Stock Base.
  2. A Valve Body Assembly with an internal valve sleeve used to vent gas if a malfunction in the system occurs.

## **PART 3: EXECUTION:**

### **3.01 INSTALLERS**

- A. Installation of Pressure Relief Valves will be completed by an installer certified by Watershed Geosynthetics.

#### **B. SUBSTITUTION LIMITATIONS**

1. Pressure Relief Valves will be provided only by Watershed Geosynthetics, LLC or AGRU America, Inc.
  - a. Additional Pressure Relief Valves must be ordered through Watershed Geosynthetics, LLC. or AGRU America, Inc.

#### **C. EXAMINATION**

1. Place Pressure Relief Valves as Geomembrane Component is deployed.
  - a. Additional Pressure Relief Valves may be ordered as required by

the POR (Professional of Record).

- b. Additional valves will be supplied at a per unit cost.

#### D. VERIFICATION OF CONDITIONS

1. Verify that the surface where the Pressure Relief Valve will be placed is:
  - a. Not saturated at the time of Installation.
  - b. Substantially free of protrusions that may block the valve from minor movements due to expansion, contraction and/or settlement.

#### E. PREPARATION

1. The Surficial Foot Base is designed to move with the dynamic forces exerted by the Geomembrane Component in a typical landfill environment.
  - a. The Surficial Base should not be confined by base grade design.

### 3.02 INSTALLATION

- A. At spacing specified by the POR;
  1. Place the Surficial Foot and Flat Stock underneath;
  2. Core a hole above the hole in the top plate.;
  3. Push the Valve Body Assembly through the cored hole.
  4. Place Pressure Relief Valve Body into the hole in the Surficial Foot.
  5. Weld the Valve Body Assembly to the Surficial Foot.
    - a. Assure that the Valve Body Assembly is vertical prior to welding.
  6. Weld geomembrane closure liner to top plate of the surficial foot. If required, protect the installed Pressure Relief Valve from damage during the remainder of construction activities.

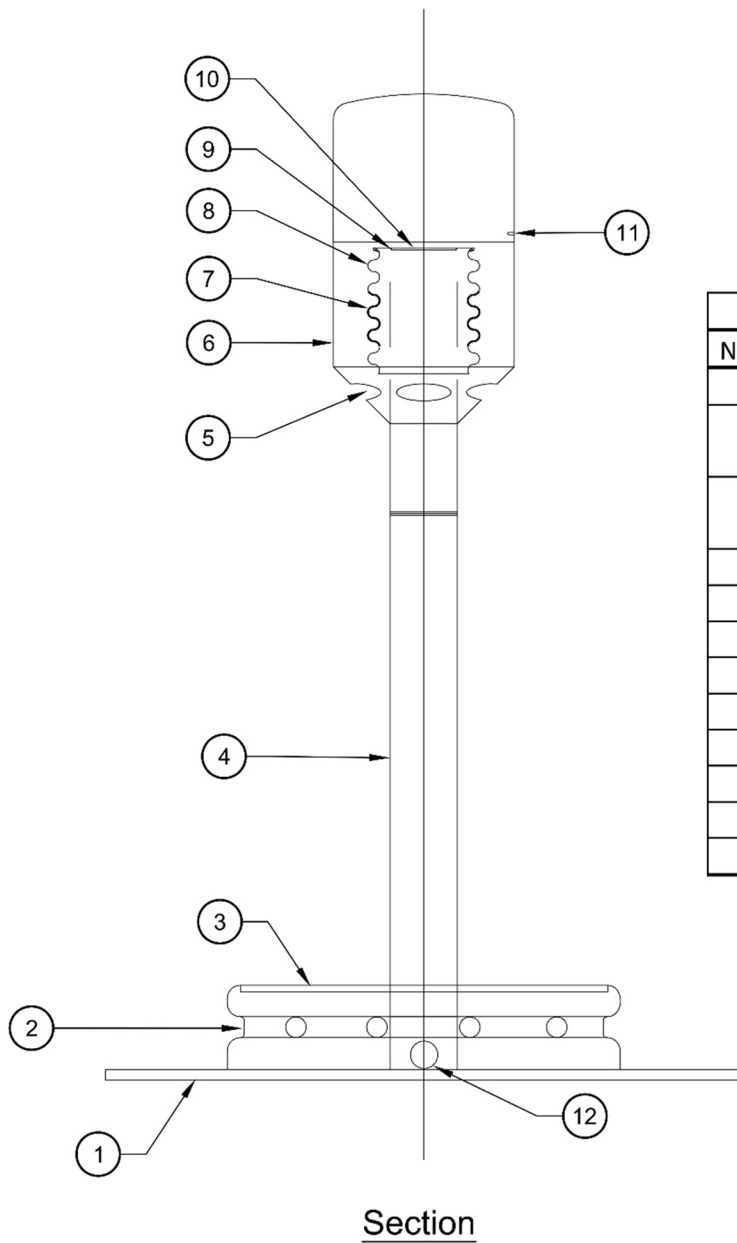
### 3.03 REPAIR

- A. Contact Watershed Geosynthetics, LLC if repairs or replacement parts are needed.

### 3.04 ATTACHMENTS

- A. See Figure 1 for Pressure Relief Valve Schematic.

**END OF SECTION**



Pressure Relief Valve (Patent Pending)	
Number	Item
1	24"x24" PE stabilization base plate
2	15 inch ID diameter PE collector ring (9-15/16ths collection holes)
3	15 inch PE top plate (2.5" beveled hole for valve stem installation)
4	2 inch SDR 11 PE valve stem
5	4 - 1-1/8" dia. Holes
6	4 inch PE valve body
7	2 - 2-1/4" dia. Holes in valve sleeve
8	3 inch PE valve sleeve
9	Viton O-Ring
10	Neoprene valve diaphragm
11	5/16 x 3/8ths stainless steel set screw
12	3 - 1-1/8" dia. Holes in valve stem

**Figure 1: HDPE Pressure Relief Valve**