DOCUMENT INFORMATION

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- ☐ Balance of Facilities
- ☐ Pretreatment
- ☐ HLW Vitrification
- ☐ LAW Vitrification
- ☐ Analytical
- ☐ External Interfaces
- ☐ Across all areas

Document is applicable to ALARA? ☐ Yes ☒ No

In general, any record that deals with Radiation, Radioactive Material, Occupational Dose, Dose Reduction, or Dose Rate are considered ALARA Records. (See 24590-WTP-GPP-SRAD-002, *Application of ALARA in the Design Process*, section 4.8 for additional guidance)

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History Sheet

Rev	Date	Reason for revision	Revised by
0	6/30/02	Issued for Permitting Use	H. Woodworth
1	7/11/02	Revised number of sumps in section 3 and sump materials in Table 1	K. Chandrasekaran
2	7/31/02	Revised number of sumps in Table 1 to reflect below grade sumps	K. Chandrasekaran
3	9/18/02	Revised number of sumps in Table 1 to include zero feet elevation sumps and added Table 2 for drains	K. Chandrasekaran
4	11/11/02	Revised document, Issued for Permitting Use	HR Woodworth
5	~~12/23/02~~ 1/14/03	Revised document, Issued for Permitting Use.	HR Woodworth

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1 Introduction

The Washington Administrative Code, WAC 173-303, requires the use of secondary containment for systems containing dangerous waste. This revision of the document provides a brief description of the secondary containment sumps located below grade and at zero feet level of the Pretreatment facility.

2 Applicable Documents

- Washington Administrative Code, WAC 173-303, Dangerous Waste Regulations

3 Description

3.1 Below Grade Level

There are two sumps located below grade in this facility. One of the sumps is a wet type and the other is a dry type sump.

The dry sump is located in the pit at the (-) 19'-0" level. This dry sump is an epoxy coated sump. The maximum operating volume of this sump is approximately 55 gallons. This sump is equipped with level detection and a pump that will discharge the liquid from the sump to the Floor Drain Collection Vessel (PWD-VSL-00045) located at the same elevation as that of the sump.

The wet sump is located in the pit at the (-) 45'-0" level. The sump is operated wet at all times. The upper edge of this fabricated stainless steel (6Mo) sump interfaces with the cell liner. The maximum operating volume of the sump is less than 235 gallons. The sump has provisions for level detection. This sump is also equipped with two ejectors that will eject the sump contents to Ultimate Overflow Vessel, (PWD-VSL-00033) and the HLW Effluent Transfer Vessel, (PWD-VSL-00043) located at (-) 45'-0" level.

There are no embedded drain lines that form an extension of the secondary containment boundary.

Information on the Pretreatment Facility below grade sumps is given in Table 1.

3.2 Elevation 0'

All hot cell and black cell areas are lined with stainless steel for secondary containment. There are a total of 24 low point sumps. These sumps are located at the low points of the liner and act as catch pots, should any liquid be released into the cell. All sumps are fabricated from stainless steel and are dry type sumps.

Each sump is approximately 30 inches in diameter and 28 inches deep. The upper edge interfaces with the cell liner. The maximum operating volume of each sump is less than 75 gallons. Each sump is equipped with level detection and an ejector that will discharge the liquid from the sump to the Plant Wash Vessel (PWD-VSL-00044) located at 0'-0" level.

Information on the Pretreatment Facility 0' elevation sumps is given in Table 1.
Information on the Pretreatment Facility 0' elevation drains is given in Table 2.

Table 1 PT Sumps

##	Sump PIN	PT Room Number	Maximum Sump Capacity, GAL	Sump Type/Nominal Operating Volume, GAL	Sump Dimensions, Inch	P&ID Number	Leak Detection Type	Material of Fabrication
1	PWD-SUMP-00071	P-B005 (PIT –19)	55.1	Dry Sump	30" O.D. X 18"	24590-PTF-M6-PWD-P00041	Radar	Epoxy coating
2	PWD-SUMP-00040	P-B002 (PIT-45)	233.7	140.3	60" X 30" X 30"	24590-PTF-M6-PWD-P00012	Bubbler	6Mo
3	PWD-SUMP-00001	P-0108B	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
4	PWD-SUMP-00001A	P-0108C	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 304L
5	PWD-SUMP-00002	P-0108A	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
6	PWD-SUMP-00002A	P-0108	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 304L
7	PWD-SUMP-00003	P-0106	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
8	PWD-SUMP-00004	P-0104	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
9	PWD-SUMP-00005	P-0102A	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
10	PWD-SUMP-00006	P-0102	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00008	Radar	SS 304L
11	PWD-SUMP-00007	P-0109	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
12	PWD-SUMP-00008	P-0111	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
13	PWD-SUMP-00009	P-0112	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
14	PWD-SUMP-00010	P-0113	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
15	PWD-SUMP-00011	P-0114	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
16	PWD-SUMP-00012	P-0117	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00009	Radar	SS 304L
17	PWD-SUMP-00013	P-0117A	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00014	Radar	SS 304L
18	PWD-SUMP-00026	P-0123 (Hot Cell)	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 316L
19	PWD-SUMP-00028	P-0123 (Hot Cell)	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00014	Radar	SS 316L
20	PWD-SUMP-00029	P-0123 (Hot Cell)	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00014	Radar	SS 316L
21	PWD-SUMP-00031	P-0119	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 304L
22	PWD-SUMP-00032	P-0123A (Maintenance Cave)	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 316L
23	PWD-SUMP-00033	P-0123A (Maintenance Cave)	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00010	Radar	SS 316L
24	PWD-SUMP-00034	P-0121A	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00012	Radar	SS 304L
25	PWD-SUMP-00035	P-0122A	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00012	Radar	SS 304L
26	PWD-SUMP-00036	P-0118	73.5	Dry Sump	30" Dia. by ~28" deep	24590-PTF-M6-PWD-P00012	Radar	SS 304L

Table 2 PT Drains

###	Drain Line	PT Room Number	Max. Drain Line Capacity (gallons per minute)	Drain Line Size (Pipe diameter, inches)	P&ID Number	Leak Detection Type	Material of Fabrication
1	PWD-ZF-03000-S11B-06	P-0123, Hot Cell , Elevation 0'	939	6	24590-PTF-M6-PWD-P0011	N/A	SS316L
2	PWD-ZF-03001-S11B-06	P-0123, Hot Cell , Elevation 0'	939	6	24590-PTF-M6-PWD-P0011	N/A	SS316L
3	PJV-ZF-00027-S11B-02	P-0101, PJV-BULGE-00001 Drain Elevation 0'	60	2	24590-PTF-M6-PJV-P0002	N/A	SS316L
4	PWD-ZF-00004-S11B-02	P-0105, PVP-BULGE-00001 Drain Elevation 0'	60	2	24590-PTF-M6-PVP-P0003	N/A	SS316L
5	PWD-ZF-00005-S11B-02	P-0101A, PVP-BULGE-00002 Drain Elevation 0'	60	2	24590-PTF-M6-PVP-P0003	N/A	SS316L
6	RDP-ZF-00016-S11B-02	P-0110A, RDP-BULGE-00010 Drain Elevation 0'	60	2	24590-RDP-M6-RDP-P0001	N/A	SS316L
7	TCP-PH-00032-S11B-02	P-0116, TCP-BULGE-00004 Drain Elevation 0'	60	2	24590-PTF-M6-TCP-P0001	N/A	SS316L
8	TEP-ZF-02066-S11B-011/2	P-0110A, TEP-BULGE-00006 Drain Elevation 0'	40	1-1/2	24590-PTF-M6-TEP-P0001	N/A	SS316L
9	TXP-ZF-00022-S11M-011/2	P-0110B, TXP-BULGE-00001 Drain Elevation 0'	40	1-1/2	24590-PTF-M6-TXP-P0001	N/A	SS316L
10	TXP-ZF-00021-S11M-011/2	P-0110C, TXP-BULGE-00002 Drain Elevation 0'	40	1-1/2	24590-PTF-M6-TXP-P0001	N/A	SS316L
11	TXP-ZF-00042-S11M-011/2	P-0110C, TXP-BULGE-00004 Drain Elevation 0'	40	1-1/2	24590-PTF-M6-TXP-P0001	N/A	SS316L
12	TXP-ZF-00019-S11M-011/2	P-0110C, TXP-BULGE-00005 Drain Elevation 0'	40	1-1/2	24590-PTF-M6-TXP-P0004	N/A	SS316L