

# Umatilla Chemical Agent Disposal Facility

## ATTACHMENT 12

### **DESIGN AND SPILL/OVERFLOW PROTECTION CONTROL DOCUMENTS AND REQUIREMENTS**



**ATTACHMENT 12**  
**UMCDF DESIGN**  
**AND SPILL/OVERFLOW PROTECTION CONTROL**  
**DOCUMENTS AND REQUIREMENTS**

(electronic copies of the design documents are provided on CD)

THIS PAGE INTENTIONALLY LEFT BLANK

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
1050	Adsorber Cell Type II Ionex Model C1050	E
5942	Prefilter - 80% ASHRAE	C
5943	HEPA Filter	B
Figure D-1-1	Details of Magazine Ventilation System	N/A
Figure D-1-2, Sht 1/3	K- and J-Block Igloo Storage Units, Sheet 1	N/A
Figure D-1-2, Sht 2/3	K- and J-Block Igloo Storage Units, Sheet 2	N/A
Figure D-1-2, Sht 3/3	K- and J-Block Igloo Storage Units, Sheet 3	N/A
RC-35-MH-217	CSDP - Munitions Demilitarization Building; Fixtures For 105 and 155 Proj. Cradles For MC-1, MIC-94, Bombs, and One-Ton Container Type E Assemblies Plans and Sections	A
UM-00-D-901	CSDP - General; Symbols and Legend; Piping and Instrument Diagram	18
UM-00-H-901	CSDP - General; HVAC; Legend, Symbols and Abbreviations	03
UM-00-H-902	CSDP - General; Plumbing and Fire Protection; Symbols and Abbreviations	01
UM-00-H-903	CSDP - General; HVAC Piping and Instrumentation; Legend and Symbols	01
UM-00-S-909	CSDP - General; Typical Concrete Details	05
UM-01-D-009	CSDP - Munitions Demilitarization Building; Spent Decon Collection; Piping and Instrument Diagram	13
UM-01-D-010	CSDP - Munitions Demilitarization Building; Spent Decon Collection System; Piping and Instrument Diagram	10
UM-01-D-506	CSDP - Munitions Demilitarization Building; Projectile and Bulk Item Processing System (B); Piping and Instrument Diagram	04
UM-01-D-507	CSDP - Munitions Demilitarization Building; Tray/Dunnage Processing System (A); Piping and Instrument Diagram	08
UM-01-D-508	CSDP - Munitions Demilitarization Building; Tray/Dunnage Processing System (B); Piping and Instrument Diagram	08
UM-01-D-512	CSDP - Munitions Demilitarization Building; Buffer Storage/Charge Car (Second Floor); Piping and Instrument Diagram	05
UM-01-D-513/1	(Sht. 1) CSDP - Munitions Demilitarization Building; Buffer Storage; Piping and Instrument Diagram	05
UM-01-D-513/2	(Sht. 2) CSDP - Munitions Demilitarization Building; Buffer Storage; Piping and Instrument Diagram	02
UM-01-D-514	CSDP - Munitions Demilitarization Building; Multipurpose Demilitarization and Bulk Drain System (B); Piping and Instrument Diagram	16
UM-01-D-515	CSDP - Munitions Demilitarization Building; Multipurpose Demilitarization and Bulk Drain System (A); Piping and Instrument Diagram	17

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
UM-01-D-516	CSDP - Munitions Demilitarization Building; Multipurpose Demilitarization and Bulk Drain System (A); Piping and Instrument Diagram	08
UM-01-D-517	CSDP - Munitions Demilitarization Building; Multipurpose Demilitarization and Bulk Drain System (B); Piping and Instrument Diagram	08
UM-01-D-522	CSDP - Munitions Demilitarization Building; Agent Collection System; Piping and Instrumentation Diagram	12
UM-01-D-526	CSDP, Munitions Demilitarization Building, LIC Furnace No. 1 - Primary Chamber, Piping and Instrument Diagram	21
UM-01-D-527/1	(Sht. 1) CSDP - Munitions Demilitarization Building; LIC Furnace No. 1 - Secondary Chamber; Piping and Instrument Diagram	19
UM-01-D-527/2	(Sht. 2) CSDP - Munitions Demilitarization Building; LIC Furnace No. 1 - Secondary Chamber; Piping and Instrument Diagram	08
UM-01-D-528/1	CSDP - Munitions Demilitarization Building; Metal Parts Furnace; Piping and Instrument Diagram	21
UM-01-D-528/2	CSDP - Munitions Demilitarization Building; Metal Parts Furnace; Piping and Instrument Diagram	04
UM-01-D-528/3	CSDP - Munitions Demilitarization Building; Metal Parts Furnace; Piping and Instrument Diagram	03
UM-01-D-528/4	CSDP - Munitions Demilitarization Building; Metal Parts Furnace; Piping and Instrument Diagram	03
UM-01-D-529	CSDP - Munitions Demilitarization Building; MPF Burners; Piping and Instrument Diagram	15
UM-01-D-530/1	(Sht. 1) CSDP - Munitions Demilitarization Building; MPF Details; Piping and Instrument Diagram	09
UM-01-D-530/2	(Sht. 2) CSDP - Munitions Demilitarization Building; MPF Details; Piping and Instrument Diagram	10
UM-01-D-531/1	(Sht. 1) CSDP - Munitions Demilitarization Building; DFS Retort; Piping and Instrument Diagram (Sheet 1 of 3)	16
UM-01-D-531/2	(Sht. 2) CSDP - Munitions Demilitarization Building; DFS Retort; Piping and Instrument Diagram (Sheet 2 of 3)	14
UM-01-D-531/3	(Sht. 3) CSDP - Munitions Demilitarization Building; DFS Retort; Piping and Instrument Diagram (Sheet 3 of 3)	07
UM-01-D-533	CSDP - Munitions Demilitarization Building; DFS Air Blower/Retort Lube Oil System; Piping and Instrument Diagram	09
UM-01-D-534	CSDP - Munitions Demilitarization Building; Toxic Cubicle - Spent Decon; Piping and Instrument Diagram	10
UM-01-D-535	CSDP - Munitions Demilitarization Building; Toxic Cubicle - Spent Decon; Piping and Instrument Diagram	11
UM-01-D-536	CSDP - Munitions Demilitarization Building; Toxic Cubicle - Agent; Piping and Instrument Diagram	13
UM-01-D-541	ASDP - Munitions Demilitarization Building; Spent Decon Sampling System; Piping and Instrument Diagram	07
UM-01-D-546	CSDP - Munitions Demilitarization Building; LIC Furnace No. 2 - Primary Chamber; Piping and Instrument Diagram	21
UM-01-D-547/1	(Sht. 1) CSDP - Munitions Demilitarization Building; LIC Furnace No. 2 - Secondary Chamber; Piping and Instrument Diagram	19

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
UM-01-D-547/2	(Sht. 2) CSDP - Munitions Demilitarization Building; LIC Furnace No. 2 - Secondary Chamber; Piping and Instrument Diagram	10
UM-01-D-593	MDB; Munitions Processing Bay; Heel Transfer System; P&ID	02
UM-01-D-595	CSDP; MDB; Munitions Processing Bay, Rinsate Collection System - BDS Interface, P&ID	01
UM-01-D-596	CSDP; MDB; Munitions Processing Bay, Rinsate Collection System - Filters, P&ID	01
UM-01-D-597	CSDP; MDB; Munitions Processing Bay, Rinsate Collection System - Tanks, P&ID	01
UM-01-D-598	CSDP; MDB; Munitions Processing Bay, Rinsate Collection System - Feed to LICs, P&ID	01
UM-01-G-501/1	CSDP, MDB, Major Equipment Legend, 1, General Arrangement	14
UM-01-G-501/2	CSDP, MDB, Major Equipment Legend, 1, General Arrangement	04
UM-01-G-502	CSDP, MDB, Major Equipment Legend, 2, General Arrangement	17
UM-01-G-503	CSDP, MDB, Major Equipment Legend, 3, General Arrangement	22
UM-01-G-504	CSDP, MDB, First Floor Plan, North, General Arrangement	24
UM-01-G-505	CSDP, MDB, First Floor Plan, South, General Arrangement	26
UM-01-G-506	CSDP, MDB, First Floor Platform Plan, North, General Arrangement	06
UM-01-G-507	CSDP, MDB, First Floor Platform Plan, South, General Arrangement	07
UM-01-G-508	CSDP, MDB, Second Floor Plan, North, General Arrangement	16
UM-01-G-509	CSDP, MDB, Second Floor Plan, South, General Arrangement	19
UM-01-G-510	CSDP, MDB, Second Floor Platform Plan, North, General Arrangement	07
UM-01-G-511	CSDP, MDB, Second Floor Platform Plan, South, General Arrangement	05
UM-01-H-002/1	CSDP - Munitions Demilitarization Building; HVAC; Air Flow and Control Diagram	18
UM-01-H-002/2	CSDP - Munitions Demilitarization Building; HVAC; Air Flow and Control Diagram	02
UM-01-H-003	CSDP - Munitions Demilitarization Building; HVAC; Control Room Air Flow Diagram	03
UM-01-H-005	CSDP - Munitions Demilitarization Building; HVAC; Process Areas Air Flow Diagram	08
UM-01-H-006/1	(Sht.1) CSDP - Munitions Demilitarization Building; HVAC; Supply and Exhaust Control Diagrams	14

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
UM-01-H-006/2	(Sht.2) CSDP - Munitions Demilitarization Building; HVAC; Supply and Exhaust Control Diagrams	10
UM-01-H-031	CSDP - Munitions Demilitarization Building; HVAC; Exhaust Filter Pad Plan	11
UM-01-H-046	MPF Conveyor Enclosure, HVAC Section and Details, Air Flow Diagram	04
UM-01-S-060	CSDP - Munitions Demilitarization Building; Foundations	01
UM-02-D-501	CSDP - Process and Utility Building; Brine Surge Tanks and Pumps - Line 1; Piping and Instrument Diagram	19
UM-02-D-502	CSDP - Process and Utility Building; BRA Evaporator - Line 1; Piping and Instrument Diagram	15
UM-02-D-503	CSDP - Process and Utility Building; BRA Drum Dryer - Line 1; Piping and Instrument Diagram	16
UM-02-D-504	CSDP - Process and Utility Building; BRA Drum Dryer - Line 1; Piping and Instrument Diagram	17
UM-02-D-505	CSDP - Process and Utility Building; BRA PAS Burner and Manifold, Piping and Instrument Diagram	10
UM-02-D-511	CSDP, Process and Utility Building, Brine Surge Tanks and Pumps-line 2, Piping and Instrument Diagram	17
UM-02-D-512	CSDP, Process and Utility Building, BRA Evaporator-Line 2, Piping and Instrument Diagram	12
UM-02-D-513	CSDP, Process and Utility Building, BRA Drum Dryer-Line 2, Piping and Instrument Diagram	16
UM-02-D-514/1	Brine Tanker Loading System	04
UM-02-D-514/2	Brine Tanker Loading System, Sheet 2	02
UM-02-G-501	CSDP, Process and Utility Building, Major Equipment Legend, General Arrangement	08
UM-02-G-502	CSDP, Process and Utility Building, Floor Plan, General Arrangement	12
UM-02-H-002	Process and Utility Building Process and Utility Building HVAC Air Flow Diagram	06
UM-02-S-007	Process and Utility Building, Foundation and Section Details	06
UM-06-D-501	CSDP - Pollution Abatement System; LIC No. 1-PAS Quench and Scrubber Towers; Piping and Instrument Diagram	25
UM-06-D-502	CSDP - Pollution Abatement System; LIC No. 1-PAS Demister; Piping and Instrument Diagram	13
UM-06-D-504	CSDP - Pollution Abatement System; MPF PAS Quench and Scrubber Towers; Piping and Instrument Diagram	24
UM-06-D-505	CSDP - Pollution Abatement System; MPF PAS Mist Eliminator and Blowers; Piping and Instrument Diagram	20
UM-06-D-506	CSDP - Pollution Abatement System; DFS PAS Quench and Scrubber Towers; Piping and Instrument Diagram	24

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
UM-06-D-507	CSDP - Pollution Abatement System; DFS Exhaust Blowers and Stack; Piping and Instrument Diagram	17
UM-06-D-508	CSDP - Pollution Abatement System; DFS PAS Mist Eliminator; Piping and Instrument Diagram	16
UM-06-D-509	CSDP - Pollution Abatement System; DFS Afterburner; Piping and Instrument Diagram	16
UM-06-D-511	CSDP - Pollution Abatement System; LIC No. 2 - PAS Quench and Scrubber Towers; Piping and Instrument Diagram	26
UM-06-D-512	CSDP - Pollution Abatement System; LIC No. 2 - PAS Mist Eliminator; Piping and Instrument Diagram	12
UM-06-D-517/1	(Sht. 1) CSDP - Pollution Abatement System; LIC No. 1 Exhaust Blower; Piping and Instrument Diagram, Sheet 1 of 2	12
UM-06-D-517/2	(Sht. 2) CSDP - Pollution Abatement System; LIC No. 2 Exhaust Blower, Piping and Instrument Diagram, Sheet 2 of 2	11
UM-06-D-523	CSDP - Pollution Abatement System, PFS Carbon Filter Units Detail, Piping and Instrument Diagram	14
UM-06-D-524	CSDP, Pollution Abatement System; DFS PFS Gas Reheater and Filters; Piping and Instrument Diagram	13
UM-06-D-525	CSDP, Pollution Abatement System; LIC No. 2 PFS Gas Reheater and Filters; Piping and Instrument Diagram	13
UM-06-D-526	CSDP, Pollution Abatement System; MPF PFS Gas Reheater and Filters; Piping and Instrument Diagram	15
UM-06-D-527	CSDP, Pollution Abatement System, MPF/DFS PAS Spare Mist Eliminator; Piping and Instrument Diagram	13
UM-06-D-528	CSDP, Pollution Abatement System; MPF Clean Liquor Air Cooler; Piping and Instrument Diagram	08
UM-06-D-529	CSDP, Pollution Abatement System; LIC No. 2 Clean Liquor Air Cooler; Piping and Instrument Diagram	07
UM-06-D-530	CSDP, Pollution Abatement System; DFS Clean Liquor Air Cooler (Bays A/B); Piping and Instrument Diagram	06
UM-06-D-531	CSDP, Pollution Abatement System; DFS Clean Liquor Air Cooler (Bays C/D); Piping and Instrument Diagram	06
UM-06-D-532	CSDP; Pollution Abatement System Strainers, Piping & Instrument Diagram	08
UM-06-D-533/1	(Sht. 1) CSDP; Pollution Abatement System, Non-Agent Monitor Details, Piping & Instrument Diagram, Sheet 1 of 4	04
UM-06-D-533/2	(Sht. 2) CSDP; Pollution Abatement System, Non-Agent Monitor Details, Piping & Instrument Diagram, Sheet 2 of 4	03
UM-06-D-533/3	(Sht. 3) CSDP; Pollution Abatement System, Non-Agent Monitor Details, Piping & Instrument Diagram, Sheet 3 of 4	03
UM-06-D-533/4	(Sht. 4) CSDP; Pollution Abatement System, Non-Agent Monitor Details, Piping & Instrument Diagram, Sheet 4 of 4	05
UM-06-D-535	CSDP, Pollution Abatement System; LIC No. 1 PFS Gas Reheater and Filters; Piping and Instrument Diagram	14
UM-06-D-539	CSDP, Pollution Abatement System; LIC No. 1-Clean Liquor Air Cooler, Piping and Instrument Diagram	07

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

<b>Drawing Design Documents</b>		
<b>Design Doc #</b>	<b>Title</b>	<b>Rev</b>
UM-06-G-501	CSDP, Pollution Abatement System (PAS); Major Equipment Legend; General Arrangement	14
UM-06-G-502	CSDP, Pollution Abatement System (PAS); Ground Floor Plan; General Arrangement	08
UM-06-G-503	CSDP, Pollution Abatement System (PAS); First Level Platform Plan; General Arrangement	08
UM-06-G-504	CSDP, Pollution Abatement System (PAS); Second Level Platform Plan; General Arrangement	05
UM-06-G-505	CSDP - Pollution Abatement System (PAS); Third Level Platform Plan; General Arrangement	09
UM-06-G-509	CSDP - PAS-Ground Floor Plan, Area 6-7, General Arrangement	04
UM-06-G-510	CSDP - PAS-Ground Floor Plan, Area 6-8, 9, 10, & II, General Arrangement	04
UM-06-G-511	CSDP - PAS-Ground Floor Plan, Area 6-12, 13, & 14, General Arrangement	04
UM-06-H-504	CSDP - Pollution Abatement System; (PAS), DFS Cyclone Enclosure Filter HVAC, Exhaust Control Diagram	07
UM-06-H-505	CSDP - Pollution Abatement System; (PAS), DFS Cyclone Filter HVAC Floor Plan	03
UM-07-D-515	Container Handling Building; HD Ton Container	01
UM-07-G-501	CSDP - Container Handling Building; Major Equipment Legend; General Arrangement	04
UM-07-G-502	CSDP - Container Handling Building; Plan - East, Unloading/Storage; General Arrangement	03
UM-07-G-503	CSDP - Container Handling Building; Plan - West, Unloading/Storage; General Arrangement	03
UM-07-G-504	CSDP - Container Handling Building; Plan - Center Area; General Arrangement	00
UM-07-G-505	CSDP - Container Handling Building; First Floor Plan, Transition; General Arrangement	01
UM-07-G-506	CSDP - Container Handling Building; Second Floor Plan, Transition; General Arrangement	05
UM-07-L-001	CSDP - Container Handling Building; Unloading and Storage Area - East; Plumbing Plan	02
UM-07-L-002	CSDP - Container Handling Building; Unloading and Storage Area - West; Plumbing Plan	01
UM-07-L-004	CSDP - Container Handling Building; Plumbing Schedules and Details	01
UM-12-A-001	CSDP - Laboratory; Area 12-1; Floor Plan - West	05
UM-12-A-002	CSDP - Laboratory; Area 12-2; Floor Plan - East	05
UM-12-D-001	Chemical Stockpile Disposal Program - Lab Building; Lab Chemical Waste Storage Tank; Piping and Instrument Diagram	09

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

### Drawing Design Documents

Design Doc #	Title	Rev
UM-14-D-002	CSDP - Personnel and Maintenance Building, Liquid Waste Storage, Piping and Instrument Diagram	03
UM-16-C-003	CSDP, Site Work, Area 1, Plot Plan	08
UM-16-C-004	CSDP, Site Work Area 2, Plot Plan	17
UM-16-C-005	CSDP, Site Work Area 3, Plot Plan	06
UM-16-C-006	CSDP, Site Work Area 1, Road Lay-out Plan	07
UM-16-C-037	CSDP, Site Work Area 1, Storm Drainage Plan	08
UM-16-C-038	CSDP, Site Work Area 2, Storm Drainage Plan	15
UM-16-C-039	CSDP, Site Work Area 3, Storm Drainage Plan	05
UM-16-C-040	CSDP - Site Work; Area 4; Storm Drainage Plan	08
UM-16-D-013	CSDP, Site Work, LIC fuel oil purge system, Piping and Instrument Diagram	08
UM-23-G-501	CSDP; Munitions Demilitarization Building Filter Plan - North; Major Equipment Legend; General Arrangement Diagram	10
UM-23-G-502	CSDP - Munitions Demilitarization Building Filter Plan - South; General Arrangement Diagram	06
UM-24-G-501	CSDP - Laboratory Filter Floor Plan; General Arrangement Diagram	05
UM-24-H-001	CSDP, Laboratory Filter HVAC, Exhaust Control Diagram	13
UM-24-H-002	CSDP, Laboratory Filter HVAC, Floor Plan Area 24-1	06
UM-27-D-501/1	(Sheet 1) CSDP - Process and Utility Building; BRA PAS Baghouses; Piping and Instrument Diagram	13
UM-27-D-501/2	(Sheet 2) CSDP - Process and Utility Building; BRA PAS Baghouses; Piping and Instrument Diagram	09
UM-27-D-502	CSDP - Process and Utility Building; BRA PAS Blower and Stacks; Piping and Instrument Diagram	12
UM-27-G-501	CSDP - BRA PAS Major Equipment Legend and Floor Plan, General Arrangement	05
UM-27-H-502	BRA PAS Baghouse Enclosure	01

### Other Design Documents

Design Doc #	Title	Rev
Section D-4B-01	RCRA Tank Assessment of UMCDF	14

# UMCDF RCRA Hazardous Waste Permit Attachment 12

## List of Design and Spill/Overflow Protection Control Documents

### Other Design Documents

Design Doc #	Title	Rev
Section D-4B-02, Spec. 13201	Pressure Vessels	12
Section D-4B-03, Spec. 13202	Tanks	09
Section D-4B-04, Spec. 16641	Cathodic Protection System (Tanks)	04
Section D-4B-08, Spec. 15120	Process Piping, General	37
Section D-4B-17, Spec. 13215	Underground Storage Tank (Fiberglass Reinforced Plastic) Systems	03
Section D-4B-18, Spec. 09850	Special Coating System	09
Section D-4B-19, Spec. 15160	Pumps	11
Section D-4B-19A, Spec. 15161	GFE Pumps	09
Section D-5B-01, Spec. 13187	Liquid Incinerator System Specification	08
Section D-5B-02, Spec. 13211	Liquid Incinerator Pollution Abatement System Specification	07
Section D-5B-06	Liquid Incinerator System Residence Time Calculation	N/A
Section D-6B-01, Spec. 13188	Metal Parts Furnace Specification	15
Section D-6B-02, Spec. 13212	Metal Parts Furnace Pollution Abatement System Specification	09
Section D-8B-05, Spec. 15987	Pollution Abatement System (PAS) Filter Units	17

### Preliminary Design Documents

PMR # UMCDF-10-010-LIC(3TA)		Title: HD Rinsate Storage Tank System and Treatment in the Liquid Incinerator
Design Doc #	Title	Rev
UM-01-D-526	CSDP, Munitions Demilitarization Building, LIC Furnace No. 1 - Primary Chamber, Piping and Instrument Diagram	19-M1