

## **SWMU 8 - Used Pump Area**

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### **5.5.8 SWMU 8 - Used Pump Area**

The location of Solid Waste Management Unit (SWMU) 8 is shown on Figure 5.5.8-1a and SWMU 8 monitoring stations and sample locations are provided on Figure 5.5.8-1b. SWMU 8, the Used Pump Area, is located north of the Coarse Slag Pile (SWMU 12), east of the Tailing Basin (SWMU 1) and west of the Precipitator Dust Burial Area (SWMU 15) (*see* Figure 5.5.8-1b). During the 2012 field investigation, it was noted that the location of SWMU 8 was misidentified on the prior locator maps. A differential global positioning system (GPS) was used to delineate the location of SWMU 8. The corrected location is shown on Figures 5.5.8-1a and 5.5.8-1b.

The Used Pump Area contains pump barrels that were used in the production process. The used pump barrels are metal tubes 64 inches long and 7 inches in diameter with a hard rubber liner. A photograph of the used pump barrels is provided on Figure 5.5.8-2. A total of 119 used pump barrels are located in SWMU 8. As shown on Figure 5.5.8-2, the majority of the pump barrels were strapped together and the barrels were placed on wooden pallets. The used pump barrels cannot be recycled because the rubber liner cannot be removed efficiently by mechanical methods.

There is no documented or suspected release of hazardous waste or constituents from the used pump barrels that were placed in SWMU 8. Elemental phosphorus was not managed in SWMU8, nor was process water handled in SWMU 8. Any ignitable hazardous waste that may have been present on the interior of the pumps was removed by cleaning prior to placement of the used pump barrels in this area. As with any process equipment that handled elemental phosphorus, the pumps were repeatedly flushed with hot water to remove residual elemental phosphorus. This rinsing process is consistent with the RCRA requirements to determine whether a container is empty (*see* RCRA 40 CFR 261.7), and which state that a container is empty if it has been triple rinsed using a solvent (i.e., hot water) capable of removing the commercial chemical product. Therefore, the pump barrels are not regulated under RCRA hazardous waste regulations. The interior of the pumps have been exposed to the atmosphere for more than 12 years and no fires have been reported from any used pump barrel in SWMU 8.

#### **5.5.8.1 RFI Activities**

In October 2012, two test pits were advanced in the Used Pump Area. The locations of the test pits are shown on Figure 5.5.8-1b. At the suggestion of onsite EPA officials, one test pit was located downwind of the used pump barrels, based on the predominant wind direction at the site. Cam Balentine, a local Rhodia employee, indicated that the predominant wind direction at the site is from

the west, and the test pit was advanced approximately two feet directly east of the pump barrels. The second test pit was located approximately in the center of the used pump barrel storage area.

The test pits were excavated with a rubber tire backhoe to an approximate depth of 12-18 inches below ground surface and soil samples were collected from the 0-2 inch and 2-12 inch depth interval at each test pit (total of 4 samples). The soil samples were analyzed for elemental phosphorus and total phosphorus. Test pit logs are provided in Appendix 5.5.8-A.

#### **5.5.8.2 RFI Results**

The SWMU-8 soil sample data and background values are summarized in Table 5.5.8-1 and presented on Figure 5.5.8-3.

Elemental phosphorus was not detected (DL = 0.000015 mg/kg) in the soil samples collected from the test pits.

Total phosphorus concentrations ranged from 35,400 to 52,300 mg/kg. The maximum concentration was reported for the 2-12 inch interval at SWMU-8 SP-1. The concentration of total phosphorus at SWMU 8 is considered above background when compared to the mean concentration reported for Silver Bow County (USGS, 2012).

#### **5.5.8.3 Conclusions**

There is sufficient information to conduct the risk assessment for SWMU 8. The risk assessment will identify which parameters, if any, are present at concentrations that warrant corrective measures. The dataset will be reviewed during risk assessment and additional sampling may be necessary to inform the corrective measures study or later during the corrective measures design phase.

#### **5.5.8.4 References**

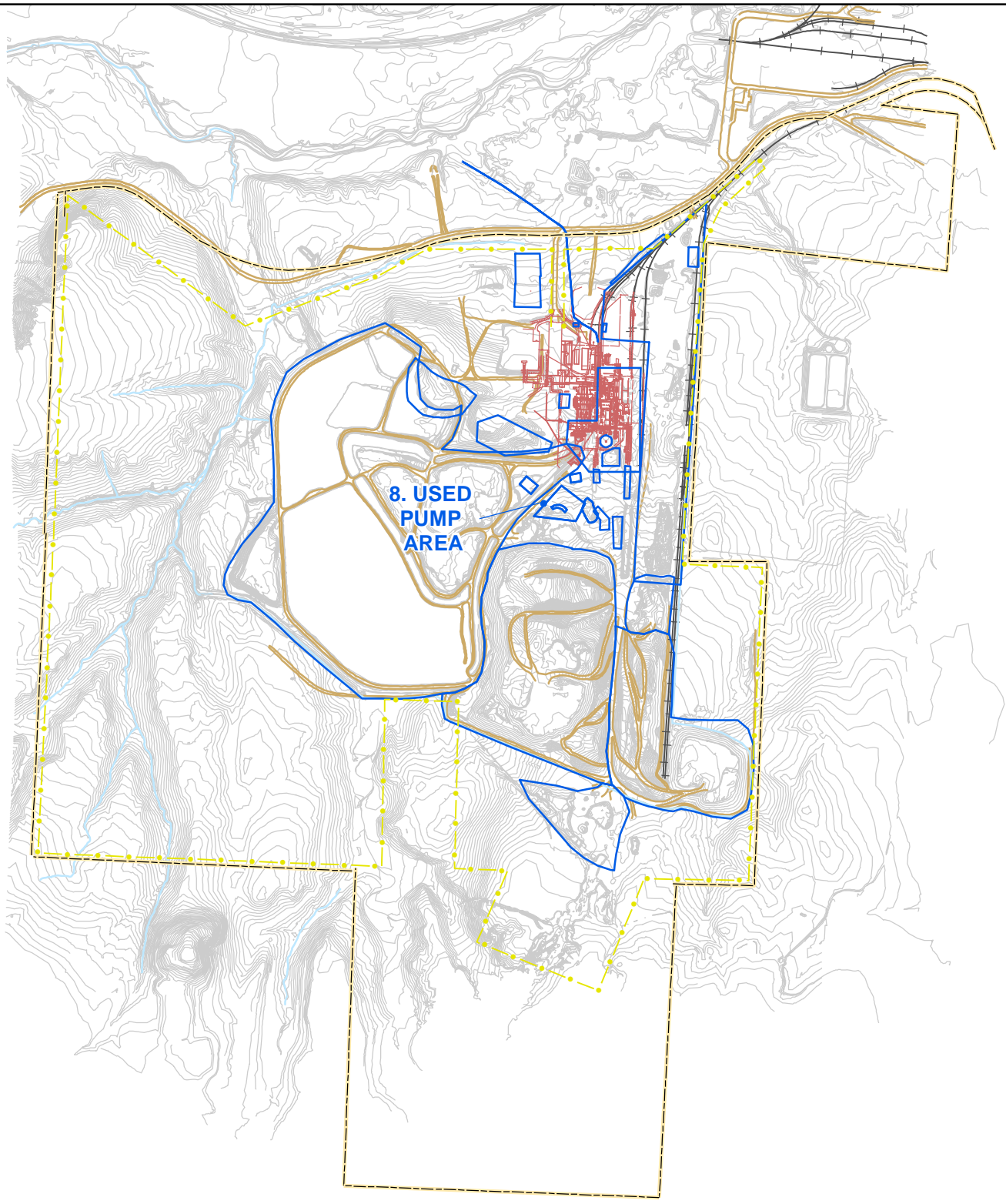
U.S. Geological Survey, 2012. Open-File Report 2004-1001. Accessed December 11, 2012, at <http://mrdata.usgs.gov/geochem/county.php?place=f30093&el=P&rf=northwestern>.










## Tables

**Table 5.5.8-1**  
**Soil Data - General and Site Specific Parameters**  
**SWMU 8**  
**Rhodia Silver Bow Plant**  
[concentrations in mg/kg]

Chemical Name				Phosphorus, elemental (white)	Phosphorus, total
Location ID	Sample Date	Depth	Sample Type		
SWMU-8 SP-1	10/04/2012	0 - 2 in	N	< 0.000015	<b>42400</b>
SWMU-8 SP-1	10/04/2012	2 - 12 in	N	< 0.000015	<b>52300</b>
SWMU-8 SP-2	10/04/2012	0 - 2 in	N	< 0.000015	<b>35400</b>
SWMU-8 SP-2	10/04/2012	2 - 12 in	N	< 0.000015	<b>46800</b>
			FD	< 0.000015	<b>35500</b>

## Figures



-  SWMU 8
-  Other SWMUs
-  Elevation Contour
-  Drainage
-  Railroad
-  Road
-  Former Plant Structures
-  Property Boundary
-  Fence Line

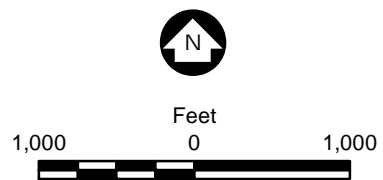


Figure 5.5.8-1a

**SWMU 8 LOCATION**  
Rhodia Silver Bow Plant  
Montana

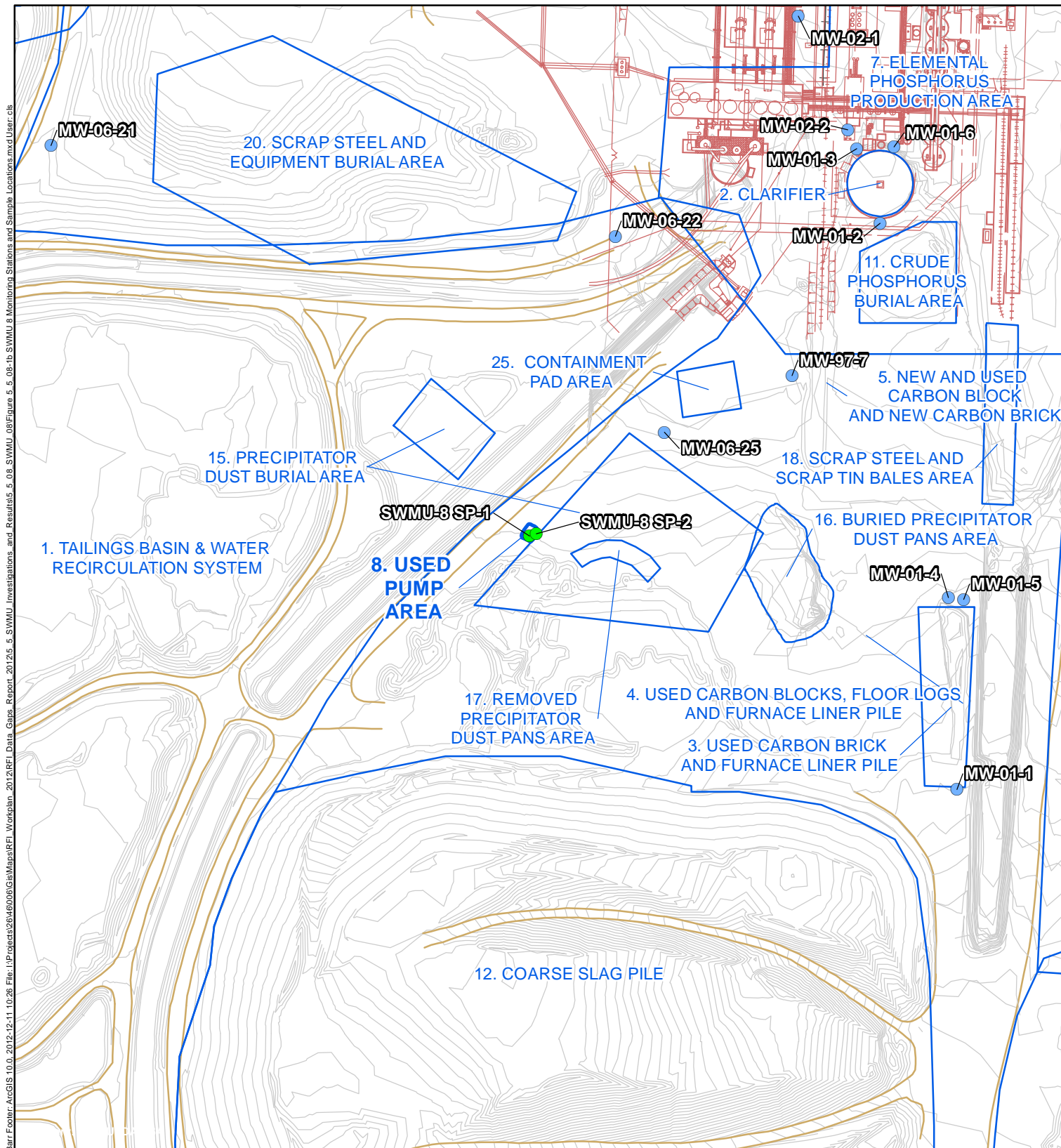


Figure 5.5.8-1b

**SWMU 8  
MONITORING STATIONS  
AND SAMPLE LOCATIONS  
Rhodia Silver Bow Plant  
Montana**



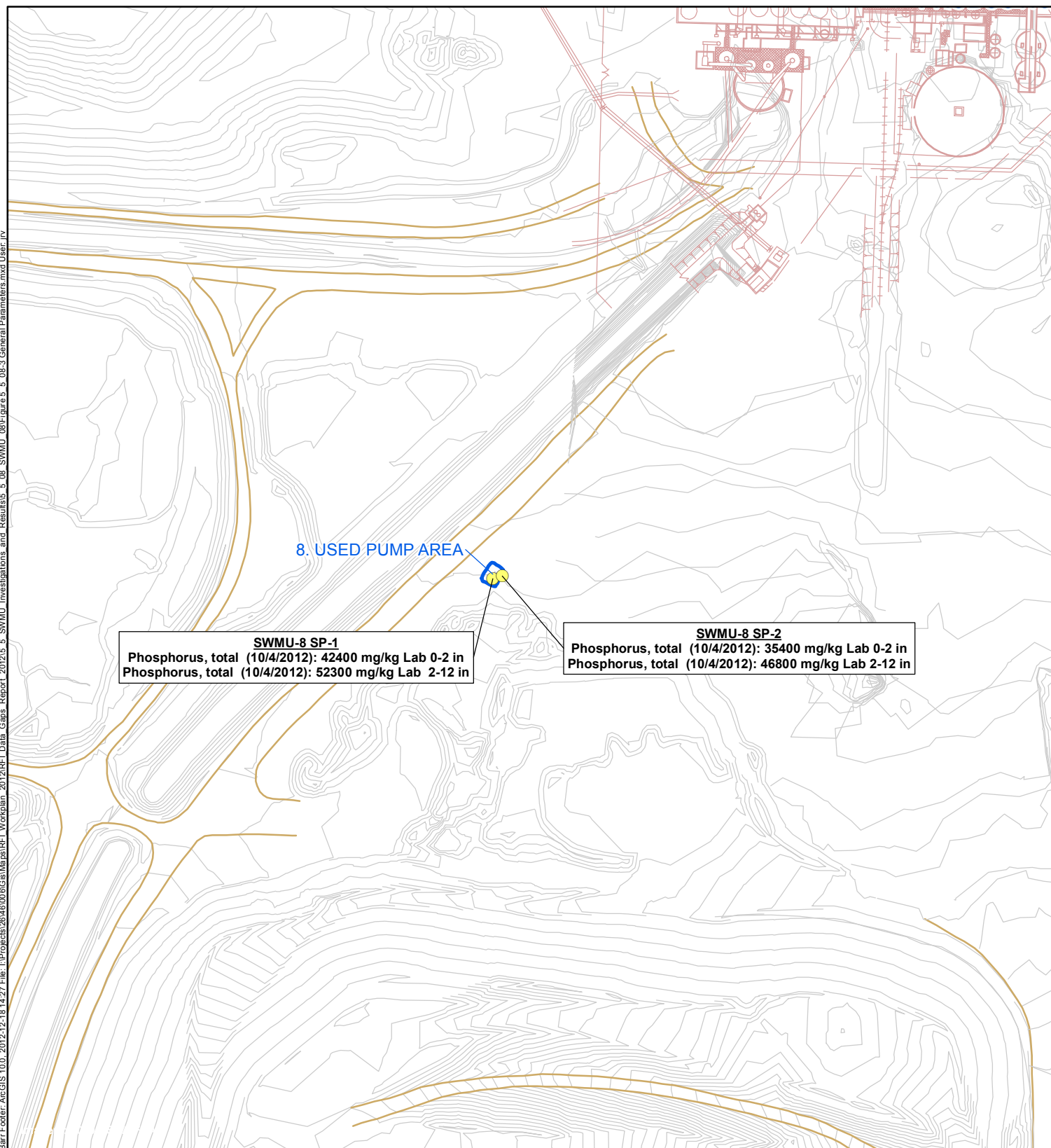


Figure 5.5.8-2

SWMU 8: Used Pump Barrels

Rhodia Silver Bow Plant, MT





- Sample Location
- SWMU 8
- Elevation Contour
- Drainage
- + + Railroad
- Road
- Former Plant Structures

**Bold font indicates that sample concentration is greater than the 95% UCL of mean Reference Area Concentration.**

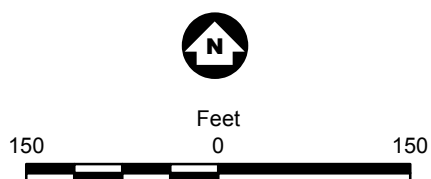


Figure 5.5.8-3

**SWMU 8**  
**GENERAL PARAMETERS**  
 Rhodia Silver Bow Plant  
 Montana

## **Appendices**

## **Appendix 5.5.8-A**

### **Test Pit Logs**

PROJECT NO. 26460006		TEST PIT NO. SWMU-8 SP-1		SHEET 1 OF 1		TEST PIT WALL LOG			
PROJECT Rhodia REI		ELEVATION N/A		LOCATION SWMU-8 Used Pump Barrels		MAP OF E		WALL OF PIT	
WATER LEVEL AND DATE N/A - Dry		CONTRACTOR MT Reclamation & Landscaping		DATE EXCAVATED 10/4/12		LOGGER LML2			
APPROXIMATE DIMENSIONS		LENGTH 3'		WIDTH 2'		DEPTH 1.5'		REMARKS	
<div style="display: flex; justify-content: space-between;"> <div> DEPTH BELOW SURFACE ( )  0 1 2 </div> <div> INTERVAL  0" 2" 12" </div> </div>									
		COMMENTS							
		0 1 2 0 1 2 3 LENGTH							

PROJECT NO. 26460006		TEST PIT NO. SWMU-8 SP-2		SHEET 1 OF 1		TEST PIT WALL LOG			
PROJECT Rhodra RFI		LOCATION SWMU-8 Used Pump Barrels		MAP OF E		WALL OF PIT			
ELEVATION N/A		CONTRACTOR MT Reclamation & Landscaping		DATE EXCAVATED 10/4/12					
WATER LEVEL AND DATE N/A - Dry		EXCAVATION METHOD Backhoe		LOGGER BJK-2					
APPROXIMATE DIMENSIONS		LENGTH 3'		WIDTH 2'		DEPTH 1'		REMARKS	
<div style="display: flex; justify-content: space-between;"> <div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 100px; border: 1px solid black; position: relative;"> <div 5px;"="" margin-left:="" style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);&lt;/div&gt; &lt;/div&gt; &lt;div style=">           0" 2" 12"         </div> </div> <div style="margin-top: 10px;">           SURFACE ( )         </div> </div> </div></div>		<div style="display: flex; justify-content: space-between;"> <div>           ELEVATION            DEPTH BELOW         </div> <div>           0 1         </div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>           TYPE AND INTERVAL         </div> <div>           NUMBER         </div> </div>		<div style="display: flex; justify-content: space-between;"> <div>           COMMENTS            Few small cobbles throughout trench.             Sample collected at 0905            SWMU-8 SP-2 (0-2)             Sample collected at 0925            SWMU-8 SP-2 (2-12)             Collected sample SWMU-8            SP-100 (2-12)             Sample collected at 0945            SWMU-8 SP-120 (2-12)         </div> <div>           REMARKS            Brown sandy silt w/ large bricks and refuse. Also contains pockets of Gray silty sand w/ gravel.         </div> </div>							