Bond to Fireproof

Los Angeles Department of Water & Power

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MARCIE L. EDWARDS
General Manager

November 12, 2014
Hand Delivered on November 12, 2014

Mr. Daron Haddock
Utah Division of Oil, Gas & Mining Coal Program (DOGM)
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Dear Mr. Haddock:

Subject: Intermountain Power Agency (IPA)
Conditional Approval of Oil Transloading Construction
Wildcat Loadout Facility, C/007/0033, Task ID# 4688 Clean Copy
Submittal

As per your letter dated October 22, 2014, attached you will find two clean copies on the above mentioned project. The forms to revise the Reclamation Agreement along with the rider to increase the surety are also attached.

The Reclamation Agreement has been increased from $1,350,000 to $1,481,000 since your October 22, 2014, letter. This increase was approved by Pete Hess from your Price Office.

If you have any questions, please call me at (801) 748-1471 or contact IPA's environmental consultant, Tom Paluso, at (435) 472-3814.

Sincerely,

Lance C. Lee

Lance C. Lee
Project Manager
Intermountain Power Project

cc: James A. Hewlett (via email)
Intermountain Power Agency
Minh T. Le (via email)
William W. Engels (via email)

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Contains C1/C2

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Intermountain Power Agency (IPA)
Mine: _____ **Permit Number:** ACT 007/0033
Title: Oil Storage System

Description, Include reason for application and timing required to implement:
Crude Oil Storage System consisting of truck unloading, storage tanks and railcar loading

Instructions: If you answer yes to any of the first eight questions, this application may require Public Notice publication.

☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ ☐ increase ☐ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☒ Yes ☐ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes ☒ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☒ Yes ☐ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
☐ Yes ☒ No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)
James A. Hewlett	General Manager	Nov 11 2014	

Subscribed and sworn to before me this 11th day of November 2014

Notary Public: Michelle R Miller, state of Utah.

My commission Expires: 8/30/2015
Commission Number: 613249
Address: 10653 S. River Front Parkway, Suite 120
City: So. Jordan State: Ut Zip: 84095

MICHELLE R. MILLER
NOTARY PUBLIC • STATE OF UTAH
COMMISSION# 613249
COMM. EXP. 08-30-2015

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Form DOGM- C1 (Revised December 10, 2007)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: Intermountain Power Agency (IPA)
Mine:
Permit Number: ACT 007/0033
Title: Oil Storage System

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Redline Tabs section of the M&RP
☒ Add	☐ Replace	☐ Remove	Chapter 9 - Table of Contents
☐ Add	☒ Replace	☐ Remove	Redline Page 1-1
☐ Add	☒ Replace	☐ Remove	Redline Page 2-1
☐ Add	☒ Replace	☐ Remove	Redline Page 3-1
☐ Add	☒ Replace	☐ Remove	Redline Page 4-1
☐ Add	☒ Replace	☐ Remove	Redline Page 5-1
☐ Add	☒ Replace	☐ Remove	Redline Page 6-1
☐ Add	☒ Replace	☐ Remove	Redline Page 7-1
☐ Add	☒ Replace	☐ Remove	Redline Page 8-1
☒ Add	☐ Replace	☐ Remove	Chapter 9
☐ Add	☒ Replace	☐ Remove	Plate 1 Existing Surface Facilities
☐ Add	☒ Replace	☐ Remove	Plate 2A Wildcat Loadout Proposed Drainage Map Response to DO-04
☐ Add	☒ Replace	☐ Remove	Plate 3I Wildcat Loadout Depression Area Existing
☐ Add	☐ Replace	☐ Remove	
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	Received by Oil, Gas & Mining RECEIVED NOV 12 2014 DIV. OF OIL, GAS & MINING

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2) CHAPTER 1 LEGAL

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10) APPENDIX A
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12) APPENDIX B
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44) APPENDIX K	Deleted
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49) APPENDIX P	Response to Division Order DO-04 Wind – Blown Fines
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CHAPTER 1, LEGAL

R645-301-100. GENERAL

Marlin Logistics, LLC(Marlin) in 2014, is building a crude oil unloading station, storage system, and railcar loading stations on the west side of the Utah Railroad tracks. This operation will be located on the west side of the Wildcat Coal Loading Facility. According to UDOGM, this facility will not be under their jurisdiction, but will be located within the Wildcat Loadout permit area. Items pertaining to this operation are addressed in Chapter 9 of the M&RP.

R645-301-110. LEGAL, FINANCIAL, AND COMPLIANCE INFORMATION

Legal, Financial, Compliance and Information

The objective of this chapter is to set forth all relevant information concerning ownership and control of Intermountain Power Agency, the ownership and control of the property to be affected by mining activities and all other information and documentation required.

Compliance Information

a) Suspension and Revocation

Intermountain Power Agency, affiliates or persons controlled by or under common control with Intermountain Power Agency never had a mining permit suspended or revoked.

b) Forfeiture of Bond

Intermountain Power Agency, affiliates or persons controlled by or under common control with Intermountain Power Agency have not forfeited a mining bond or similar security in lieu of bond.

c) History of Violations

Intermountain Power Agency and affiliated companies have not received any violations received within the last three years prior to the date of this application. See attached amended and restated Appendix B Part B.

R645-301-111. INTRODUCTION

Introduction and Overview of Project Permit Application

A. Introduction

This permit application is being submitted by Intermountain Power Agency, in order that coal can be stored and loaded out of its coal loadout facility located at

Wildcat Junction, near Helper, Utah. This facility is known as the Wildcat Loadout. Intermountain Power Agency is a political subdivision of the State of Utah. Intermountain Power Agency has a permit to operate its coal loading and storage facility known as Wildcat Loadout, in accordance with the appropriate regulations. This coal loadout facility is located on land owned by the United States of America in Carbon County, Utah.

Intermountain Power Agency was granted the right-of-way in August, 2011, by the Bureau of Land Management of the United States Department of the Interior.

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R645-301-200. SOILS

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

Marlin Logistics, LLC(Marlin) in 2014, is building a crude oil unloading station, storage system, and railcar loading stations on the west side of the Utah Railroad tracks. This operation will be located on the west side of the Wildcat Coal Loading Facility. According to UDOGM, this facility will not be under their jurisdiction, but will be located within the Wildcat Loadout permit area. Items pertaining to this operation are addressed in Chapter 9 of the M&RP.

I. Soil Survey and Vegetation Inventory (please see Appendix D, *Appendix D Supplement,* and Appendix I).

1. Introduction

Appendix D is a survey conducted by the SCS in the Wildcat area and depicts the major soil types here. Appendix D also includes a survey including sampling as performed by Earl Jensen consulting as a soil scientist. Included in this survey is a soil profile description for each soil type identified on the permit area. Plate 11 depicts the soils as outlined by the Order 3 Survey performed by the SCS.

R645-301-211. PREMINING SOIL RESOURCES

The entire disturbed area, with the exception of approximately 20 acres, was disturbed pre-law by previous owners, and no topsoil was saved.

Topsoil was removed prior to construction in 1984, and stored and protected for use in final reclamation. Please see Plate 13C for a summary of stored topsoil. Appendix D also includes a topsoil mass balance and

includes soil quality data from the Utah State University Testing Laboratory. The mass balance indicates that there may not be sufficient volume of topsoil for final reclamation. IPA has committed to identifying and testing for suitable substitute material either off the permit area or possibly within

CHAPTER 3, BIOLOGY

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

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R645-301-300. **BIOLOGY**

R645-301-310. **INTRODUCTION**

Vegetation Information

Introduction

An intensive detailed vegetation survey was not required or performed for the BLM Right-of-Way prior to the construction of this facility. It was a sagebrush/grass lowland with a Pinyon-Juniper community to the west. The following letter, shows the two reference areas identified by the SCS which show the general vegetative types in the area. Although the SCS identified these two areas, a third area was chosen by the Division of Oil, Gas, and Mining and Andalex Resources and is shown on Plate 1. A detailed vegetation inventory has been performed for Andalex by a qualified range scientist on this third reference area and is included in this document as Appendix I. This inventory will be the basis for a seed mixture to be used during reclamation. Please note that although the SCS identified two reference areas, the reference area being used for this MRP was designated by DOGM and Andalex for use during reclamation.

Description **(Also R645-301-311, 320 and 321)**

CHAPTER 4, LAND USE & AIR QUALITY

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

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R645-301-400. **LAND USE AND AIR QUALITY**

R645-301-410. **LAND USE**

R645-301-411. **ENVIRONMENTAL DESCRIPTION**

Because of the vegetation and poor rainfall, the land is presently used only for grazing, wildlife habitat, and limited outdoor recreation. Historically, the land has also been used for coal loading.

R645-301-411.100. **PREMINING LAND USE INFORMATION**

Past mining in the vicinity of Wildcat includes ARCO'S Beaver Creek Mines (ten miles to the west). The Swisher Coal Company previously used the Wildcat Siding.

R645-301-411.110. **USES OF THE LAND AT THE TIME OF FILING APPLICATION**

The Wildcat Loadout area would fall into two land use categories: 1) Fish and Wildlife habitat and recreation lands, and 2) Range Lands. County zoning regulations (1974) indicate all lands involved in the lease application area are within Zone M and G1 which is for mining and grazing. Current land use consists of grazing, wildlife habitat, and deer hunting. No other game species are found in the area. For recreational purposes, the land is suitable for deer hunting as well as ATV riding and occasionally snowmobiling. There are no oil and gas wells or water wells.

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CHAPTER 5, ENGINEERING

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

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R645-301-500. <u>ENGINEERING</u>

R645-301-510. INTRODUCTION

Volume II of this PAP contains plates which support the narrative of Volume I. These maps include, but are not limited to, contiguous surface and subsurface owners, the permit boundary including the area to be affected over the life of the project, a plate depicting all buildings and structures within 1,000 feet of the permit area and any surface or subsurface man-made features (powerline). Much of this information is combined on individual maps, e.g., the man-made features are on Plate 1 which also depicts buildings within 1,000 feet.

The location and boundaries of the revegetation reference area are shown on Plate 1.

Figure VII-2 depicts surface waters and receiving waters in the vicinity of the permit area. The Gordon Creek Road (County Road 139) is also depicted as it relates to the permit area on the surface facilities map.

<u>Cross Sections, Maps, and Plans</u> **(Also R645-301-511, 521.140, 521.150, 521.160, 521.170, 521.180 and R645-301-722)**

Many of the plans of this section are not applicable to the Wildcat Loadout Facility as it is strictly a surface facility and plans showing core samples, nature of coal seams, outcrops, active underground and abandoned workings or any others pertaining to mining (surface or underground) are not included.

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CHAPTER 6, GEOLOGY

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

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R645-301-600. **GEOLOGY**

R645-301-610. **INTRODUCTION**

R645-301-611. **GENERAL REQUIREMENTS**

R645-301-611.100. **GEOLOGY WITHIN AND ADJACENT TO THE PERMIT AREA**

Introduction

The Wildcat Loadout is in the Gordon Creek area of the Wasatch Plateau which is one of the major physiographic features in the region. The plateau rises from a base at approximately 6,000 feet in elevation to over 9,000 feet.

Spring Canyon and Ford Ridge (Forge Mountain) are the major topographic features of the area. The Price River Canyon and Spring Canyon are the major area drainages.

Geologic Setting (Stratigraphy and Structure)

The permit area sits on the Masuk Member of the Mancos Shale. The Mancos Shale in this area is in access of 5,000 feet thickness. The Mancos Shale in the area is mainly dark bluish, gray shale which becomes sandy towards the top.
The oldest unit of the Mesa Verde Group is the Star Point Sandstone. It lacks coal and consists of three sandstone tongues. The beds of sandstone range in thickness from one to ten feet in most parts. The Mesa Verde Group immediately

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CHAPTER 7, HYDROLOGY

HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment Pond B. A complete description of the mitigation plan proposed for DO-04 is included in Appendix P.

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R645-301-700. HYDROLOGY

R645-301-710. INTRODUCTION

It should be noted that the entire sedimentation and control plan, including impoundments, diversions and *reclamation hydrology* are discussed in *Appendix R, Sedimentation and Drainage Control Plan.*

R645-301-711. GENERAL REQUIREMENTS

See Sections R645-301-711.100 through R645-301-711.500

R645-301-711.100. EXISTING HYDROLOGIC RESOURCES

Existing Groundwater Resources

Regional Groundwater Hydrology

The groundwater resources of the Wasatch Plateau have not been studied to any great extent. The region has been characterized generally as one of regional groundwater recharge.[1] The lithologic nature of the upper cretaceous strata generally makes them unsuitable as significant aquifers. Much of the precipitation that falls in the Wasatch Plateau is removed by overland flow and evapotranspiration. The water that does enter the ground moves only short distances before discharging as springs and seeps, generally in the higher elevation areas. The regional water table is probably several hundred feet below the surface,[1] and probably coincides with the bottoms of the major streams, i.e., Price River.

[1]Price and Arnow, 1974

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CHAPTER 8, BONDING

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R645-301-800. BONDING AND INSURANCE

IPA currently holds a bond, calculated and approved by the Division, in the amount of $1,481,000. This bond, and all supporting calculations, is included in this MRP in Appendix B, Part D.
It should be noted that only major headings and information specific to the IPA Wildcat Bond and Insurance are included in this chapter. If a major heading is noted "N/A" or "By Division" all subsequent headings in that series are also assumed "N/A" or "By Division".

R645-301-810. BONDING DEFINITIONS AND DIVISION RESPONSIBILITIES

BY DIVISION

R645-301-820. REQUIREMENT TO FILE A BOND

IPA currently holds a bond, approved by UDOGM in the amount of $1,481,000 and it is included in this MRP in Appendix B, Part D.

R645-301-830. DETERMINATION OF BOND AMOUNT

The bond amount has been determined through joint effort by IPA and the Division. The present amount of bond is $1,481,000. Complete calculations are included in Appendix B, Part D. Bonded areas (disturbed areas) are shown on Plates *1* and 1B and further described in R645-301-542

INTERMOUNTAIN POWER AGENCY

WILDCAT LOADOUT

MINING AND RECLAMATION PLAN

CHAPTER 9, OIL STORAGE

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CHAPTER 9

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APPENDICES

APPENDIX A - MARLIN LOGISTICS, LLC - OIL STORAGE HYDROLOGY PLAN

APPENDIX B - MARLIN LOGISTICS, LLC - UPDES PERMIT

APPENDIS C - MARLIN LOGISTICS, LLC - BOND CALCULATIONS

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R645-301-100 GENERAL

This chapter is being submitted by Intermountain Power Agency, in order that a crude oil unloading, storage, and railcar loading systems can be installed on the west side of the Wildcat coal loading facility.

The crude oil facility will be operated by Marlin Logistics, LLC (Marlin). The resident agent is:

Brian Hess
General Manager
121 West 200 South
Farmington, Utah 84025
(801) 386-1861

Managers of the crude oil handling facilities are as follows:

Name	Address	Title	Date Position Assumed
General Manger			
Brian Hess	121 West 200 South Farmington, UT 84025	General Manager	July, 2012
Site Manager			
Scott Dimick		Site Manager 435-650-3221	Feb. 2014

R645-301-200 SOILS

The crude oil facility is located in a previously disturbed area. The crude oil unloading facility and fire water tank will infringe on the Revegetation Test Plot "D" area. To insure that this soil is protected, the soil will be removed by using a truck and hydraulic backhoe and hauled to a different location of the test plot area, see Plate 1 of this submittal.

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The soil will be spread using a small bulldozer to configure the pile. The amount of material to be removed and stored is approximately 2,170 cubic yards. The perimeter of the newly created pile will have a base of 60 feet wide and 172 feet long and a height of 5 feet. The slopes of the pile will be graded to a 2:1 configuration.

The pile will be surrounded by silt fence to control the loss of sediment and will be reseeded to help stabilize the soil. The interim seed mix stated in Chapter 2, "Soils " of the Wildcat M&RP will be used to reseed the pile. The seed mix label will be available for the inspector to examine to ensure that the proper seed mix was used. The silt fence will remain in place until vegetation is reestablished as per the Division of Oil, Gas and Mining regulations.

Topsoil piles "B" and "E" in ASCA #5 will remain in place for the present.

The waste rock disposal area will remain in place for the present and will be maintained by the company operating the coal loading facility.

R-645-301-300 BIOLOGY

The vegetation types in the surrounding areas of the crude oil facilities are Pinyon-Juniper and Sagebrush-Grass. Refer to Chapter 3 of the M&RP for more details on plants communities.

There are no know threatened or endangered species within the crude oil facility based upon previous studies of the area.

The crude oil facility is partially located within crucial winter habitat for Rocky Mountain elk and for mule deer.

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R645-301-400 LAND USE

The crude oil facility area will fall into two land use categories: 1) Fish and Wildlife habitat and recreation lands, and 2) Range Lands. County zoning regulations indicate all lands involved in the crude oil facility area are within Zone M and GI which is for mining and grazing. Current land use consists of grazing, wildlife habitat, and deer hunting. For recreational purposes, the land is suitable for deer hunting as well as ATV riding and occasionally snowmobiling.

A reconnaissance survey has been conducted of the existing area to assure that no archaeological or historical sites exist within the area. The results of the survey can be found in the *Confidential Binder* of the M&RP.

A reconnaissance survey has been conducted of the area where the oil storage facility will be constructed and the area for the dam and diversion ditch to direct undisturbed runoff around the oil storage facility. The results of the survey can be found in a report sent to the Bureau of Land Management, Price Field Office.

R645-301-500 ENGINEERING

Overview of Project

General Description

The Wildcat Loadout facility is centrally location for transporting oil from Central Utah and the Uintah Basin.

The unloading, storage, and loading of crude oil are designed to reduce chance of leaks and spills from degrading the area.

Summary Description

Storage Tanks

Four storage tanks with a combined capacity of approximately 250,000 barrels are used for crude oil storage. Two of the tanks will have a storage capacity of 100,000 barrels. These tanks will have a diameter of 146 feet and will be approximately 40 feet in height. Two of the tanks will have a storage capacity of 20,000 barrels. These tanks will have a diameter of 70 feet and will be approximately 32 feet in height. Each tank will have a sealed floating roof to prevent the escape of vapors. Each tank will contain coils for heating the oil during storage. The tanks will set on concrete foundations and pads.

The pads under the tanks will have open notches radiating from the center of the pad, each leading to the outside diameter of the tank to help detect bottom leaks of the tanks.

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Fire Suppression

A 5,000 barrel tank containing water with foam injection capabilities will be connected by pipe and pumped to the tank roof to provide fire suppressant. Pipes will have a connecting valve outside the containment berm to allow suppressant from tank trucks.

Truck Unloading

Four truck unloading lanes will be using the existing roadways within the facility. Truck unloading racks will be adjacent to the unloading lanes. Four and six inch piping and fixed pumps will be used to transfer the tanker truck oil to the storage tanks through a closed system. This will prevent vapors from escaping. The fixed pumps will have 50 and 100 horsepower motors that are approximately 20 inches wide and 48 inches tall.

Railcar Loading

Mobile pump stations will be used to transfer oil from storage tanks to railcars through a closed system to prevent vapors from escaping. This closed system will consist of four and six inch pipes. All piping will be of steel construction and will be above ground, where feasible.

Vapor Combustor

A smokeless, natural draft, air assisted and enclosed vapor combustor will be installed to combust any vapors generated during the loading process as required by the Utah Department of Environmental Quality. Two inch vapor vent manifold piping will be installed from each railcar station to the combustor where the vapors will be destroyed to 98 percent destruction efficiency. The combustor will be approximately three (3) feet in diameter and 20 feet tall utilizing propane for the pilot and assist gas.

Substation

A 46 KV to 12.45 KV 3 MVA transformer substation will be located adjacent to the southeast corner of the existing warehouse fence.

Yard Power

Two 12.45 KV feeds will leave the substation. One feed will be to a 12.45 KV to 480 V 500 KV transformer and will be used to supply power to two buildings. The second feed will be to a 12.75 KV to 480 v 2.5 KV transformer and will be used to supply power to control building.

Yard Lighting

Approximately twelve light posts will be use at the truck unloading lanes, tank area and railcar loading tracks. The lighting fixtures will be cut-off design to cast light downward and minimize light pollution.

Office

10' x 40' trailer will be used as an office.

Diesel Fuel Tank

A 10,000 gallon fully enclosed diesel fuel tank will be used to fuel both truck and equipment.

Construction

Construction began in the spring of 2014 and will be completed in the fall of 2014. Construction will be located and carried out so as to prevent and control erosion, siltation, water pollution, and damage to property in accordance with the regulations.

All facilities have been designed and constructed and will be maintained and used in a manner which prevents damage to wildlife and related environmental values (particularly as this relates to power line structures, regarding Fish and Wildlife).

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Marlin will maintain all facilities in a manner which prevents additional contributions of suspended solids outside the permit area. All activities shall be conducted in a manner which minimizes damage to railroads, electric and telephone lines, and water and sewage lines, which pass over or through the permit area. Marlin realizes that maintenance of the facilities is a key to optimum operation. Constant upkeep of all surface facilities and structures has resulted in their maintaining their excellent condition.

Construction Methods

Major Equipment

Excavations for foundations will be accomplished with backhoes and trackhoes. Leveling was required at the tank site; however, cut and fill was not implemented to a large degree because the area is relatively flat.

All surface pads will be stabilized and all other disturbed areas (pond embankments, other slopes, etc.) will be reseeded. Where possible, a rangeland seed drill will be used.

Maps

Crude oil unloading, storage, and railcar loading areas are all depicted on the surface facilities map, Plate 1.

Reclamation

Reclamation will be uncomplicated since this area is flat lying and topographically simple. All disturbed areas no longer required for the conduct of operations will be immediately revegetated. In the future, any areas no longer required for operations, will also be immediately revegetated.

Before buildings and final site preparation is completed, the topsoil was removed and revegetated to prevent erosion.

When the project is expired, perhaps in 20 years, extraneous material will be removed. Roads will be regraded and using the most advanced technology at the time, IPA will re-establish the terrain to as near the original contour as practical.

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Reclamation Timetable

Reclamation will be accomplished in two phases. Phase I will commence immediately after the project has expired. Phase I involves the majority of the reclamation steps. It will bring the site to near the original contour as practical with the exception of sedimentation ponds which will be left in place until revegetation has been determined complete. Prior to revegetation being complete, there is a possibility for runoff accumulating a sediment load, within the disturbed area.

The ponds left in place will prevent this runoff from leaving the disturbed area. Once the vegetation has been established which will probably take a minimum of two years, Phase II of the reclamation will commence. This phase involves the removal of the sediment ponds which were left, regrading, and revegetating these areas, and finally, IPA's commitment to monitoring.

Phase I

The first step will be to remove structures. Since none of the structures will remain on site, this will be the largest part of the Phase I effort and will also be the most expensive. The following is a list of structures which will be brought down and removed either complete or as scrap/salvage.

1. 2 Oil Storage Tanks (100,000 barrels each)
2. 2 Oil Storage Tanks (20,000 barrels each)
3. 5,000 Barrel Water Tank
4. 4 Truck Unloading Stations
5. Vapor Combustor
6. 12 Light Posts
7. 46KV to 12.47KV Substation
8. Piping
9. Railcars Loading Stations
10. Office Trailer
11. Diesel Fuel Tank

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Once the structures have been removed, then the recontouring and regrading portion will commence. It is anticipated that the structure removal will take approximately six months to complete so at this point. The recontouring would primarily involve the primary and secondary roads, the oil storage area, and unloading and loading areas. The undisturbed diversion west of the facility would become permanent at this point and would be capable of passing a 100 year precipitation event. The original natural drainage could not be restored because of the Utah Railroad. This natural drainage has been either blocked or diverted for the last 30 years by predecessors to IPA and/or Marlin Logistics, LLC.

R645-301-600 GEOLOGY

There are no changes in geology. Refer to Chapter 6, Geology of the M&RP for discussion on this subject.

R645-301-700 HYDROLOGY

The runoff from this area has always drained from the west of the railroad tracks to the east side using culverts under the tracks. Ditches intercepted the water at the culverts and divert the water to sediment pond and out of the ponds into natural drainage washes. With the construction of the crude oil storage facility and the possibility of leakage occurring the culverts under the tracks were either plugged or covered.

The hydrology for the crude oil storage facility was re-evaluated to determine the amount of runoff from undisturbed and disturbed areas above and within the site. To provide the maximum protection from potential events, a 100 year-24 hour storm event was used for these calculations. The precipitation event from this storm is 2.37 inches. This information was taken from NOAA Atlas 14, Volume 1, Version 5 for the Price Warehouse. SEDCAD Version 4 was used for these calculations.

The runoff from the different areas will either be handled by the construction of new structures or the use of existing structures. Four new structures will be construction. The first two structures will be a dam and a diversion ditch. These two structures will be to the west of the facility and designed to divert the majority of the undisturbed runoff around the facility to Garley Wash.

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SEDCAD 4 was used to develop the flow rates and design of the drainage ditches, pond size and culvert verification. The storm event used was 100 yr. - 24 hr. and a rainfall depth or 2.73 inches. This was determined from the NOAA, Atlas Volume 14.

The new ditch will be trapezoidal in shape with a bottom width of three (3) feet and top width of 9.73 feet. The flow depth is estimated to be 2.60 feet. The ditch will have 1:1 side slopes and a one (1) foot freeboard. The flow rate is estimated to be 36.57 cfs.

A field inspection of the existing ditch has determined that the ditch is unsuitable. The existing ditch will be replaced using the new ditch design.

The existing ditch empties into a 24 inch half-round pipe and then into Garley Wash. The 24 inch half-round will not handle the new flow rate and will be replaced with a 30 inch half-round pipe.

The hydrology calculations can be found in Appendix A, MARLIN LOGISTICS, LLC OIL STORAGE HYDROLOGY PLAN, "AES Diversion Ditch".

Water monitoring station WCW-3 is located in the existing diversion ditch UD-1. The monitoring location is at the convergence of the existing ditch and the proposed new ditch. The monitoring station will be moved a short distance and relocated in the new diversion ditch. Refer to Plate 2A, Wildcat Loadout Proposed Drainage Map Response to DO-04.

The Upper and Lower cells are existing sediment ponds and will be used to contain the runoff from the rest of the undisturbed area from entering the facility.

Two new retention ponds will be constructed to capture the runoff from the site. These two ponds will be lined with either clay or a high density polyethylene liner to prevent the contaminated water from infiltrating into the ground. The hydrology calculations can be found in Appendix A, MARLIN LOGISTICS, LLC OIL STORAGE HYDROLOGY PLAN, "AES Drainage Area #1" and "AES Drainage Area #3".

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SEDIMENT POND #1

SOIL EROSION TO POND #1

Use the modified Universal Soil Loss Equation:

$$A = R * K * LS * VM$$

Ref: Israelsen, C. E., Fletcher, J. E., Haws, F. W., E. K. Israelsen, 1984 Erosion and Sedimentation in Utah: A Guide for Control, Utah Water Research Laboratories, Logan, Utah

A = Amount of Soil loss per unit area
R = Rainfall Factor
K= Soil Erodibility Factor
LS = Topographic Factor
VM = Erosion Control Factor
= 1.2 for bare, compacted soil

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For POND # 1

R = 11 Foot-Ton/Acre/Hour
K= 0.1 Tons/Acre/EI

$$LS = \frac{(65.41s^2+4.56s+0.065)}{s^2*10{,}000+s^2*10{,}000} * \left(\frac{l}{72.6}\right)^m$$

l = slope length – 1,125 ft,
s = slope gradient – 0.18%

m = 0.2 for 0<s<1
0.3 for 1<s<3
0.4 for 3.5<s<4.5
0.5 for s>5

$$LS = \frac{(65.41(.18)^2+4.56(.18)+0.065)}{(.18)^2*10{,}000+9.18)^2*10{,}000} * \left(\frac{1{,}125}{72.6}\right)^{0.2}$$

DRAINAGE AREA	SLOPE LENGTH	SLOPE %	R	K	LS	VM	A	ACRES	A (ft^3/yr)
AES #1	1,125	0.18	11	0.1	0.58	1.2	0.78	10.35	158

Assume 100 lf/ft^3
Safety Factor for Sediment Storage – 5 years

158 ft^3/yr * 5 years = 790 ft^3 or 0.02 ac.-ft.

Pond #1 is 50 feet wide and 120 feet long and will be 8 feet deep. The capacity of the pond is 0.82 acre-feet. The sediment amount reporting to the pond is based on modified Universal Soil Loss Equation shown on pages 9-10 and 9-11 in the amount of 0.02 ac-ft of sediment for a five year period. The runoff volume is 0.70 ac-ft. The total pond capacity required is 0.72 ac-ft. The pond will be cleaned out when the sediment level reaches the five year amount at an elevation of 6,173.29 feet. The water will be pumped out of the pond when the water level reaches an elevation of 6,178.66 feet or 80 percent of the water volume. A staff gauge will be installed in the bottom of the pond and will have a paint mark at the sediment clear out level and the top of the gauge will be set at the elevation to pump out the pond. Before water is pumped, it will be tested to make sure that the water meets the water quality requirements.

SEDIMENT POND #2

SOIL EROSION TO POND #2

Use the modified Universal Soil Loss Equation:

$$A = R * K * LS * VM$$

Ref: Israelsen, C. E., Fletcher, J.E., Haws,F. W., E. K. Israelsen, 1984 Erosion and Sedimentation in Utah: A Guide for Control, Utah Water Research Laboratories, Logan, Utah

A = Amount of Soil loss per unit area
R = Rainfall Factor
K= Soil Erodibility Factor
LS = Topographic Factor
VM = Erosion Control Factor
= 1.2 for bare, compacted soil

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For POND # 2

R = 11 Foot-Ton/Acre/Hour
K= 0.1 Tons/Acre/EI

$$LS = \frac{(65.41s^2+4.56s+0.065)}{s^2*10{,}000+s^2*10{,}000} * \left(\frac{l}{72.6}\right)^m$$

l = slope length – 645 ft,
s = slope gradient – 3.88%

m = 0.2 for 0<s<1
0.3 for 1<s<3
0.4 for 3.5<s<4.5
0.5 for s>5

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$$LS = \frac{(65.41(3.88)^2+4.56(3.88)+0.065)}{(3.88)^2*10{,}000+(3.88)^2*10{,}000} * \left(\frac{645}{72.6}\right)^{0.4}$$

DRAINAGE AREA	SLOPE LENGTH	SLOPE %	R	K	LS	VM	A	ACRES	A (ft^3/yr)
AES #1	645	3.88	11	0.1	0.08	1.2	0.10	3.88	7.44

Assume 100 lf/ft^3
Safety Factor for Sediment Storage – 5 years

7.77 ft^3/yr * 5 years = 38.85 ft^3 or 0.000892 ac.-ft.

Pond #2 is 60 feet wide and 60 feet long and will be 10 feet deep. The capacity of the pond is 0.54 acre-feet. The sediment amount reporting to the pond is based on modified Universal Soil Loss Equation shown on pages 9-11 and 9-12 in the amount of 0.000892 ac-ft of sediment for a five year period. The runoff volume is 0.43 ac-ft. The total pond capacity required is 0.43 ac-ft. The water will be pumped out of the pond when the water level reaches an elevation of 6,174.37 feet or 80 percent of the water volume, since the amount of sediment in the pond is so small. A staff gauge will be installed in the bottom of the pond and will have a paint mark at the sediment clear out level and the top of the gauge will be set at the elevation to pump out the pond. Before water is pumped, it will be tested to make sure that the water meets the water quality requirements.

The ponds are designed to be total containment with no discharge. The reason for showing single spillway in each is because the SEDCAD program requires a spillway for the pond capacity to be calculated.

Water from each pond will be pumped to diversion ditch and discharged into Garley Wash. If it becomes necessary to discharge water from these two new ponds, the discharge water under the general coal permit will be sampled for: total iron, total suspended solids, total dissolved solids (must be under one ton per day), pH, oil and grease, flow and settleable solids if sampling during a storm event or snowmelt runoff. DOGM and DWQ will notified of the test results before pumping would occur.

AES has an approved UPDES permit for discharging water, found in Appendix B, MARLIN LOGISTICS, LLC UPDES PERMIT.

Three drainage areas in the oil storage and transfer facilities replace the existing drainage areas as shown on Plate 2A. The new drainage areas include the old areas as follows:

Drainage Area #1 includes the following:
DA-11, DA-19, DA-29, DA-31, and DA-32

Drainage Area #2 includes the following:
DA-34 and DA-35

Drainage Area #3 includes the following:
DA-1, DA-2, and DA-12

R645-301-800 BONDING

Bond calculation is found Appendix C, MARLIN LOGISTICS, LLC BOND CALCULATIONS.

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APPENDIX A

MARLIN LOGISTICS, LLC

OIL STORAGE HYDROLOGY PLAN

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ASSOCIATED ENERGY SERVICES (AES)
HYDROLOGY REPORT
PRICE RAILCAR TRANSLOADING FACILITY
CONSUMERS ROAD (CARBON COUNTY)

Prepared For:
Brian Hess-AES

September 2014

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Prepared By:

PROFESSIONAL ENGINEER
No. 22-150287-2203
J. THOMAS PALUSO
9/23/14
STATE OF UTAH

EIS Environmental & Engineering Consulting
31 North Main Street
Helper, Utah 84526

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INTRODUCTION

The purpose of this report is to address water issues at the Wildcat Loadout that pertains to the Associated Energy Services Price Railcar Transloading Facility (AES). Intermountain Power Agency (IPA) is the present lease holder of the Bureau of Land Management (BLM) Wildcat Loadout Lease. IPA is proposing to modify their existing lease to allow AES to expand their oil transloading operations beyond the Utah Railroad ROW. This expansion requires that existing water issues at the Wildcat Loadout be addressed. AES is expanding their operation to the west side of the Wildcat Loadout. This expansion will be limited to the area west of the Utah Railroad tracks.

In recent times, runoff waters on the west side of the property have been controlled by two sediment ponds referred to as the Upper & Lower Cell. Additional water not contained by the Upper & Lower Cell was diverted to an area referred to as the Depression Area. The Depression Area is where a large portion of the expansion operation will be located. Four large oil storage tanks contain over 10,000,000 gallons of oil will be located in this area.

The purpose of this hydrology report is to minimize the amount of runoff water that will report to the proposed oil tank location. This report will also show the size of two new ponds that will be required to prevent water from leaving this site. These ponds are to satisfy the Division of Water Quality requirement of preventing any water containing oil from leaving the site.

SCOPE OF WORK

There is a small drainage area (79.55 acres) west of AES's proposed oil loading facilities, refer to the drawing Diversion Ditch Drainage Area located in Appendix 1. This drainage area contributes the greatest amount of runoff water to the proposed construction site. Other Drainage Areas 1,2, and 3 are shown on drawing Drainage Areas 1, 2, & 3 is located in Appendix 1, and also contribute runoff water to this site.

To provide the maximum protection from potential runoff events, a 100 year-24 hour storm event was used for these calculations. The precipitation event from this storm is 2.37 inches. This information was taken from NOAA Atlas 14, Volume 1, Version 5 for the Price Warehouses. The computer program used for these calculations was SEDCAD 4.

The runoff calculations for the Diversion Ditch Drainage Area, Drainage Area #1, Drainage Area #2, Diversion Area #3, and the Existing Wildcat Loadout Permanent Impoundments (Upper & Lower Cells) are shown in Appendix 3.

The Upper and Lower cells are existing sediment ponds that help contain runoff water coming off of the undisturbed drainage from getting onto the facility. Excess water that these two ponds cannot handle, was collected west of the Utah Railway tracks in an area

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that DOGM refers to as the Depression Area. This Depression Area is where the new storage tanks are proposed to be located. The purpose of this Hydrology Report was to divert water away from the Depression Area.

Runoff Calculations

The runoff calculations for the various areas are listed in the following table.

Area	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
Diversion Ditch	36.57	2.83
Drainage Area #1	4.47	0.70
Drainage Area #2	3.54	.25
Drainage Area #3	4.91	.43

Retention Pond Capacity

The retention size of the new and existing ponds are listed in the following table.

Pond	Capacity (ac-ft)	Size	Depth
Pond #1	.82	50' x 120'	8.0'
Pond #2	.54	60' x 60'	10.0'
Upper Cell (1)	.437	App. 60' x 110'	3.8'
Lower Cell (1)	1.114	App. 120' x 140'	2.3'

(1) Sediment from pond needs to be removed to obtain these capacities.

CONCLUSION

The proposed Diversion Ditch will remove the majority of runoff water from the proposed construction site. Refer to Appendix 4 for the details on the diversion dam and ditch. This water will be diverted to another existing channel of Garley Wash. This finger of Garley Wash is located just south of the coal loadout bin where a 36" culvert diverts water under the Utah Railway tracks.

Water from Drainage Area #1 will be collected by Pond #1. This pond will be lined with clay or a high density polyethylene liner. Water from Drainage Area #2 will be collected by existing ponds (Upper & Lower Cells). These two cells should have sediment removed to get back to their original capacities. These two ponds will not be lined because they receive uncontaminated water from an undisturbed area. Water from Drainage Area #3 will be collected by Pond #2. This pond will also be lined with clay or a high density polyethylene liner.

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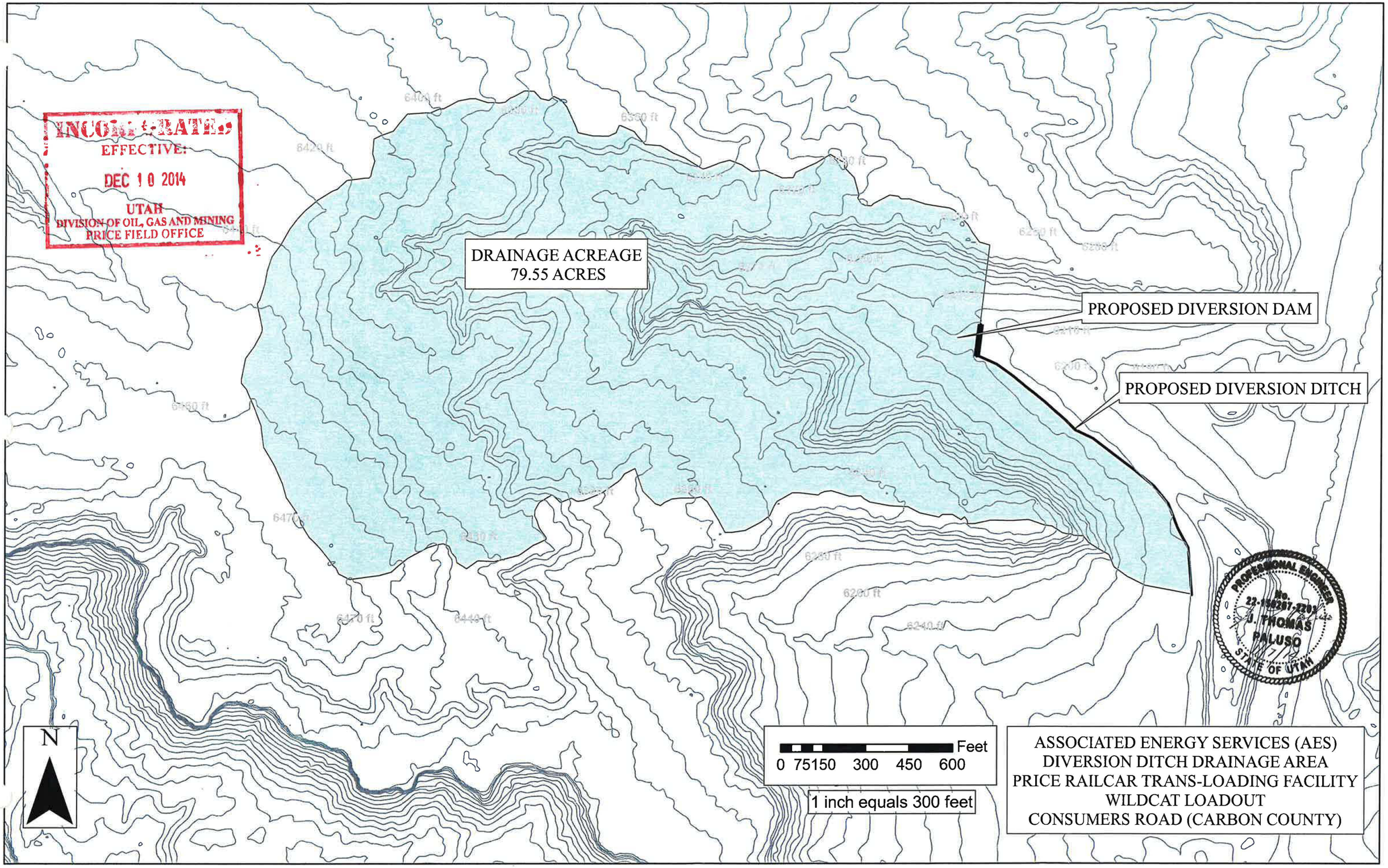
APPENDIX 1

DIVERSION DITCH DRAINAGE AREA DRAWING
&
DRAINAGE AREA 1, 2, AND 3 DRAWINGS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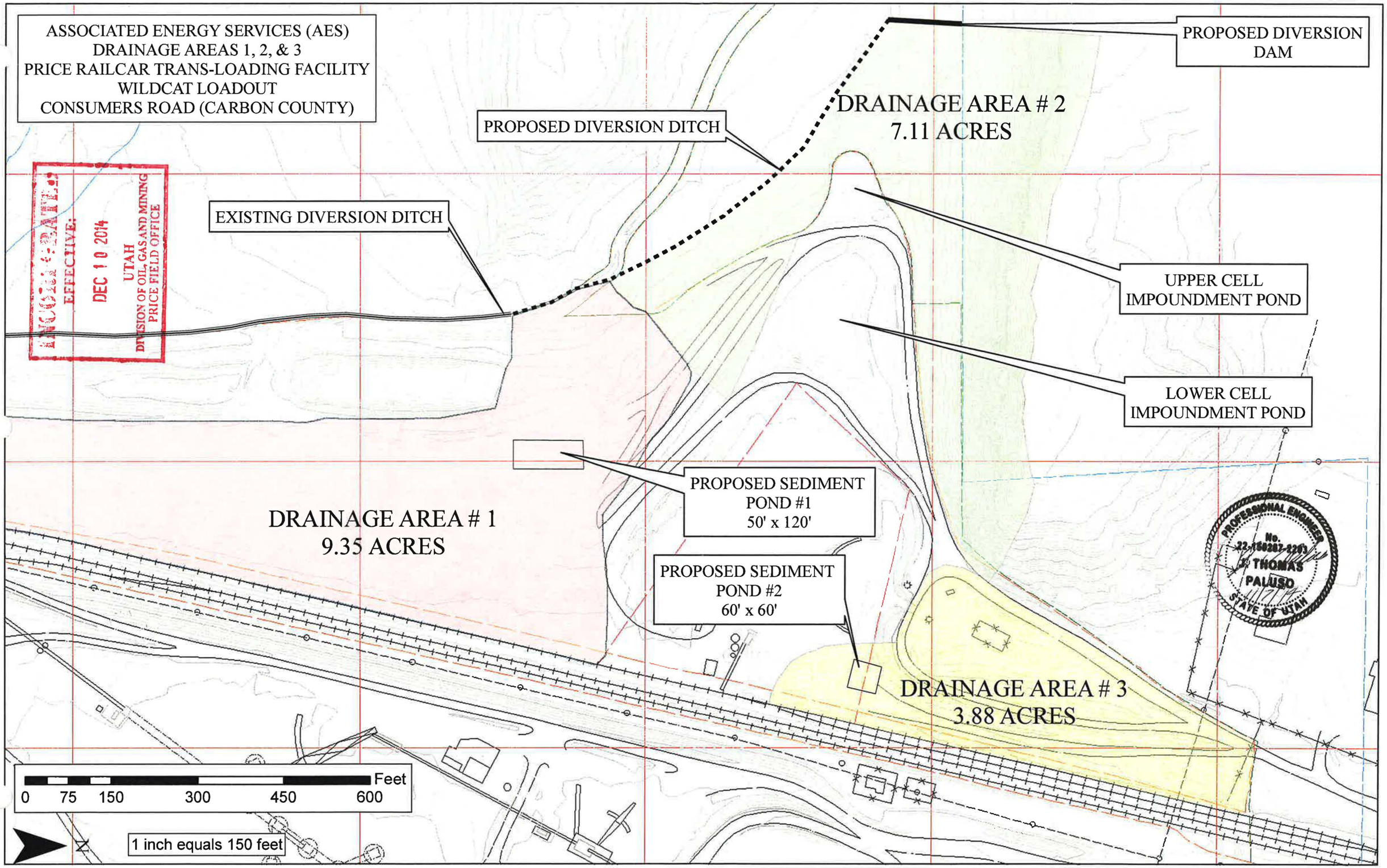
DRAINAGE ACREAGE
79.55 ACRES
PROPOSED DIVERSION DAM
PROPOSED DIVERSION DITCH
PROFESSIONAL ENGINEER
No. 22-158287-2202
J. THOMAS PALUSO
STATE OF UTAH
N
Feet
0 75150 300 450 600
1 inch equals 300 feet
ASSOCIATED ENERGY SERVICES (AES)
DIVERSION DITCH DRAINAGE AREA
PRICE RAILCAR TRANS-LOADING FACILITY
WILDCAT LOADOUT
CONSUMERS ROAD (CARBON COUNTY)


ASSOCIATED ENERGY SERVICES (AES)
DRAINAGE AREAS 1, 2, & 3
PRICE RAILCAR TRANS-LOADING FACILITY
WILDCAT LOADOUT
CONSUMERS ROAD (CARBON COUNTY)
PROPOSED DIVERSION DAM
DRAINAGE AREA # 2
7.11 ACRES
PROPOSED DIVERSION DITCH
EXISTING DIVERSION DITCH
UPPER CELL IMPOUNDMENT POND
LOWER CELL IMPOUNDMENT POND
PROPOSED SEDIMENT POND #1
50' x 120'
DRAINAGE AREA # 1
9.35 ACRES
PROPOSED SEDIMENT POND #2
60' x 60'
DRAINAGE AREA # 3
3.88 ACRES
Feet
0 75 150 300 450 600
1 inch equals 150 feet
N
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PROFESSIONAL ENGINEER
No.
THOMAS
PALUSO
STATE OF UTAH

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APPENDIX 2

NOAA PRECIPATION FREQUENCY ESTIMATES

NOAA Atlas 14, Volume 1, Version 5 PRICE WAREHOUSES
Station ID: 42-7026
Location name: Price, Utah, US*
Coordinates: 39.6167, -110.8000
Elevation:
Elevation (station metadata): 5700 ft*
* source: Google Maps

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.124 (0.107-0.146)	0.156 (0.137-0.184)	0.213 (0.184-0.251)	0.264 (0.229-0.312)	0.344 (0.288-0.406)	0.416 (0.340-0.493)	0.501 (0.400-0.596)	0.601 (0.461-0.721)	0.758 (0.551-0.929)	0.899 (0.626-1.12)
10-min	0.189 (0.163-0.222)	0.238 (0.209-0.281)	0.324 (0.280-0.381)	0.401 (0.348-0.474)	0.523 (0.439-0.618)	0.633 (0.517-0.750)	0.762 (0.609-0.906)	0.914 (0.701-1.10)	1.15 (0.839-1.41)	1.37 (0.953-1.70)
15-min	0.234 (0.202-0.275)	0.295 (0.259-0.348)	0.401 (0.347-0.473)	0.497 (0.431-0.587)	0.648 (0.544-0.766)	0.784 (0.641-0.930)	0.945 (0.755-1.12)	1.13 (0.870-1.36)	1.43 (1.04-1.75)	1.70 (1.18-2.11)
30-min	0.315 (0.272-0.370)	0.397 (0.348-0.468)	0.540 (0.466-0.636)	0.669 (0.580-0.791)	0.873 (0.732-1.03)	1.06 (0.863-1.25)	1.27 (1.02-1.51)	1.53 (1.17-1.83)	1.93 (1.40-2.36)	2.29 (1.59-2.84)
60-min	0.390 (0.337-0.458)	0.491 (0.431-0.579)	0.668 (0.577-0.787)	0.828 (0.718-0.979)	1.08 (0.906-1.28)	1.31 (1.07-1.55)	1.57 (1.26-1.87)	1.89 (1.45-2.27)	2.38 (1.73-2.92)	2.83 (1.97-3.52)
2-hr	0.461 (0.401-0.533)	0.570 (0.503-0.664)	0.736 (0.643-0.848)	0.898 (0.783-1.03)	1.15 (0.973-1.32)	1.37 (1.13-1.60)	1.63 (1.31-1.92)	1.94 (1.51-2.29)	2.45 (1.80-2.96)	2.91 (2.06-3.59)
3-hr	0.512 (0.452-0.583)	0.636 (0.559-0.727)	0.798 (0.704-0.906)	0.953 (0.838-1.08)	1.19 (1.02-1.35)	1.39 (1.17-1.61)	1.65 (1.36-1.94)	1.96 (1.56-2.32)	2.47 (1.89-2.99)	2.93 (2.16-3.63)
6-hr	0.629 (0.559-0.703)	0.769 (0.690-0.865)	0.944 (0.840-1.06)	1.09 (0.973-1.22)	1.30 (1.15-1.46)	1.48 (1.28-1.67)	1.74 (1.48-1.99)	2.05 (1.71-2.37)	2.56 (2.06-3.03)	3.01 (2.36-3.66)
12-hr	0.754 (0.684-0.837)	0.929 (0.840-1.03)	1.11 (1.00-1.24)	1.28 (1.14-1.42)	1.48 (1.32-1.66)	1.65 (1.45-1.86)	1.82 (1.58-2.08)	2.12 (1.81-2.43)	2.62 (2.20-3.04)	3.06 (2.51-3.70)
24-hr	0.983 (0.886-1.09)	1.21 (1.10-1.35)	1.47 (1.33-1.64)	1.67 (1.51-1.87)	1.95 (1.75-2.17)	2.16 (1.92-2.40)	2.37 (2.10-2.63)	2.58 (2.26-2.88)	2.85 (2.46-3.19)	3.08 (2.62-3.74)
2-day	1.12 (1.01-1.24)	1.38 (1.24-1.53)	1.67 (1.51-1.85)	1.90 (1.71-2.11)	2.21 (1.97-2.44)	2.44 (2.17-2.72)	2.68 (2.36-2.99)	2.92 (2.55-3.27)	3.22 (2.78-3.64)	3.45 (2.95-3.93)
3-day	1.20 (1.09-1.33)	1.49 (1.34-1.65)	1.80 (1.63-1.99)	2.05 (1.84-2.27)	2.39 (2.13-2.64)	2.64 (2.34-2.93)	2.90 (2.55-3.23)	3.16 (2.76-3.53)	3.49 (3.01-3.94)	3.75 (3.19-4.26)
4-day	1.29 (1.17-1.43)	1.59 (1.45-1.76)	1.93 (1.74-2.13)	2.20 (1.98-2.43)	2.56 (2.29-2.83)	2.84 (2.52-3.15)	3.12 (2.75-3.46)	3.40 (2.96-3.79)	3.77 (3.24-4.23)	4.04 (3.44-4.58)
7-day	1.48 (1.34-1.65)	1.83 (1.66-2.04)	2.23 (2.00-2.47)	2.54 (2.28-2.82)	2.96 (2.65-3.29)	3.27 (2.90-3.65)	3.60 (3.16-4.03)	3.92 (3.41-4.40)	4.34 (3.72-4.91)	4.65 (3.95-5.30)
10-day	1.69 (1.53-1.89)	2.10 (1.90-2.35)	2.55 (2.29-2.84)	2.90 (2.60-3.23)	3.37 (3.00-3.76)	3.71 (3.29-4.14)	4.06 (3.58-4.54)	4.41 (3.86-4.94)	4.85 (4.19-5.49)	5.18 (4.43-5.91)
20-day	2.09 (1.88-2.35)	2.60 (2.34-2.92)	3.18 (2.84-3.57)	3.63 (3.25-4.08)	4.24 (3.76-4.75)	4.69 (4.14-5.27)	5.14 (4.50-5.79)	5.59 (4.85-6.32)	6.17 (5.28-7.02)	6.60 (5.59-7.56)
30-day	2.44 (2.23-2.71)	3.03 (2.76-3.37)	3.67 (3.34-4.06)	4.16 (3.78-4.61)	4.80 (4.33-5.31)	5.26 (4.72-5.84)	5.72 (5.10-6.37)	6.16 (5.46-6.89)	6.72 (5.88-7.58)	7.13 (6.18-8.08)
45-day	2.92 (2.66-3.22)	3.62 (3.30-4.00)	4.39 (4.00-4.84)	4.98 (4.51-5.48)	5.73 (5.16-6.32)	6.28 (5.64-6.93)	6.81 (6.08-7.53)	7.31 (6.49-8.11)	7.95 (6.98-8.85)	8.40 (7.32-9.39)
60-day	3.39 (3.10-3.76)	4.21 (3.85-4.67)	5.12 (4.66-5.65)	5.81 (5.27-6.41)	6.69 (6.04-7.40)	7.34 (6.59-8.12)	7.96 (7.09-8.84)	8.55 (7.57-9.55)	9.30 (8.15-10.4)	9.83 (8.53-11.1)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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APPENDIX 3

AES DIVERSION DITCH CALCULATIONS
RAILROAD CULVERT SIZING
AES DRAINAGE AREA #1 CALUCLATIONS
AES DRAINAGE AREA #2 CALCULATIONS
AES DRAINAGE AREA #3 CALCULATIONS

AES Diversion Ditch

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Tom Paluso

EIS Enviromental & Engineering Consulting
31 North Main
Helper, Utah 84526

General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	100 yr - 24 hr
Rainfall Depth:	2.370 inches

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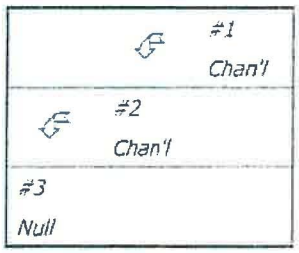
Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Channel	#1	==>	#2	0.111	0.415	Overflow Ditch
Channel	#2	==>	#3	0.000	0.000	
Null	#3	==>	End	0.000	0.000	



Structure Routing Details:

Stru #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	8. Large gullies, diversions, and low flowing streams	7.66	255.00	3,330.02	8.30	0.111
#1	**Muskingum K:**					**0.111**

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Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	79.550	79.550	36.57	2.83
#2	0.000	79.550	34.60	2.83
#3	0.000	79.550	34.60	2.83

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Structure Detail:

Structure #1 (Vegetated Channel)

Overflow Ditch

Trapezoidal Vegetated Channel Inputs:

Material: Bermuda grass

Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Retardance Classes	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)	Limiting Velocity (fps)
3.00	1.0:1	1.0:1	1.5	D, B	1.00			6.0

Vegetated Channel Results:

	Stability Class D w/o Freeboard	Stability Class D w/ Freeboard	Capacity Class B w/o Freeboard	Capacity Class B w/ Freeboard
Design Discharge:	36.57 cfs		36.57 cfs	
Depth:	1.60 ft	2.60 ft	2.36 ft	3.36 ft
Top Width:	6.20 ft	8.20 ft	7.73 ft	9.73 ft
Velocity:	4.96 fps		2.89 fps	
X-Section Area:	7.37 sq ft		12.67 sq ft	
Hydraulic Radius:	0.978 ft		1.309 ft	
Froude Number:	0.80		0.40	
Roughness Coefficient:	0.0360		0.0751	

Structure #2 (Nonerodible Channel)

Structure #2 (Nonerodible Channel) Nonerodible Channel Inputs:

Material: Metal, Corrugated

Nonerodible Channel Results:

	w/o Freeboard	w/ Freeboard
Design Discharge:	34.60 cfs	
Depth:	1.20 ft	
Top Width:	2.50 ft	
Velocity:	14.80 fps	
X-Section Area:	2.34 sq ft	
Hydraulic Radius:	0.610 ft	
Froude Number:	2.70	

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Structure #3 (Null)

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Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	79.550	0.111	0.111	0.415	71.000	M	39.57	2.832
	Σ	**79.550**						**36.57**	**2.832**
#2	Σ	**79.550**						**34.60**	**2.832**
#3	Σ	**79.550**						**34.60**	**2.832**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	8. Large gullies, diversions, and low flowing streams	7.66	255.00	3,330.02	8.300	0.111
#1	**1**	**Time of Concentration:**					**0.111**

Subwatershed Muskingum Routing Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	8. Large gullies, diversions, and low flowing streams	7.66	255.00	3,330.02	8.300	0.111
#1	**1**	**Muskingum K:**					**0.111**

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Railroad Culvert Sizing

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Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
108.00	1.00	0.0160	4.10	0.00	0.50

Culvert Results:

Minimum pipe diameter: 1 - 30 inch pipe(s) required

Detailed Performance Curves

Design Discharge = 36.57 cfs

Maximum Headwater = 4.10 ft

(BOLD indicates design pipe size)

Headwater (ft)	Discharge (cfs) (24 in)	**Discharge (cfs) (30 in)**	Discharge (cfs) (36 in)
0.41	1.11	**1.38**	1.65
0.82	3.11	**3.89**	4.66
1.23	5.71	**7.14**	8.57
1.64	8.80	**10.99**	13.19
2.05	12.29	**15.37**	18.44
2.46	15.84	**20.20**	24.24
2.87	18.69	**25.45**	30.54
3.28	21.20	**29.71**	37.31
3.69	23.40	**33.57**	43.50
4.10	25.02	**37.04**	48.98
4.51	26.45	**40.19**	53.91
4.92	27.81	**43.14**	58.42
5.33	29.10	**45.88**	62.61
5.74	30.34	**48.47**	66.54
6.15	31.53	**50.93**	70.24

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AES Drainage Area #1

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Tom Paluso

General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	100 yr - 24 hr
Rainfall Depth:	2.370 inches

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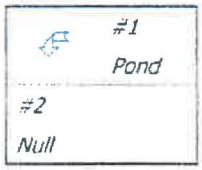
Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	#2	0.372	0.165	
Null	#2	==>	End	0.000	0.000	



Structure Routing Details:

Stru #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	7. Paved area and small upland gullies	0.18	2.00	1,125.00	0.84	0.372
#1	**Muskingum K:**					**0.372**

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Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	10.350	10.350	4.95	0.77
	Out			4.95	0.77
#2		0.000	10.350	4.69	0.77

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Structure Detail:

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Structure #1 (Pond)

Pond Inputs:

Initial Pool Elev:	6,180.80 ft
Initial Pool:	0.82 ac-ft

Broad-crested Weir

Weir Width (ft)	Spillway Elev (ft)
50.00	6,180.80

Pond Results:

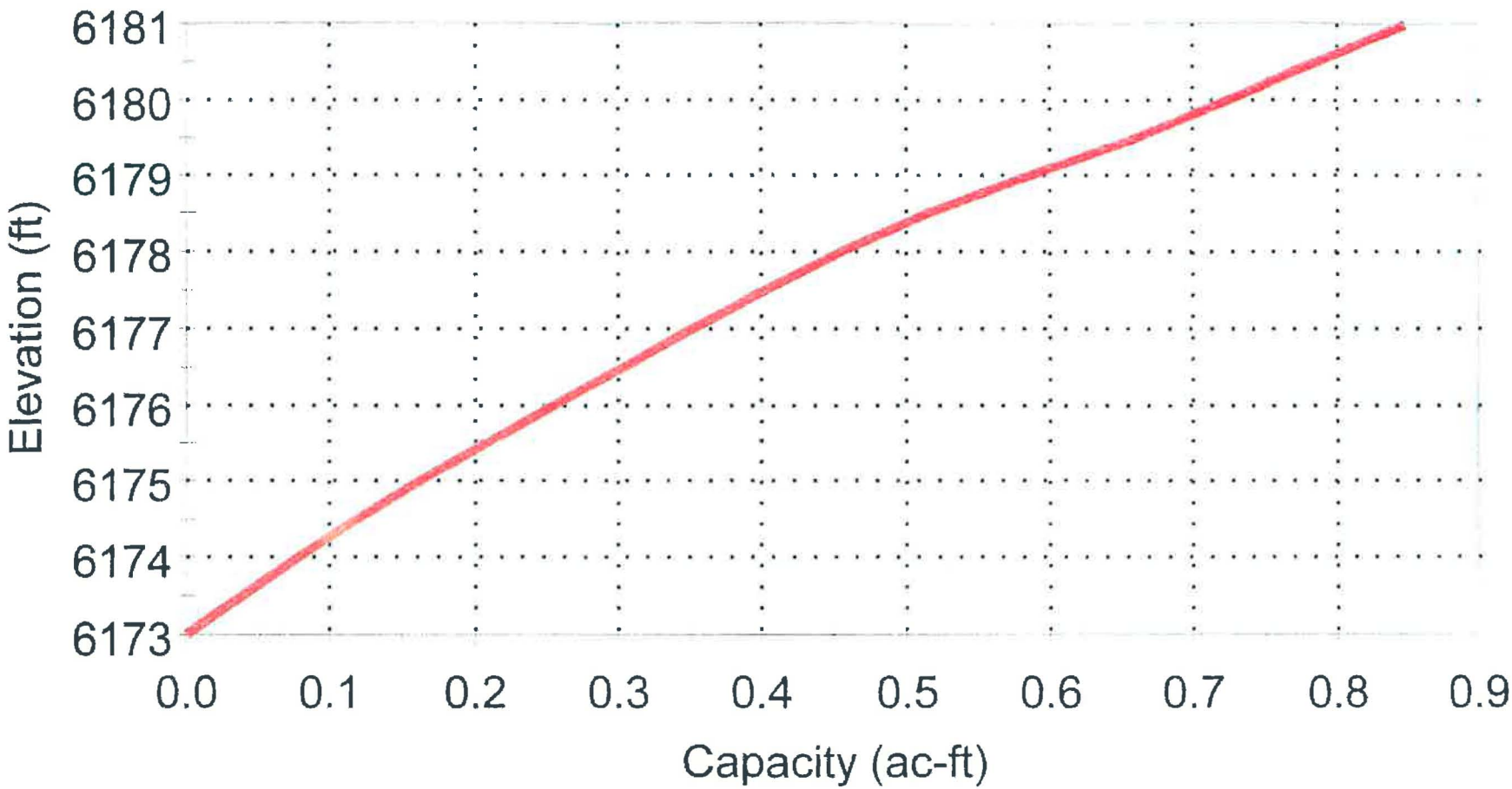
Peak Elevation:	6,180.87 ft
Dewater Time:	0.61 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
6,173.00	0.075	0.000	0.000		
6,173.50	0.078	0.038	0.000		
6,174.00	0.081	0.078	0.000		
6,174.50	0.084	0.119	0.000		
6,175.00	0.088	0.162	0.000		
6,175.50	0.091	0.207	0.000		
6,176.00	0.094	0.253	0.000		
6,176.50	0.097	0.301	0.000		
6,177.00	0.101	0.351	0.000		
6,177.50	0.104	0.402	0.000		
6,178.00	0.108	0.455	0.000		
6,178.50	0.130	0.515	0.000		
6,179.00	0.155	0.586	0.000		
6,179.50	0.138	0.659	0.000		
6,180.00	0.122	0.724	0.000		
6,180.50	0.126	0.786	0.000		
6,180.80	0.128	0.824	0.000		Spillway #1
6,180.87	0.129	0.834	4.947	14.75	Peak Stage
6,181.00	0.130	0.850	13.826		

Pond #1 AES Drainage Area #1



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Detailed Discharge Table

Elevation (ft)	Broad-crested Weir (cfs)	Combined Total Discharge (cfs)
6,173.00	0.000	0.000
6,173.50	0.000	0.000
6,174.00	0.000	0.000
6,174.50	0.000	0.000
6,175.00	0.000	0.000
6,175.50	0.000	0.000
6,176.00	0.000	0.000
6,176.50	0.000	0.000
6,177.00	0.000	0.000
6,177.50	0.000	0.000
6,178.00	0.000	0.000
6,178.50	0.000	0.000
6,179.00	0.000	0.000
6,179.50	0.000	0.000
6,180.00	0.000	0.000
6,180.50	0.000	0.000
6,180.80	0.000	0.000
6,181.00	13.826	13.826

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Structure #2 (Null)

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	10.350	0.372	0.372	0.165	89.000	S	5.33	0.773
	Σ	**10.350**						**4.95**	**0.773**
#2	Σ	**10.350**						**4.69**	**0.773**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	7. Paved area and small upland gullies	0.18	2.00	1,125.00	0.840	0.372
#1	**1**	**Time of Concentration:**					**0.372**

Subwatershed Muskingum Routing Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	7. Paved area and small upland gullies	0.18	2.00	1,125.00	0.840	0.372
#1	**1**	**Muskingum K:**					**0.372**

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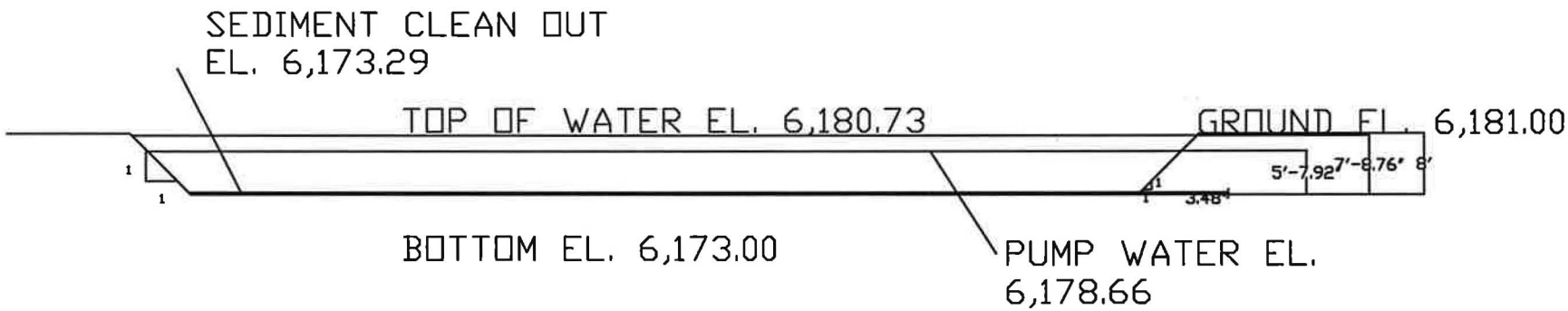

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ACTION ITEMS	
ELEVATION	ACTION
6,173.29	CLEAN OUT SEDIMENT
6,178.66	PUMP WATER

Environmental Industrial Services

NO.	REVISION	DATE	BY

POND #1

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AES Drainage Area #2

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Tom Paluso

EIS Environmental & Engineering Consulting
31 North Main Street
Helper, Utah 84526

Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1*	In	7.110	7.110	3.54	0.25
	Out			0.00	0.00
#2		0.000	7.110	3.54	0.00

**Denotes structures with incomplete design parameters. Results for these structures have not been evaluated, and may affect downstream structures.*

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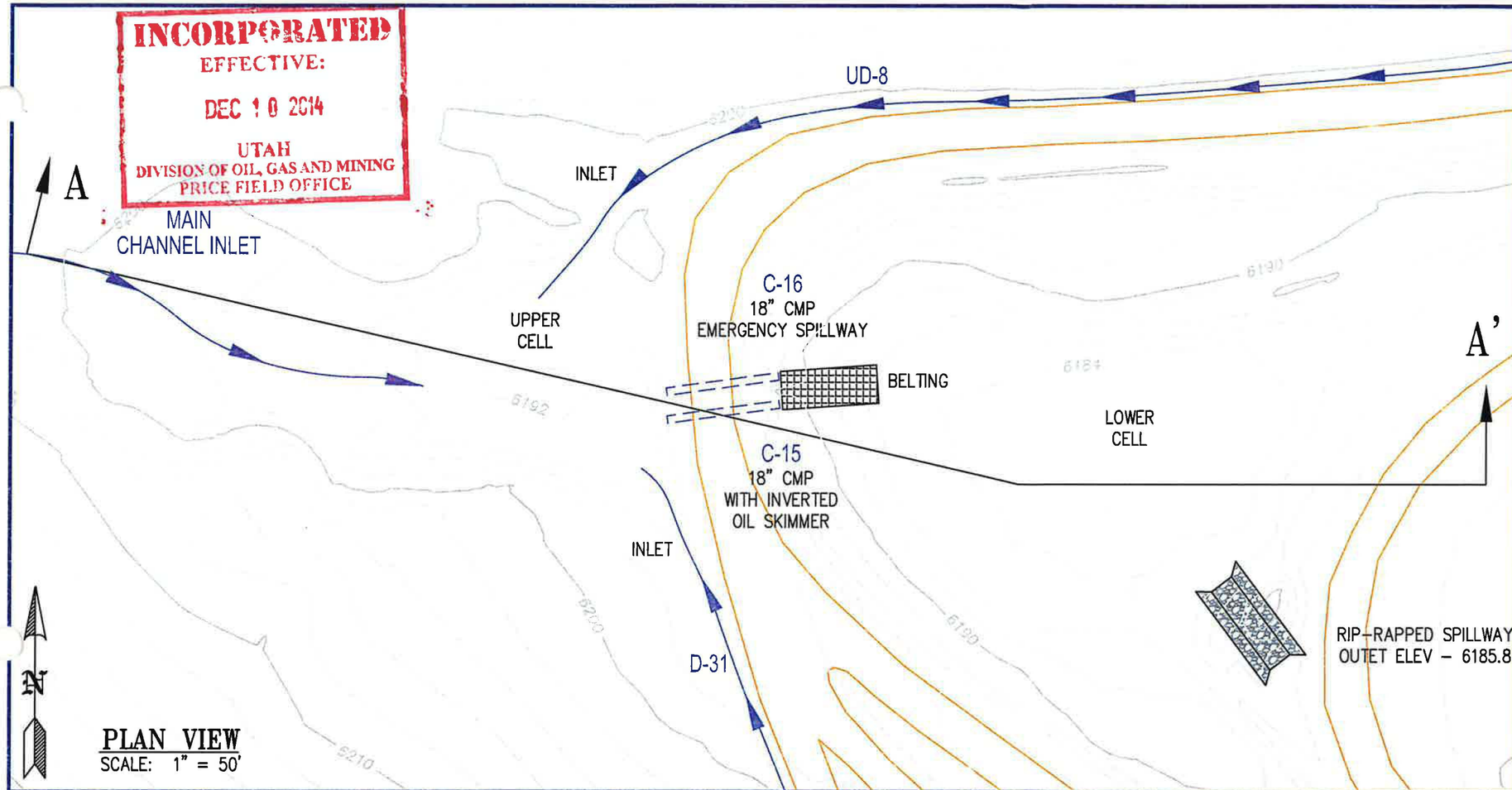


PLAN VIEW
SCALE: 1" = 50'

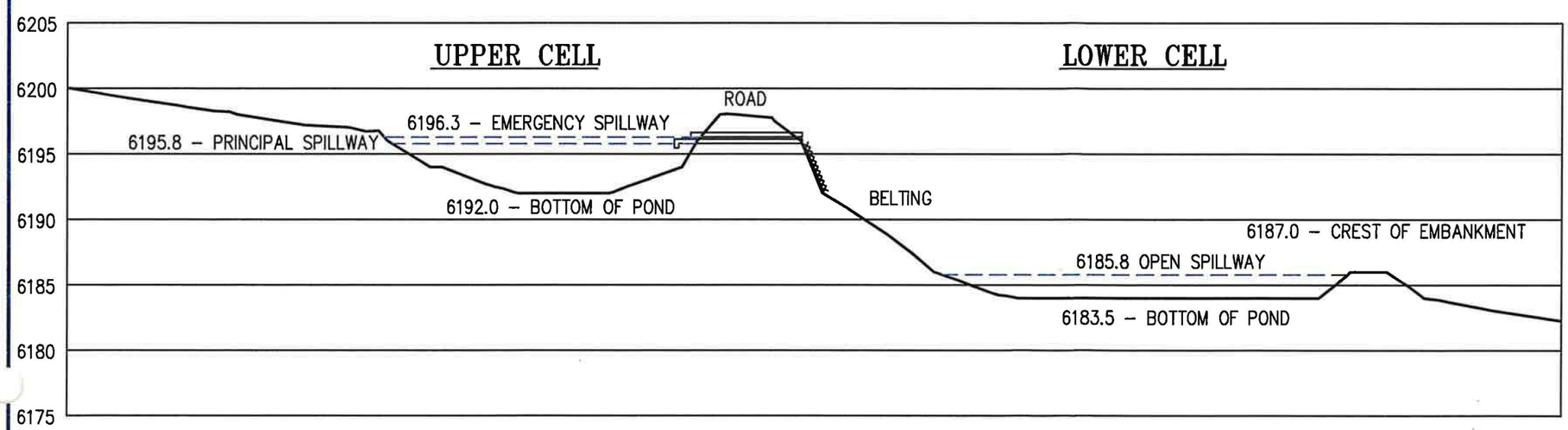
STAGE VOLUME
"PERMANENT IMPOUNDMENT"

ITEM	ELEVATION	VOLUME (Ac. Ft.)
BOTTOM OF UPPER CELL	6192.0	0
EMERGENCY SPILLWAY	6196.3	0.539
PRINCIPAL SPILLWAY	6195.8	0.437
BOTTOM OF LOWER CELL	6183.5	0.437
OVERFLOW FOR LOWER CELL	6185.8	1.114

VOLUME:

REQUIRED: 1.031 Ac. Ft.
EXISTING: 1.114 Ac. Ft.

NOTE:
NOT A SEDIMENT POND.



SECTION A–A'
VERTICAL EXAGGERATION 5X

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'

PROFESSIONAL ENGINEER
No. 22-158287-2203
J. THOMAS PALUSO
STATE OF UTAH

ANDALEX RESOURCES, INC.

WILDCAT LOADOUT
PERMANENT IMPOUNDMENT
EXISTING

REVISION NUMBER: 2	SCALE: AS SHOWN
DATE: JULY 2010	PLATE 3H

Copyright 1998 -2007 Pamela J. Schwab

AES Drainage Area #3

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

Tom Paluso

General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	100 yr - 24 hr
Rainfall Depth:	2.370 inches

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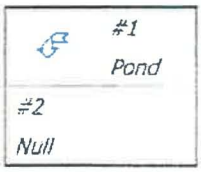
Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	#2	0.091	0.268	
Null	#2	==>	End	0.000	0.000	



Structure Routing Details:

Stru #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	5. Nearly bare and untilled, and alluvial valley fans	3.88	25.00	645.00	1.96	0.091
#1	**Muskingum K:**					**0.091**

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Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	3.880	3.880	5.19	0.43
	Out			5.07	0.43
#2		0.000	3.880	4.91	0.43

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Structure Detail:

INCORPORATED
EFFECTIVE:
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Structure #1 (Pond)

Pond Inputs:

Initial Pool Elev:	6,177.50 ft
Initial Pool:	0.54 ac-ft

Broad-crested Weir

Weir Width (ft)	Spillway Elev (ft)
10.00	6,177.50

Pond Results:

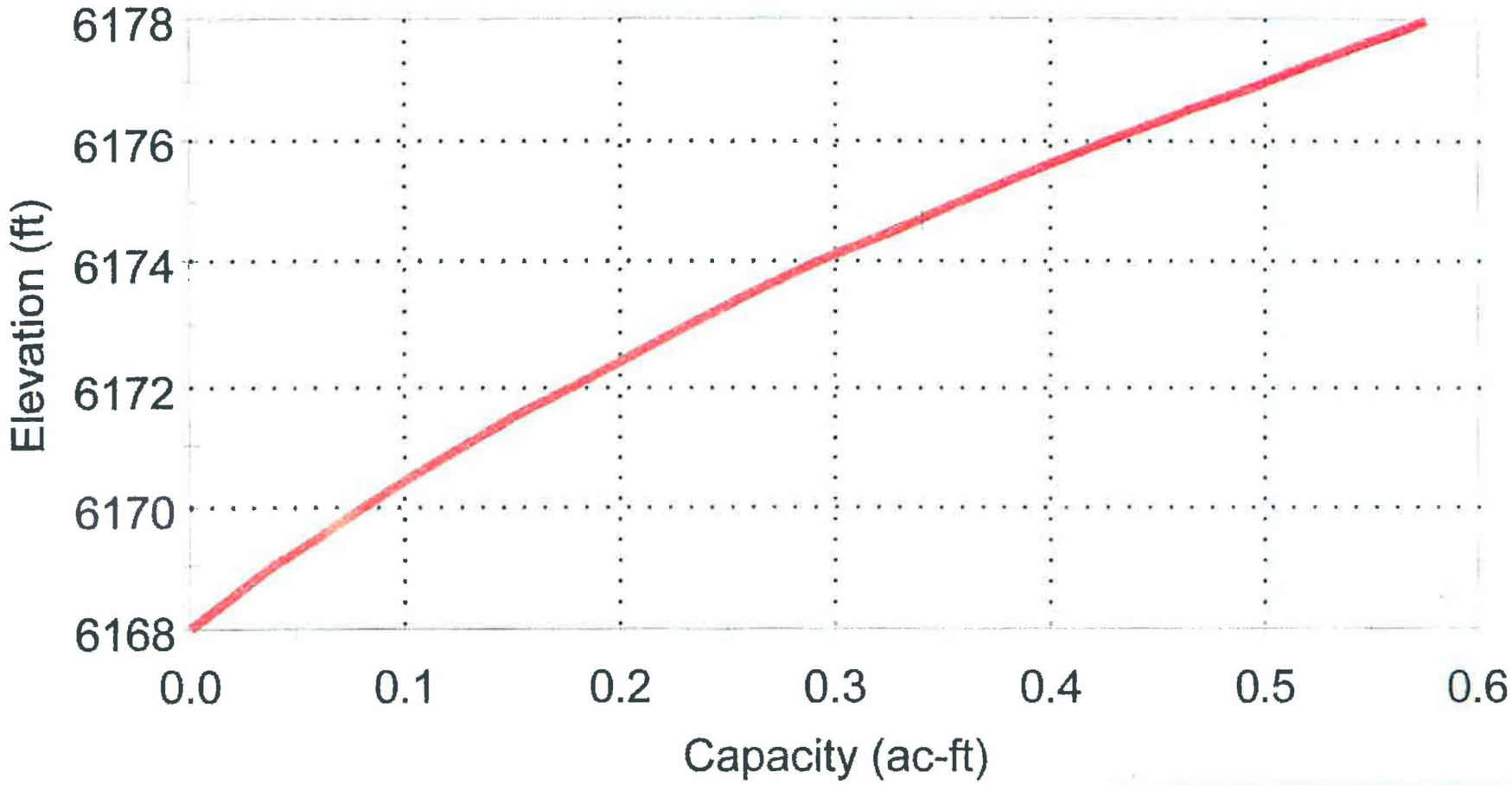
Peak Elevation:	6,177.76 ft
Dewater Time:	0.51 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
6,168.00	0.037	0.000	0.000	
6,168.50	0.038	0.019	0.000	
6,169.00	0.040	0.038	0.000	
6,169.50	0.042	0.059	0.000	
6,170.00	0.044	0.080	0.000	
6,170.50	0.046	0.103	0.000	
6,171.00	0.049	0.127	0.000	
6,171.50	0.051	0.152	0.000	
6,172.00	0.053	0.178	0.000	
6,172.50	0.055	0.205	0.000	
6,173.00	0.057	0.233	0.000	
6,173.50	0.059	0.262	0.000	
6,174.00	0.062	0.292	0.000	
6,174.50	0.064	0.324	0.000	
6,175.00	0.067	0.357	0.000	
6,175.50	0.069	0.391	0.000	
6,176.00	0.072	0.426	0.000	
6,176.50	0.073	0.463	0.000	
6,177.00	0.075	0.500	0.000	

Pond #2 AES Drainage Area #3



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Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
6,177.50	0.076	0.537	0.000		Spillway #1
6,177.76	0.077	0.557	5.067	12.20	Peak Stage
6,177.90	0.077	0.568	7.807		
6,178.00	0.083	0.576	10.914		

Detailed Discharge Table

Elevation (ft)	Broad-crested Weir (cfs)	Combined Total Discharge (cfs)
6,168.00	0.000	0.000
6,168.50	0.000	0.000
6,169.00	0.000	0.000
6,169.50	0.000	0.000
6,170.00	0.000	0.000
6,170.50	0.000	0.000
6,171.00	0.000	0.000
6,171.50	0.000	0.000
6,172.00	0.000	0.000
6,172.50	0.000	0.000
6,173.00	0.000	0.000
6,173.50	0.000	0.000
6,174.00	0.000	0.000
6,174.50	0.000	0.000
6,175.00	0.000	0.000
6,175.50	0.000	0.000
6,176.00	0.000	0.000
6,176.50	0.000	0.000
6,177.00	0.000	0.000
6,177.50	0.000	0.000
6,177.90	7.807	7.807
6,178.00	10.914	10.914

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Structure #2 (Null)

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	3.880	0.091	0.091	0.268	89.000	M	5.34	0.433
	Σ	**3.880**						**5.19**	**0.433**
#2	Σ	**3.880**						**4.91**	**0.433**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	5. Nearly bare and untilled, and alluvial valley fans	3.88	25.00	645.00	1.960	0.091
#1	**1**	**Time of Concentration:**					**0.091**

Subwatershed Muskingum Routing Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	5. Nearly bare and untilled, and alluvial valley fans	3.88	25.00	645.00	1.960	0.091
#1	**1**	**Muskingum K:**					**0.091**

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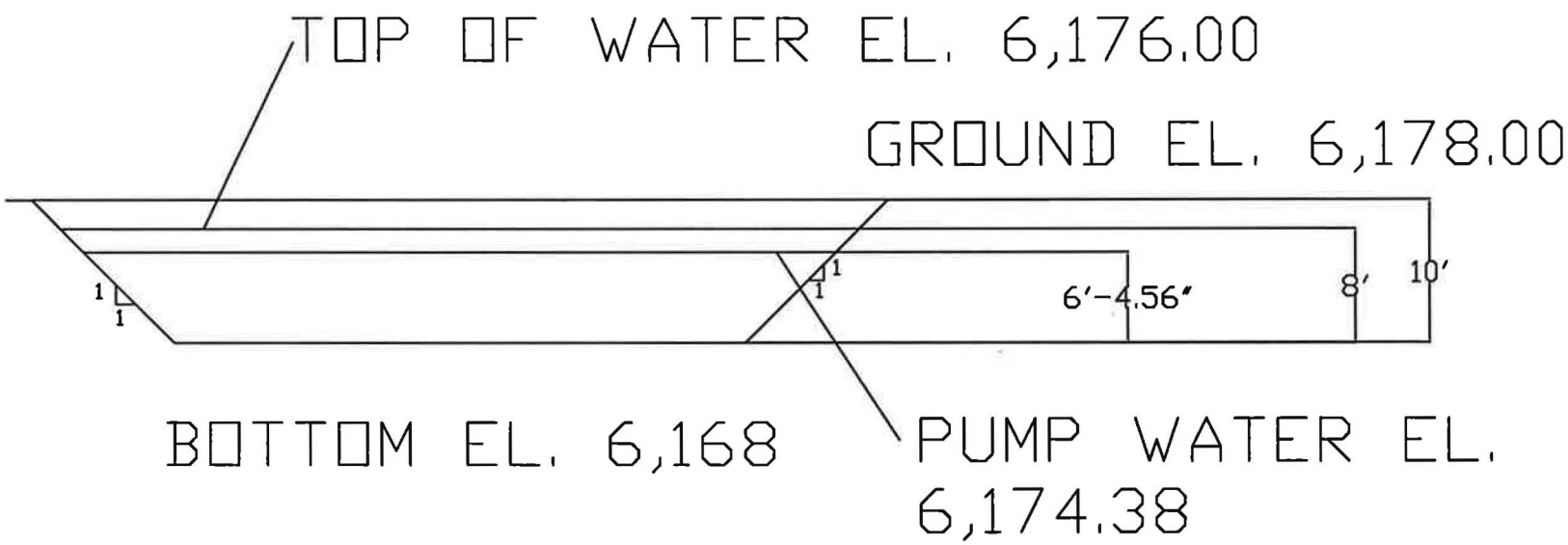

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ACTION ITEMS	
ELEVATION	ACTION
LOWER AMOUNT OF SEDIMENT	CLEAN OUT SEDIMENT
6174.38	PUMP WATER

Environmental Industrial Services

NO.	REVISION	DATE	BY

POND #2

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APPENDIX 4

DIVERSION DITCH & DAM INFORMATION

APPENDIX B
MARLIN LOGISTICS, LLC
UPDES PERMIT

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

Permit No.: UTR000000

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
SALT LAKE CITY, UTAH 84114-4870

Authorization to Discharge Under the
Utah Pollutant Discharge Elimination System

Multi-Sector General Permit (MSGP) for Storm Water
Discharges Associated with Industrial Activities

GROUP 1

Sector P. *Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities.*

In compliance with the provisions of the *Utah Water Pollution Control Act, Title 19, Chapter 5, Utah Code Annotated 1953*, as amended, the *Act*, the facility identified in the Notice of Intent, is authorized to discharge industrial storm water from the specified industrial site to waters of the State, as identified in the Notice of Intent, in accordance with discharge point(s), effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit shall become effective on January 01, 2014.

This permit and the authorization to discharge shall expire at midnight, December 31, 2018.

Signed this 31st day of December, 2013.

Walter L. Baker, P.E.
Director

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

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APPENDIX I.
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APPENDIX II.
A. Timber Products Facilities
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C. Chemical and Allied Products Manufacturing Facilities
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E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities
F. Primary Metals Facilities
G. Metal Mines (Ore Mining and Dressing)
H. Coal Mines and Coal Mine-Related Facilities
I. Oil or Gas Extraction Facilities
J. Mineral Mining and Processing Facilities
K. Hazardous Waste Treatment Storage or Disposal Facilities
L. Landfills and Land Application Sites
M. Automobile Salvage Yards
N. Scrap Recycling and Waste Recycling Facilities
O. Steam Electric Power Generating Facilities
P. Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities
Q. Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities
R. Ship or Boat Building and Repair Yards
S. Vehicle Maintenance Areas, Equipment Cleaning Areas or Airport Deicing Operations located at Air Transportation Facilities

T. Wastewater Treatment Works
U. Food and Kindred Products Facilities
V. Textile Mills, Apparel and other Fabric Product Manufacturing Facilities
W. Furniture and Fixture Manufacturing Facilities
X. Printing and Publishing Facilities
Y. Rubber and Miscellaneous Plastic Product Manufacturing Facilities
Z. Leather Tanning and Finishing Facilities
AA. Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware
AB. Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery
AC. Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods
AD. Non-Classified Facilities

APPENDIX III.
A. List of "Section 313" Water Priority Chemicals

PART I
Permit No.: UTR000000

I. COVERAGE UNDER THIS PERMIT.

A. Overview of the Multisector General Permit. *Parts I. - VIII.* apply to all facilities. *Parts I.* describe eligibility requirements. *Parts II. - VIII.* contain "basic" permit requirements.

Appendix I contains forms for application or termination of the permit and procedures to do such.

Appendix II. provides additional requirements for particular sectors of industrial activity. For example, primary metal facilities add *Appendix II.F*, to the "universal" *Parts I. - VIII.* requirements.

Appendix III contains a list of *EPCRA Section 313* "water priority chemicals".

Some facilities may have "co-located" activities that are described in more than one sector and need to comply with applicable conditions of each sector contained in the *Appendix*. For example, a chemical manufacturing facility could have a land application site and be subject to *Appendix II.C.* - Chemical and Allied Products Manufacturing sector (primary activity), with runoff from the land application site (co-located activity) also subject to conditions in the *Appendix II.L.* - Landfills and Land Application Sites sector.

B. Permit Area. The permit covers all areas of the State of Utah except for Indian lands[1].

C. Eligibility

1. Discharges Covered. Except for storm water discharges identified under *Part I.D.*, this permit may cover all new and existing point source discharges of storm water to waters of the State that are associated with industrial activity identified under the coverage sections contained in *Appendix II.* (see Table 1). Military installations must comply with the permit and monitoring requirements for all sectors that describe industrial activities that such installations perform.

TABLE 1.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Timber Products Facilities	II.A.1.

[1] The State of Utah, *Division of Water Quality*, does not have permit authority for Indian lands. Storm water permits for Indian lands within the State must be acquired through EPA Region VIII, except for facilities on the Navajo Reservation or on the Goshute Reservation which must acquire storm water permits through EPA Region IX.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Paper and Allied Products Manufacturing Facilities	II.B.1.
Chemical and Allied Products Manufacturing Facilities	II.C.1.
Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities	II.D.1.
Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities	II.E.1.
Primary Metals Facilities	II.F.1.
Metal Mines (Ore Mining and Dressing)	II.G.1.
Coal Mines and Coal Mine-Related Facilities	II.H.1.
Oil or Gas Extraction Facilities	II.I.1.
Mineral Mining and Processing Facilities	II.J.1.
Hazardous Waste Treatment Storage or Disposal Facilities	II.K.1.
Landfills and Land Application Sites	II.L.1.
Automobile Salvage Yards	II.M.1.
Scrap Recycling and Waste Recycling Facilities	II.N.1.
Steam Electric Power Generating Facilities	II.O.1.
Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities	II.P.1.
Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities	II.Q.1.
Ship or Boat Building and Repair Yards	II.R.1.
Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities	II.S.1.
Wastewater Treatment Works	II.T.1.
Food and Kindred Products Facilities	II.U.1.
Textile Mills, Apparel and other Fabric Product Manufacturing Facilities	II.V.1.
Furniture and Fixture Manufacturing Facilities	II.W.1.
Printing and Publishing Facilities	II.X.1.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Rubber and Miscellaneous Plastic Product Manufacturing Facilities	II.Y.1.
Leather Tanning and Finishing Facilities	II.Z.1.
Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware	II.AA.1.
Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery	II.AB.1.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods	II.AC.1.
Non-Classified Facilities	II.AD.1

2. Construction. This permit may authorize storm water discharges associated with industrial activity that are mixed with storm water discharges associated with construction activities provided that the storm water discharge from the construction activity is authorized by and in compliance with the terms of the *UPDES Storm Water General Permit for Construction Activity*, General Permit Number UTR100000.

3. Storm Water Not Associated With Industrial Activity. Storm water discharges associated with industrial activity that are authorized by this permit may be combined with other sources of storm water that are not classified as associated with industrial activity pursuant to *Utah Administrative Code (UAC) R317-8-3.8(6)(c) & (d)* (see also the definition of "storm water discharge associated with industrial activity", *Part VIII.A.21*).

4. Discharges Subject to New Source Performance Standards. Operators of facilities with storm water discharges subject to New Source Performance Standards[2] shall have documentation of a final *DWQ* decision indicating that the *DWQ* has determined that the storm water discharge will have no direct or indirect impact on the affected receiving waters

[2]Storm water discharges subject to New Source Performance Standards (NSPS) and that may be covered under this permit include: runoff from material storage piles at cement manufacturing facilities [40 CFR Part 411 Subpart C (established February 23, 1977)]; contaminated runoff from phosphate fertilizer manufacturing facilities [40 CFR Part 418 Subpart A (established April 8, 1974)]; coal pile runoff at steam electric generating facilities [40 CFR Part 423 (established November 19, 1982)]; and runoff from asphalt emulsion facilities [40 CFR Part 443 Subpart A (established July 24, 1975)]. NSPS apply only to discharges from those facilities or installations that were constructed after the promulgation of NSPS. For example, storm water discharges from areas where the production of asphalt paving and roofing emulsions occurs are subject to NSPS only if the asphalt emulsion facility was constructed after July 24, 1975.

of the State. This documentation shall be obtained and retained on site by 180 days after the submittal of the Notice of Intent. The information shall be sent to the appropriate address listed in *Part V.B.* of this permit.

D. Limitations on Coverage. The following storm water discharges associated with industrial activity are **not** authorized by this permit:

1. Storm water discharges associated with industrial activities that are not listed under the coverage sections contained in *Appendix II.* (see Table 1).

2. Storm water discharges subject to New Source Performance Standards except as provided in *Part I.C.4.*

3. Storm water discharges associated with industrial activity that are mixed with sources of non-storm water other than non-storm water discharges that are:

   a. In compliance with a different *UPDES* permit; or

   b. Identified by and in compliance with *Part II.A.* (Prohibition of Non-storm Water Discharges) of this permit.

4. Storm water discharges associated with industrial activity that are subject to an existing *UPDES* individual or general permit.

5. Are located at a facility where a *UPDES* permit has been terminated (other than at the request of the permittee) or denied, or that are issued a permit in accordance with *Part VI.M.* (Requirements for Individual or Alternative General Permits) of this permit;

6. Storm water discharges associated with industrial activity that the *Executive Secretary* (of the *Utah Water Quality Board*) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard. Where such determinations have been made, the discharger will be notified by the *Executive Secretary* of additional requirements for treatment or handling of the discharge or that an individual permit application is necessary. The *Executive Secretary* may authorize coverage under this permit after appropriate controls and implementation procedures, designed to bring the discharges into compliance with water quiality standards, have been included in the pollution prevention plan;

7. Discharges subject to storm water effluent guidelines, not described under *Appendix II.*

8. Storm water discharges associated with industrial activity from inactive mining, inactive landfills, or inactive oil and gas operations occurring on Federal lands where an operator cannot be identified.

E. Authorization. Dischargers of storm water associated with industrial activity must submit a complete *NOI* using an *NOI* form as found in *Appendix I* (or photocopy thereof), including payment of the appropriate permit fee to be authorized to discharge under this general permit. Unless notified by the *Executive Secretary* to the contrary, owners or operators who submit such notification are authorized immediately to discharge storm water associated with industrial activity under the terms and conditions of this permit after the NOI is received by the *DWQ*. An operator that had coverage under the preceeding expired general storm water industrial permit, must submit the *NOI* from *Appendix I* and a permit fee by January 1, 1998, to have continued coverage under this permit. The *Executive Secretary* may, at any time, deny coverage under this permit and may require submittal of an application for an individual *UPDES* permit based on a review of the *NOI* or other information.

F. *DWQ* Intent to Stagger Operator Renewal. The *DWQ* wishes to cover sectors in *Appendix II* identified in the table below for different periods of time under this permit. The table below shows the different time periods (beginning at the effective date of this permit) that the *DWQ* wishes to cover sectors in *Appendix II*. When that period of time is up, the *DWQ* will issue other permits for the specified sectors similar to this permit and with compliance issues scheduled in concert with this permit, such that permittees covered by this permit may continue under other permits with staggered renewal schedules. The objective for this action is to disperse permit renewals so that about 20% of all industrial storm water permittees will be up for renewal each year instead of 100% every 5 years. The purpose for this is simply to disperse the work load for the renewal process over 5 years rather then (how it is now) concentrating all general industrial storm water permit renewals in one year every five years.

Appendix II Sector	Years of Coverage Under This Permit
P	1
I, R, AB, and AC	2
E, G, U, AA, and AD	3
A, B, C, D, F, H, M, T, and W	4
J, K, L, N, O, Q, S, V, Y, and X	5

II. SPECIAL CONDITIONS.

A. Prohibition of Non-storm Water Discharges.

1. Storm Water Discharges. Except as provided in *Part II.A.2.* (below), all discharges covered by this permit shall be composed entirely of storm water.

2. Non-Storm Water Discharges.

a. Except as provided in *Part II.A.2.b.* (below), discharges other than storm water must be in compliance with a *UPDES* permit (other than this permit) issued for the discharge.

b. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with *Part III* and *Appendix II*: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage; lawn watering; routine external building washdown that does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Releases in Excess of Reportable Quantities.

1. Hazardous Substances or Oil. The discharge of hazardous substances or oil in the storm water discharge(s) from a facility shall be prevented or minimized in accordance with the applicable storm water pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of *40 CFR Part 117, 40 CFR Part 110,* and *40 CFR Part 302.* Except as provided in *Part II.B.2.* (Multiple Anticipated Discharges) of this permit, where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either *40 CFR Part 117, 40 CFR 110,* or *40 CFR Part 302,* occurs during a 24-hour period:

a. The discharger is required to notify the National Response Center (NRC) (800-424-8802; in the Washington, DC metropolitan area 202-426-2675) in accordance with the requirements of *40 CFR Part 117, 40 CFR 110,* and *40 CFR Part 302* and the *Division of Water Quality* (DWQ) (801-538-6146; or the 24 hour *DWQ* answering service at 801-536-4123) as soon as he or she has knowledge of the discharge; and

b. The storm water pollution prevention plan required under *Part III.* (Storm Water Pollution Prevention Plans) of this permit must be modified within 14 calendar days

of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed by the permittee to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate; and

c. The permittee shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and steps to be taken in accordance with *Part II.B.1.b.* (above) of this permit to the *DWQ* at the address provided in *Part V.B.* (Reporting: Where to Submit) of this permit.

2. Multiple Anticipated Discharges. Facilities that have more than one anticipated discharge per year containing the same hazardous substance in an amount equal to or in excess of a reportable quantity established under either *40 CFR Part 117, 40 CFR 110,* or *40 CFR Part 302*, that occurs during a 24-hour period, where the discharge is caused by events occurring within the scope of the relevant operating system shall:

a. Submit notifications in accordance with *Part II.B.1.b.* (above) of this permit for the first such release that occurs during a calendar year (or for the first year of this permit, after submittal of an NOI); and

b. Shall provide in the storm water pollution prevention plan required under *Part III.* (Storm Water Pollution Prevention Plans) a written description of the dates on which all such releases occurred, the type and estimate of the amount of material released, and the circumstances leading to the releases. In addition, the plan must be reviewed to identify measures to prevent or minimize such releases and the plan must be modified where appropriate.

3. Spills. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill.

C. Co-located Industrial Activity. In the case where a facility has industrial activities occurring onsite which are described by any of the activities in other sections of *Appendix II*, those industrial activities are considered to be co-located industrial activities. Storm water discharges from co-located industrial activities are authorized by this permit, provided that the permittee complies with any and all additional pollution prevention plan and monitoring requirements from other sections of *Appendix II* applicable to the co-located industrial activity. The operator of the facility shall determine which additional pollution prevention plan and monitoring requirements are applicable to the co-located industrial activity by examining the narrative descriptions of each coverage section (Discharges Covered Under This Section) in the NOI form (*Appendix I*) of this permit.

D. Discharge Compliance with Water Quality Standards. Dischargers seeking coverage under this permit shall not be causing or have the reasonable potential to cause or contribute to a violation of a water quality standard. Where a discharge is already authorized under this permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable Water Quality Standard, the *Executive Secretary* will notify the operator of such violation(s) and the permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and document these actions in the pollution prevention plan. If violations remain or re-occur, then coverage under this permit will be terminated by the *Executive Secretary* and an alternative permit may be issued or denied. Compliance with this requirement does not preclude any enforcement activity as provided by the *Water Quality Act* for the underlying violation.

III. STORM WATER POLLUTION PREVENTION PLANS. A storm water pollution prevention plan shall be developed for each facility covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in *40 CFR 125.3(d)(2)* or *(3)* as appropriate. The *DWQ* recommends that plans be signed by a State registered Professional Engineer (P.E.), particularly where plans are complex, treatment systems are used, and risks to storm water discharges are significant. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. Deadlines for Plan Preparation and Compliance.

1. Existing Facilities. Except as provided in *Part III.A.3.* and *4.* (below), all existing facilities and new facilities that begin operation on or before October 1, 1998 shall prepare and implement the plan by October 1, 1998.

2. New Facilities. Facilities that begin operation after October 1, 1998 shall prepare and implement the plan prior to submitting the Notice of Intent.

3. Oil and Gas Facilities. Oil and gas exploration, production, processing or treatment facilities that are not required to submit a permit application on or before January 1, 1998, in accordance with *UAC R317-8-3.8(2)(a)3.*, but after October 1, 1998, have a discharge of a reportable quantity of oil or a hazardous substance for which notification is required pursuant to either *40 CFR 110.6* or *40 CFR 302.6*, shall prepare and implement the plan on or before the date 60 calendar days after first knowledge of such release.

4. Facilities Continuing Coverage Under the Multi-Sector General Permit upon Expiration of the Baseline General Permit. Facilities previously subject to the *UPDES* General Permit for Storm Water Discharges Associated With Industrial Activity that are renewing coverage under this permit shall continue to implement the storm water pollution prevention plan required by that permit. The plan shall be revised as necessary to address requirements under *Appendix II.* of this permit no later than October 1, 1998. The revisions made to the plan shall be implemented on or before October 1, 1998.

5. Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than January 1, 2001. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate non-structural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

6. Extensions. Upon a showing of good cause, the *Executive Secretary* may establish a later date in writing for preparing and compliance with a plan for a storm water discharge associated with industrial activity.

B. Signature and Plan Review .

1. Signature/Location. The plan shall be signed in accordance with *Part VI.G.* (Signatory Requirements), and be retained onsite at the facility that generates the storm water discharge in accordance with *Part VI.P.2.* (Retention of Records) of this permit. For inactive facilities, the plan may be kept at the nearest office of the permittee.

2. Plan Availability. The permittee shall make plans available upon request to the *Executive Secretary*; other local agencies approving storm water management plans; interested members of the public; local government officials; or to the operators of a municipal separate storm sewer receiving discharges from the site. Viewing by the public shall be at reasonable times during regular business hours (advance notice by the public of the desire to view the plan may be required, not to exceed two working days). The permit does not require that free copies of the plan be provided to interested members of the public, only that they have access to view the document and copy it at their own expense. The copy of the plan required to be kept onsite (or locally available) must be made available to the *Executive Secretary* (or authorized representative) for review at the time of an onsite inspection.

3. Required Modifications. The *Executive Secretary*, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this part. Such notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan requires modifications in order to meet the minimum requirements of this part. Within 30 days of such notification from the *Executive Secretary*, (or as otherwise provided by the *Executive Secretary*), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the *Executive Secretary* a written certification that the requested changes have been made.

C. Keeping Plans Current. The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under *Part III.D.* (Contents of the Plan) of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. New owners shall review the existing plan and make appropriate changes: Amendments to the plan may be reviewed by the *Executive Secretary*, or an authorized representative, in the same manner as *Part III.B.* (above).

D. Contents of the Plan. The contents of the pollution prevention plan shall comply with the

requirements listed in the appropriate section of *Appendix II.* (Specific Requirements for Industrial Activities). Table 2 lists the location of the plan requirements for the respective industrial activities. These requirements are cumulative. If a facility has co-located activities that are covered in more than one section of *Appendix II.*, that facility's pollution prevention plan must comply with the requirements listed in all applicable sections of this permit.

Table 2
Pollution Prevention Plan Requirements

Storm Water Discharges From:	Are Subject to Pollution Prevention Plan Requirements Listed in Appendix:
Timber Products Facilities	II.A.3.
Paper and Allied Products Manufacturing Facilities	II.B.3.
Chemical and Allied Products Manufacturing Facilities	II.C.4.
Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities	II.D.3.
Glass, Clay, Cement Concrete and Gypsum Product Manufacturing Facilities	II.E.3.
Primary Metals Facilities	II.F.3.
Metal Mines (Ore Mining and Dressing)	II.G.3.
Coal Mines and Coal Mine-Related Facilities	II.H.3.
Oil or Gas Extraction Facilities	II.I.3.
Mineral Mining and Processing Facilities	II.J.3.
Hazardous Waste Treatment Storage or Disposal Facilities	II.K.3.
Landfills and Land Application Sites	II.L.3.
Automobile Salvage Yards	II.M.2.
Scrap and Waste Recycling Facilities	II.N.3.
Steam Electric Power Generating Facilities	II.O.3.
Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities	II.P.3.

Storm Water Discharges From:	Are Subject to Pollution Prevention Plan Requirements Listed in Appendix:
Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities	II.Q.3.
Ship or Boat Building and Repair Yards	II.R.3.
Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities	II.S.3.
Wastewater Treatment Works	II.T.3.
Food and Kindred Products Facilities	II.U.3.
Textile Mills, Apparel and other Fabric Product Manufacturing Facilities	II.V.3.
Furniture and Fixture Manufacturing Facilities	II.W.3.
Printing and Publishing Facilities	II.X.3.
Rubber and Miscellaneous Plastic Product Manufacturing Facilities	II.Y.3.
Leather Tanning and Finishing Facilities	II.Z.3.
Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware	II.AA.3.
Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery	II.AB.3.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods	II.AC.3.
Non-Classified Facilities	II.AD.3.

E. Special Pollution Prevention Plan Requirements. In addition to the minimum standards listed in *Appendix II.* of this permit (Specific Requirements for Industrial Activities), the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines, other effective storm water pollution prevention procedures, and applicable State rules, regulations and guidelines:

1. Additional Requirements for Storm Water Discharges Associated With Industrial Activity that Discharge Into or Through Municipal Separate Storm Sewer Systems Serving a Population of 100,000 or More.

a. In addition to the applicable requirements of this permit, facilities covered by this permit are not relieved from meeting applicable requirements in municipal storm water management programs developed under *UPDES* permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge.

b. Permittees that discharge storm water associated with industrial activity through a municipal separate storm sewer system serving a population of 100,000 or more, or a municipal system designated by the *Executive Secretary* shall make plans available to the municipal operator of the system upon request.

2. Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to *EPCRA Section 313* Requirements. In addition to the requirements of *Appendix II.* of this permit and other applicable conditions of this permit, storm water pollution prevention plans for facilities subject to reporting requirements under *EPCRA Section 313* for chemicals that are classified as "Section 313 water priority chemicals" in accordance with the definition in *Part VIII.* of this permit, except as provided in *Part III.E.2.c.* (below), shall describe and ensure the implementation of practices that are necessary to provide for conformance with the following guidelines:

a. In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided unless otherwise exempted under *Part III.E.2.c.* At a minimum, one of the following preventive systems or its equivalent shall be used:

(1) Curbing, culverting, gutters, sewers, or other forms of drainage control to prevent or minimize the potential for storm water runon to come into contact with significant sources of pollutants; or

(2) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water and wind.

b. In addition to the minimum standards listed under *Part III.E.2.a.* (above) of this permit, except as otherwise exempted under *Part III.E.2.c.* (below) of this permit, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with other effective storm water pollution prevention procedures, and applicable State rules, regulations, and guidelines:

(1) Liquid Storage Areas Where Storm Water Comes Into Contact With Any Equipment, Tank, Container, or Other Vessel Used for Section 313 Water Priority Chemicals.

(a) No tank or container shall be used for the storage of a Section 313 water

priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(b) Liquid storage areas for Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.

(2) Material Storage Areas for Section 313 Water Priority Chemicals Other Than Liquids. Material storage areas for Section 313 water priority chemicals other than liquids that are subject to runoff, leaching, or wind shall incorporate drainage or other control features that will minimize the discharge of Section 313 water priority chemicals by reducing storm water contact with Section 313 water priority chemicals.

(3) Truck and Rail Car Loading and Unloading Areas for Liquid Section 313 Water Priority Chemicals. Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 water priority chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Appropriate measures to minimize discharges of Section 313 chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(4) Areas Where Section 313 Water Priority Chemicals Are Transferred, Processed, or Otherwise Handled. Processing equipment and materials handling equipment shall be operated so as to minimize discharges of Section 313 water priority chemicals. Materials used in piping and equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall minimize storm water contact with Section 313 water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(5) Discharges From Areas Covered by Paragraphs *(1)*, *(2)*, *(3)*, or *(4)* (above).

(a) Drainage from areas covered by paragraphs *(1)*, *(2)*, *(3)*, or *(4)* of this part (above) should be restrained by valves or other positive means to prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these shall be manually activated.

(b) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design.

(c) If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material to the facility.

(d) Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

(6) Facility Site Runoff Other Than From Areas Covered By *(1)*, *(2)*, *(3)*, or *(4)*. Other areas of the facility (those not addressed in paragraphs *(1)*, *(2)*, *(3)*, or *(4)*), from which runoff that may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(7) Preventive Maintenance and Housekeeping. All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures that could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or noncontainment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered that may result in significant releases of Section 313 water priority

chemicals to waters of the State, action to stop the leak or otherwise prevent the significant release of Section 313 water priority chemicals to waters of the State shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or noncontainment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(8) Facility Security. Facilities shall have the necessary security systems to prevent accidental or intentional entry that could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(9) Training. Facility employees and contractor personnel that work in areas where Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year. Training shall address: pollution control laws and regulations, the storm water pollution prevention plan and the particular features of the facility and its operation that are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

c. Facilities subject to reporting requirements under EPCRA Section 313 for chemicals that are classified as ‹Section 313 water priority chemicals' in accordance with the definition in *Part VIII.* of this permit that are handled and stored onsite only in gaseous or non-soluble liquid or solid (at atmospheric pressure and temperature) forms may provide a certification as such in the pollution prevention plan in lieu of the additional requirements in *Part III.E.2.* Such certification shall include a narrative description of all water priority chemicals and the form in which they are handled and stored, and shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

d. The storm water pollution prevention plan shall be certified in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

3. Additional Requirements for Salt Storage. Storage piles of salt used for deicing or other commercial or industrial purposes and that generate a storm water discharge associated with industrial activity that is discharged to waters of the State shall be enclosed or covered

to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. The *Executive Secretary* may waive this requirement for salt piles located in areas where surface and/or ground waters are already high in concentrations of salt.

4. Consistency With Other Plans. Storm water pollution prevention plans may reference the existence of other plans for Spill Prevention, Control, and Countermeasure (SPCC), plans developed for the facility under Section 311 of the CWA, or *Best Management Practices* (*BMP*) Programs otherwise required by a *UPDES* permit for the facility as long as such requirement(s) is incorporated into the storm water pollution prevention plan.

5. Other Laws and Requirements.

   (1) Local Storm Water Control Requirements. This permit does not relieve the permittee from compliance with other laws affecting storm water discharges. If the requirements of this permit appears to be a conflict in with other laws or local requirements the permittee must contact the *Executive Secretary* within 30 days of knowledge of any discrepancies. Where applicable, compliance efforts to other storm water requirements (as they pertain to water quality issues) should also be reflected in the SWP3.

   (2) Threatened or Endangered Species & Historic Properties. This permit does not relieve the permittee from compliance with Federal or State laws pertaining to threatened or endangered species or historic properties. Where applicable compliance efforts to these laws should be reflected in the SWP3.

IV. NUMERIC EFFLUENT LIMITATIONS

A. Discharges Associated With Specific Industrial Activity. Numeric effluent limitations for storm water discharges associated with a specific industrial activity are described in *Appendix II.* of this permit.

B. Coal Pile Runoff. Any discharge composed of coal pile runoff shall not exceed a maximum concentration for any time of 50 mg/L total suspended solids. Coal pile runoff shall not be diluted with storm water or other flows in order to meet this limitation. The pH of such discharges shall be within the range of 6.5 to 9.0. Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event shall not be subject to the 50 mg/L limitation for total suspended solids.

PART V
Permit No.: UTR000000

V. MONITORING AND REPORTING REQUIREMENTS

A. Monitoring Requirements.

1. Limitations on Monitoring Requirements.

a. Except as required by paragraph b. (below), only those facilities with discharges or activities identified in *Part V.C.*and *Appendix II.* are required to conduct sampling of their storm water discharges associated with industrial activity. Monitoring requirements under *Parts V.C.* and *Appendix II.* are additive. Facilities with discharges or activities described in more than one monitoring section are subject to all applicable monitoring requirements from each section.

b. The *Executive Secretary* can provide written notice to any facility otherwise exempt from the sampling requirements of *Parts V.C.* and *Appendix II.* that it shall conduct discharge sampling for a specific monitoring frequency for specific parameters.

B. Reporting: Where to Submit.

1. Location. Signed copies of storm water discharge monitoring reports (SWDMR) required under *Parts V.C.* and *Appendix II.*, individual permit applications, and all other reports required herein, shall be submitted to the *Executive Secretary* of the *Water Quality Board* at the address listed below. For each outfall, one SWDMR form must be submitted per storm event sampled.

Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

2. Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with *Part V.B.1* (above), facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) or a municipal system designated by the *Executive Secretary* must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in *Appendix II.* Facilities not required to report monitoring data under *Appendix II.* and facilities that are not otherwise required to monitor their discharges, have no need to comply with this provision.

C. Special Monitoring Requirements for Coal Pile Runoff. During the period beginning on the effective date and lasting through the expiration date of this permit, permittees with storm water discharges containing coal pile runoff shall monitor such storm water for: pH and TSS (mg/l) at least annually (1 time per year). Permittees with discharges containing coal pile runoff must report in accordance with *Part IV.B.* (Coal Pile Runoff) and *Part V.B.* (Reporting: Where to

Submit). In addition to the parameters listed above, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event samples and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge samples.

1. Sample Type. Discharges containing coal pile runoff shall be monitored by a grab sample(s). All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Sampling Waiver. When a discharger is unable to collect samples of coal pile runoff due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit this data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

3. Representative Discharge. When a facility has two or more outfalls containing coal pile runoff that, based on a consideration of the other industrial activity, and significant materials, and upon management practices and activities within the area drained by the outfall, and the permittee reasonably believes substantially identical effluents are discharged, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (e.g., low (under 40 percent), medium (40 to 65 percent) or high (above 65 percent)) shall be provided in the plan. Permittees required to submit monitoring information under *Part VI.* of this permit shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the SWDMR. This representative discharge provision is not applicable to storm water

discharges from coal piles regulated under the national effluent limitations guidelines.

4. Alternative Certification. Facilities with storm water discharges containing coal pile runoff may not submit alternative certification in lieu of the required monitoring data.

5. When to Submit. Permittees with discharges containing coal pile runoff shall submit monitoring results annually no later than the 28th day of January.

VI. STANDARD PERMIT CONDITIONS

A. Duty to Comply.

1. Permittee's Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the *Act* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions.

   a. Negligent Violations. The *Act* provides that any person who negligently violates permit conditions implementing the *Act*, this permit, or the Utah wastewater rules is subject to a fine of $10,000 per day.

   b. Willful or Gross Negligence. The *Act* provides that any person who willfully or with gross negligence violates *UCA 19-5-107(1)* (discharges a pollutant to waters of the State) or a condition or limitation of this permit is subject to a fine of $25,000 per day or $50,000 per day for any person twice convicted.

   c. False Statements. The *Act* provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the *Act* or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the *Act* shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment by 6 months, or by both.

B. Continuation of the Expired General Permit. This permit, expires on December 31, 2002. However, an expired general permit may continue in force and effect after the expiration date until a new permit is issued if a timely reapplication is made for the new permit (*UAC R317-8-3.1(1)(d)*). If this permit is not renewed by the *Division of Water Quality*, for some reason, the *Executive Secretary* will notify the permittee and provide instructions concerning how to stay in compliance with the the *Utah Water Quality Act* and the *Utah Wastewater Rules* (*UAC R317-8*) with the discharge(s) that is(are) covered by this permit.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information. The permittee shall furnish to the *Executive Secretary* or an

authorized representative any information which is requested to determine compliance with this permit or other information. The permittee shall also furnish copies of records required to be kept by this permit to the *Executive Secretary* upon request.

F. Other Information. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the *NOI* or in any other report to the *Executive Secretary*, he or she shall promptly submit such facts or information.

G. Signatory Requirements. All *Notices of Intent*, storm water pollution prevention plans, reports, certifications or information either submitted to the *Executive Secretary* or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed as follows:

1. All Notices of Intent shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing; production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership of sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

      (1) the chief executive officer of the agency, or

      (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

2. All reports required by the permit and other information requested by the *Executive Secretary* or by an authorized representative of the *Executive Secretary* shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to

the *Executive Secretary.*

b. The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

c. Changes to authorization. If an authorization under *Part VI.G.2.* is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new notice of intent satisfying the requirements of *Part I.C. & D.* must be submitted to the *Executive Secretary* prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing documents under *Part VI.G.* shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *"Act"* provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months, or by both.

I. Penalties for Falsification of Monitoring Systems. The *"Act"* provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in *19-5-111* of the *"Act"*.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the "*Act*".

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of

personal rights, nor any infringement of Federal, State, or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

M. Requiring an Individual Permit or an Alternative General Permit.

1. *Executive Secretary* Designation. The *Executive Secretary* may require any person authorized by this permit to apply for and/or obtain either an individual *UPDES* permit or an alternative *UPDES* general permit. Any interested person may petition the *Executive Secretary* to take action under this paragraph. The *Executive Secretary* may require any owner or operator authorized to discharge under this permit to apply for an individual *UPDES* permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of issuance or denial of the individual *UPDES* permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Individual permit applications shall be submitted to the address of the *DWQ* shown in *Part V.B.* (Reporting: Where to Submit) of this permit. The *Executive Secretary* may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit, in a timely manner, an individual *UPDES* permit application as required by the *Executive Secretary*, then the applicability of this permit to the individual *UPDES* permittee is automatically terminated at the end of the day specified for application submittal.

2. Individual Permit Application. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application (EPA, Form 1 and Form 2F) with reasons supporting the request to the *Executive Secretary*. Individual permit applications shall be submitted to the address of the DWQ shown in *Part V.B.* of this permit. The request may be granted by the issuance of any individual permit or an alternative general permit if the reasons cited by the owner or operator are adequate to support the request.

3. Individual/Alternative General Permit Issuance. When an individual *UPDES* permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is authorized for coverage under an alternative *UPDES* general permit, the applicability of this permit to the individual *UPDES* permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual *UPDES* permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied

for coverage under an alternative *UPDES* general permit, the applicability of this permit to the individual *UPDES* permittee is automatically terminated on the date of such denial, unless otherwise specified by the *Executive Secretary*.

N. State/Environmental Laws.

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by *UCA 19-5-117*.

2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

O. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

P. Monitoring and Records.

1. Representative Samples/Measurements. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Retention of Records.

   a. The permittee shall retain records of all monitoring information, copies of all reports required by this permit, and records of all data used to complete the application of this permit for a period of at least three (3) years from the date of sample, measurement, evaluation or inspection, report, or application. This period may be extended by request of the *Executive Secretary* at any time. Permittees must submit any such records to the *Executive Secretary* upon request.

   b. The permittee shall retain the pollution prevention plan developed in accordance with *Part III.* and *Appendix II.* of this permit until a date 3 years after the last modification or amendment is made to the plan, and at least 1 year after coverage under this permit terminates.

3. Records Contents. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

b. The initials or name(s) of the individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The time(s) analyses were initiated;

e. The initials or name(s) of the individual(s) who performed the analyses;

f. References and written procedures, when available, for the analytical techniques or methods used; and

g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

4. Approved Monitoring Methods. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

Q. Inspection and Entry. The permittee shall allow the *Executive Secretary* or an authorized representative, the EPA, or in the case of a facility that discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to: enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit; have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

R. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. Bypass of Treatment Facility.

1. Notice.

a. Anticipated Bypass. If a permittee subject to the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit knows in advance of the need for a bypass, he or she shall submit prior notice, if possible, at least 10 days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

b. Unanticipated Bypass. The permittee subject to the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit shall submit notice of an unanticipated bypass. Any information regarding the unanticipated bypass shall be provided orally within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee became aware of the circumstances. The written submission shall contain a description of the bypass and its cause; the period of the bypass; including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

2. Prohibition of Bypass.

a. Bypass is prohibited and the *Executive Secretary* may take enforcement action against a permittee for a bypass. Unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee should, in the exercise of reasonable engineering judgement, have installed adequate backup equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices of the bypass.

b. The *Executive Secretary* may approve an anticipated bypass after considering its adverse effects, if the *Executive Secretary* determines that it will meet the three conditions listed in *Part VI.S.2.a.*

T. Upset Conditions.

1. Affirmative Defense. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based numeric effluent limitations in *Parts IV.* and *Appendix II.* of this permit if the requirements of paragraph 2 below are met. The *Executive Secretary's* administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Required Defense. A permittee who wishes to establish the affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

a. An upset occurred and that the permittee can identify the specific cause(s) of the upset:

b. The permitted facility was at the time being properly operated; and

c. The permittee provided oral notice of the upset to the *Executive Secretary* within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee became aware of the circumstances. The written submission shall contain a description of the upset and its cause; the period of the upset; including exact dates and times, and if the upset has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the upset.

3. Burden of Proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

VII. REOPENER CLAUSE

A. Potential or Realized Impacts on Water Quality. If there is evidence indicating potential or realized impacts on water quality or on a listed endangered species due to any storm water discharge associated with industrial activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or an alternative general permit in accordance with *Part VI.M.* (Requiring an Individual Permit or an Alternative General Permit) of this permit or the permit may be modified to include different limitations and/or requirements.

B. Applicable Regulations. Permit modification or revocation will be conducted according to *UAC R317-8-5.6* and *UAC R317-8-6.2*.

VIII. DEFINITIONS

A. Definitions Pertaining to this Permit.

1. "Act" means the "*Utah Water Quality Act*".

2. "*Best Management Practices*" ("*BMPs*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

3. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

4. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

5. "Co-located industrial activity" means when a facility has industrial activities being conducted onsite that are described under more than one of the coverage sections of *Appendix II* in this permit (Discharges Covered Under This Permit). Facilities with co-located industrial activities shall comply with all applicable monitoring and pollution prevention plan requirements of each section in which a co-located industrial activity is described.

6. "*CWA*" means "*Clean Water Act*" (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).

7. "Commercial Treatment and Disposal Facilities" means facilities that receive, on a commercial basis, any produced hazardous waste (not their own) and treat or dispose of those wastes as a service to the generators. Such facilities treating and/or disposing exclusively residential hazardous wastes are not included in this definition.

8. "*DWQ*" means the "*Division of Water Quality*", the State agency authorized by the EPA to administer the *National Pollutant Discharge Elimination System* (*NPDES*) permitting program, described in the *CWA Section 402*, within the State of Utah (except for Indian lands). Since jurisdiction is limited to the State of Utah the program administered by the *DWQ* is called the *Utah Pollutant Discharge Elimination System* (*UPDES*).

9. "*Executive Secretary*" means the *Executive Secretary* of the *Water Quality Board.*

10. "Flow-weighted composite sample" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

11. "Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

12. "Land application unit" means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

13. "Municipal separate storm sewer system" (large and/or medium) means all municipal separate storm sewers that are either:

    a. located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (at the issuance date of this permit, Salt Lake City is the only city in Utah that falls in this category); or

    b. located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (at the issuance date of this permit Salt Lake County is the only county that falls in this category); or

    c. owned or operated by a municipality other than those described in paragraph *a.* or *b.* (above) and that are designated by the *Executive Secretary* as part of the large or medium municipal separate storm sewer system.

14. "*NOI*" means "*notice of intent*", it is an application form that is used to obtain coverage under this permit (see *Appendix I.*).

15. "*NOT*" means "*notice of termination*", it is a form used to terminate coverage under this permit (see *Appendix I* of this permit.).

16. "Point source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

17. "Section 313 water priority chemical" means a chemical or chemical categories that:

    a. are listed at *40 CFR 372.65* pursuant to *Section 313* of the *Emergency Planning and Community Right-to-Know Act* (*EPCRA*) (also known as *Title III of the Superfund Amendments and Reauthorization Act* (*SARA*) of 1986);

    b. are present at or above threshold levels at a facility subject to *EPCRA Section 313* reporting requirements; and

c. meet at least one of the following criteria:

(1) are listed in *Appendix D* of *40 CFR Part 122* on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);

(2) are listed as a hazardous substance pursuant to *Section 311(b)(2)(A)* of the *CWA* at *40 CFR 116.4*; or

(3) are pollutants for which EPA has published acute or chronic water quality criteria. See *Appendix III* of this permit. This appendix was revised based on final rulemaking EPA published in the *Federal Register* November 30, 1994.

18. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *CERCLA*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

19. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311 of the Clean Water Act* (see *40 CFR 110.10* and *CFR 117.21*) or *Section 102* of *CERCLA* (see *40 CFR 302.4*).

20. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

21. "SWDMR" means "*storm water discharge monitoring report*", a report of the results of storm water monitoring required by the permit. A storm water discharge monitoring report form is provided by the Division of Water Quality.

22. "Storm water associated with industrial activity" (*UAC R317-8-3.8(6)(c) & (d)*) means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the *UPDES* program. For the categories of industries identified in paragraphs *(a)* through *(j)* of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined in *40 CFR Part 401*); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage,

or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph *(k)* of this definition, the term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs *(a)* to *(k)* of this definition) include those facilities designated under *UAC R317-8-3.8(1)(a)5*. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

a. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under *40 CFR Subchapter N* (except facilities with toxic pollutant effluent standards that are exempted under category (k) of this definition);

b. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;

c. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under *40 CFR 434.11(l)* because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of noncoal mining operations that have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but that have an identifiable owner/operator;

d. Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

e. Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under *Subtitle D* of *RCRA*;

f. Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

g. Steam electric power generating facilities, including coal handling sites;

h. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45 and 5171 that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified under paragraphs (a) to (g) or (I) to (k) of this subsection are associated with industrial activity;

i. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under *40 CFR Part 403*. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located in the confines of the facility, or areas that are in compliance with *40 CFR Part 503*;

j. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than 5 acres of total land area that are not part of a larger common plan of development or sale;

k. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and that are not otherwise included within categories (a) to (j))[3].

23. "Time-weighted composite" means a composite sample consisting of a mixture of equal

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[3]On June 4, 1992, the United States Court of Appeals for the Ninth Circuit remanded the exclusion for manufacturing facilities in category (xi) that do not have materials or activities exposed to storm water to the EPA for further rulemaking. (Nos. 90-70671 and 91-70200.)

volume aliquots collected at a constant time interval.

24. "UAC" means "Utah Administrative Code" the administrative rules for the State of Utah.

25. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

26. "Waste pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

27. "Waters of the State" (*UAC R317-1-1.32*) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, except that bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state".

APPENDIX II

POLLUTION PREVENTION PLAN REQUIREMENTS FOR INDUSTRIAL SECTORS (LISTED A THROUGH AD)

P. Storm Water Discharges Associated With Industrial Activity From Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and United States Postal Service Transportation Facilities.

1. Coverage of This Section.

   a. Discharges Covered Under This Section. Storm water discharges from ground transportation facilities and rail transportation facilities (generally identified by Standard Industrial Classification (SIC) codes 40, 41, 42, 43, and 5171), that have vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication) and/or equipment cleaning operations are eligible for coverage under this section. Also covered under this section are facilities found under SIC code 4221-4225 (public warehousing and storage) that do not have vehicle and equipment maintenance shops and/or equipment cleaning operations but have areas (exclusive of access roads and rail lines) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products or industrial machinery are exposed to storm water.

   b. Co-Located Industrial Activity. When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Storm Water Pollution Prevention Plan Requirements.

   a. Deadlines for Plan Preparation and Compliance. There are no additional deadlines for plan preparation and compliance, other than those stated in *Part III.A.*

   b. Contents of the Plan. The plan shall include, at a minimum, the following items:

      1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

      2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants

during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials which may potentially be significant pollutant sources. Each plan shall include, at a minimum:

a) Drainage. A site map indicating the location of each point of discharge of storm water associated with industrial activity, an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries (with a prediction of the direction of flow), each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under paragraph *2.b.(2)(c)* (Spills and Leaks) of this section have occurred, and the locations of the following activities: fueling stations, vehicle and equipment maintenance and/or cleaning areas, storage areas for vehicles and equipment with actual or potential fluid leaks loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas, storage areas, and all monitoring locations. The site map must also indicate the types of discharges contained in the drainage areas of the outfalls (e.g., storm water and air conditioner condensate). In order to increase the readability of the map, the inventory of the types of discharges contained in each outfall may be kept as an attachment to the site map.

b) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit and the present; method and location of onsite storage or disposal; dirt or gravel parking areas for storage of vehicles to be maintained; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

c) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.

d) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.

e) Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities associated with vehicle and equipment maintenance and equipment cleaning: fueling stations; maintenance shops; equipment or vehicle cleaning areas; paved dirt or gravel parking areas for vehicles to be maintained; loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., oil and grease, etc.) of concern shall be identified.

3) Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:

a) Good Housekeeping. All areas that may contribute pollutants to storm water discharges shall be maintained in a clean, orderly manner. The following areas must be specifically addressed:

(1) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks must be confined to designated areas (delineated on the site map). The plan must describe measures that prevent or minimize contamination of the storm water runoff from these areas.' The facility shall consider the use of drip pans under vehicles and equipment, indoor storage of the vehicles and equipment, installation of berming and diking of this area, use of absorbents, roofing or covering storage areas, cleaning pavement surface to remove oil and grease, or other equivalent methods.

(2) Fueling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from fueling areas. The facility shall consider covering the fueling area, using spill and overflow protection and cleanup equipment, minimizing runon/runoff of storm water to the fueling area, using dry cleanup methods, collecting the storm water runoff and providing treatment or recycling, or other equivalent measures.

(3) Material Storage Areas. Storage units of all materials (e.g., used oil, used oil filters, spent solvents, paint wastes, radiator fluids, transmission fluids, hydraulic fluids) must be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil," "spent solvents," etc.). The plan must describe measures that prevent or

minimize contamination of the storm water runoff from such storage areas. The facility shall consider indoor storage of the materials, installation of berming and diking of the area, minimizing runon/runoff of storm water to the areas, using dry cleanup methods, collecting the storm water runoff and providing treatment, or other equivalent methods.

(4) Vehicle and Equipment Cleaning Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment cleaning. The facility shall consider performing all cleaning operations indoors, covering the cleaning operation, ensuring that all washwaters drain to the intended collection system (i.e., not the storm water drainage system unless *UPDES* permitted), collecting the storm water runoff from the cleaning area and providing treatment or recycling, or other equivalent measures. The discharge of vehicle and equipment wash waters, including tank cleaning operations, are not authorized by this permit and must be covered under a separate *UPDES* permit or discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.

(5) Vehicle and Equipment Maintenance Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment maintenance. The facility shall consider performing all maintenance activities indoors, using drip pans, maintaining an organized inventory of materials used in the shop, draining all parts of fluids prior to disposal, prohibiting wet clean up practices where the practices would result in the discharge of pollutants to storm water drainage systems, using dry cleanup methods, collecting the storm water runoff from the maintenance area and providing treatment or recycling, minimizing runon/runoff of storm water areas or other equivalent measures.

(6) Locomotive Sanding (loading sand for traction) Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from areas used for locomotive sanding. The facility shall consider covering sanding areas, minimizing storm water runon/runoff, appropriate sediment removal practices to minimize the offsite transport of sanding material by storm water, or other equivalent measures.

(7) Preventive Maintenance. A preventive maintenance program shall include timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins, drip pans, vehicle-mounted drip containment devices) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment

and systems.

b) Spill Prevention and Response Procedures. Areas where potential spills could contribute pollutants to storm water discharges, and their accompanying drainage points, shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures and equipment for cleaning up spills shall be identified in the plan and made available to the appropriate personnel.

c) Inspections. Qualified facility personnel shall be identified to inspect designated equipment and areas of the facility on a quarterly basis. The following areas shall be included in all inspections: storage area for vehicles and equipment awaiting maintenance, fueling areas, vehicle and equipment maintenance areas (both indoors and outdoors), material storage areas, vehicle and equipment cleaning areas, and loading and unloading areas. Follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist should be considered by the facility.

d) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify how often training will take place; at a minimum, training must be held annually (once per calendar year). Employee training must, at a minimum, address the following areas when applicable to a facility: summary of the facility's pollution prevention plan requirements; used oil management; spent solvent management; spill prevention, response and control; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

e) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

f) Non-storm Water Discharges.

(1) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any

test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit. Such certification may not be practical if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution prevention plan shall indicate why the certification required by this part was not practical, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the*Executive Secretary* in accordance with paragraph *2.b.(3)(g)(iv)* (Failure to Certify) of this section.

(2) Exceptions. Except for flows from fire fighting activities, sources of non-storm water listed in *Part II.A.2.* (Prohibition of Non-storm Water Discharges) of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

(3) A copy of the *UPDES* permit issued for vehicle and equipment washwaters or, if a *UPDES* permit has not yet been issued, a copy of the pending application must be attached to or referenced in the plan. For facilities that discharge vehicle and equipment washwaters to the sanitary sewer system, the operator of the sanitary system and associated treatment plant must be notified. In such cases, a copy of the notification letter must be attached to the plan. If an industrial user permit is issued under a pretreatment program, a copy of that permit must be attached in the plan. In all cases, any permit conditions or pretreatment requirements must be considered in the plan. If the washwaters are handled in another manner (e.g., hauled offsite), the disposal method must be described and all pertinent documentation (e.g., frequency, volume, destination, etc.) must be attached to the plan.

(4) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the *Executive Secretary* within 180 days after submitting a notice of intent to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm

sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State which are not authorized by a *UPDES* permit are unlawful, and must be terminated

g) Sediment and Erosion Control. The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

h) Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide for the implementation and maintenance of measures that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph *2.b.(2)* (description of potential pollutant sources) of this permit] shall be considered when determining reasonable and appropriate measures. Appropriate measures or other equivalent measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.

4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct comprehensive site compliance evaluations at appropriate intervals specified in the plan, but, in no case less than once a year. Such evaluations shall provide:

a) Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph *2.b.(2)* (Description of Potential Pollutant Sources) of this section and pollution prevention measures and controls identified in the plan in accordance with paragraph *2.b.(3)* (Measures and Controls) of this section shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes

to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.

c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph *2.b.(4)(b)* (above) of the section shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

d) Where compliance evaluation schedules overlap with inspections required under *2.b.(3)(d)*, the compliance evaluation may be conducted in place of one such inspection.

3. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part IV.B.* of this permit.

4. Monitoring and Reporting Requirements.

a. Quarterly Visual Examination of Storm Water Quality. Facilities shall perform and document a visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted under paragraph *(d)* below. The examination(s) must be made at least once in each designated period [described in (a), below] during facility operation in the daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event.

1) Sampling Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water quality associated with storm water runoff or snow melt: January through March; April through June; July through September; and October through December.

2) Sample and Data Collection. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall)

storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

3) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

4) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

5) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

APPENDIX III

SECTION 313 WATER PRIORITY CHEMICALS

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
75-07-0	Acetaldehyde
75865	Acetane cynohydrin
107-02-8	Acrolein
107-13-1	Acrylonitrile
309-00-2	Aldrin[1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha., 8a.beta.)-]
107-05-1	Allyl Chloride
7429-90-5	Aluminum (fume or dust)
7664-41-7	Ammonia
62-53-3	Aniline
120-12-7	Anthracene
7440-36-0	Antimony
7647189	Antimony pentachloride
28300745	Antimony potassium tartrate
7789619	Antimony tribromide
10025919	Antimony trichloride
7783564	Antimony trifluoride
1309644	Antimony trioxide
7440-38-2	Arsenic
1303328	Arsenic disulfide
1303282	Arsenic pentoxide
7784341	Arsenic trichloride
1327533	Arsenic trioxide
1303339	Arsenic trisulfide
1332-21-4	Asbestos (friable)

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
542621	Barium cyanide
71-43-2	Benzene
92-87-5	Benzidine
100470	Benzonitrile
98-88-4	Benzoyl chloride
100-44-7	Benzyl chloride
7440-41-7	Beryllium
7787475	Beryllium chloride
7787497	Beryllium fluoride
7787555	Beryllium nitrate
111-44-4	Bis(2-chloroethyl) ether
75-25-2	Bromoform
74-83-9	Bromomethane (Methyl bromide)
85-68-7	Butyl benzyl phthalate
7440-43-9	Cadmium
543908	Cadmium acetate
7789426	Cadmium bromide
10108642	Cadmium chloride
7778441	Calcium arsenate
52740166	Calcium arsenite
13765190	Calcium chromate
592018	Calcium cyanide
133-06-2	Captan [1H-Isoindole-1,3(2H)-dione,3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]
63-25-2	Carbaryl [1-Naphthalenol, methylcarbamate]
75-15-0	Carbon disulfide

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
56-23-5	Carbon tetrachloride
57-74-9	Chlordane [4,7-Methanoindan,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]
7782-50-5	Chlorine
59-50-7	Chloro-4-methyl-3-phenol *p*-Chloro-*m*-cresol
108-90-7	Chlorobenzene
75-00-3	Chloroethane (Ethyl chloride)
67-66-3	Chloroform
74-87-3	Chloromethane (Methyl chloride)
95-57-8	2-Chlorophenol
106-48-9	4-Chlorophenol
1066304	Chromic acetate
11115745	Chromic acid
10101538	Chromic sulfate
7440-47-3	Chromium
1308-14-1	Chromium (Tri)
10049055	Chromous chloride
7789437	Cobaltous bromide
544183	Cobaltous formate
14017415	Cobaltous sulfamate
7440-50-8	Copper
108-39-4	*m*-Cresol
9548-7	*o*-Cresol
106-44-5	*p*-Cresol
1319-77-3	Cresol (mixed isomers)
142712	Cupric acetate

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
12002038	Cupric acetoarsenite
7447394	Cupric chloride
3251238	Cupric nitrate
5893663	Cupric oxalate
7758987	Cupric sulfate
10380297	Cupric sulfate, ammoniated
815827	Cupric tartrate
57-12-5	Cyanide
506774	Cyanogen chloride
110-82-7	Cyclohexane
94-75-7	2,4-D [Acetic acid, (2,4-dichlorophenoxy)-]
106-93-4	1,2-Dibromoethane (Ethylene dibromide)
84-74-2	Dibutyl phthalate
25321-22-6	Dichlorobenzene (mixed isomers)
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidine
75-27-4	Dichlorobromomethane
107-06-2	1,2-Dichloroethane (Ethylene dichloride)
540-59-0	1,2-Dichloroethylene
120-83-2	2,4-Dichlorophenol
78-87-5	1,2-Dichloropropane
542-75-6	1,3-Dichloropropylene
62-73-7	Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester]

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
115-32-2	Dicofol [Benzenemethanol, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-(trichloromethyl)-]
177-81-7	Di-(2-ethylhexyl phthalate (DEHP)
84-66-2	Diethyl phthalate
105-67-9	2,4-Dimethylphenol
131-11-3	Dimethyl phthalate
534-52-1	4,6-Dinitro-*o*-cresol
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
117-84-0	*n*-Dioctyl phthalate
122-66-7	1,2-Diphenylhydrazine (Hydrazobenzene)
106-89-8	Epichlorohydrin
100-41-4	Ethylbenzene
106934	Ethylene dibromide
50-00-0	Formaldehyde
76-44-8	Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene]
118-74-1	Hexachlorobenzene
87-68-3	Hexachloro-1,3-butadiene
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
7647-01-0	Hydrochloric acid
74-90-8	Hydrogen cyanide
7664-39-3	Hydrogen fluoride
7439-92-1	Lead

SECTION 313 WATER PRIORITY CHEMICALS	
	Common Name
301042	Lead acetate
7784409	Lead arsenate
7645252	Lead arsenate
10102484	" "
7758954	Lead chloride
13814965	Lead fluoborate
7783462	Lead fluoride
10101630	Lead iodide
10099748	Lead nitrate
7428480	Lead stearate
1072351	" "
52652592	" "
7446142	Lead sulfate
1314870	Lead sulfide
592870	Lead thiocyanate
58-89-9	Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro- (1.alpha.,3.beta., 4.alpha.,5.alpha.,6.beta.)-]
14307358	Lithium chromate
108-31-6	Maleic anhydride
592041	Mercuric cyanide
10045940	Mercuric nitrate
7783359	Mercuric sulfate
592858	Mercuric thiocyanate
7782867	Mercurous nitrate
7439-97-6	Mercury
72-43-5	Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-]

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	
80-62-6	Methyl methacrylate
91-20-3	Naphthalene
7440-02-0	Nickel
15699180	Nickel ammonium sulfate
37211055	Nickel chloride
7718549	" "
12054487	Nickel hydroxide
14216752	Nickel nitrate
7786814	Nickel sulfate
7697-37-2	Nitric acid
98-95-3	Nitrobenzene
88-75-5	2-Nitrophenol
100-02-7	4-Nitrophenol
62-75-9	*N*-Nitrosodimethylamine
86-30-6	*N*-Nitrosodiphenylamine
621-64-7	*N*-Nitrosodi-*n*-propylamine
56-38-2	Parathion [Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester]
87-86-5	Pentachlorophenol (PCP)
108-95-2	Phenol
75-44-5	Phosgene
7664-38-2	Phosphoric acid
7723-14-0	Phosphorus (yellow or white)
1336-36-3	Polychlorinated biphenyls (PCBs)
7784410	Potassium arsenate
10124502	Potassium arsenite
7778509	Potassium bichromate

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	Common Name
7789006	Potassium chromate
151508	Potassium cyanide
75-56-9	Propylene oxide
91-22-5	Quinoline
7782-49-2	Selenium
7446084	Selenium oxide
7440-22-4	Silver
7761888	Silver nitrate
7631892	Sodium arsenate
7784465	Sodium arsenite
10588019	Sodium bichromate
7775113	Sodium chromate
143339	Sodium cyanide
10102188	Sodium selenite
7782823	" "
7789062	Strontium chromate
100-42-5	Styrene
7664-93-9	Sulfuric acid
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethylene (Perchloroethylene)
935-95-5	2,3,5,6-Tetrachlorophenol
78002	Tetraethyl lead
7440-28-0	Thallium
10031591	Thallium sulfate
108-88-3	Toluene
8001-35-2	Toxaphene

SECTION 313 WATER PRIORITY CHEMICALS	
	Common Name
52-68-6	Trichlorfon [Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-dimethylester]
120-82-1	1,2,4-Trichlorobenzene
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
7440-62-2	Vanadium (fume or dust)
108-05-4	Vinyl acetate
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride
108-38-3	*m*-Xylene
95-47-6	*o*-Xylene
106-42-3	*p*-Xylene
1330-20-7	Xylene (mixed isomers)
7440-66-6	Zinc (fume or dust)
557346	Zinc acetate
14639975	Zinc ammonium chloride
14639986	" " "
52628258	" " "
1332076	Zinc borate
7699458	Zinc bromide
3486359	Zinc carbonate
7646857	Zinc chloride
557211	Zinc cyanide
7783495	Zinc fluoride

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	
557415	Zinc formate
7779864	Zinc hydrosulfite
7779886	Zinc nitrate
127822	Zinc phenolsulfonate
1314847	Zinc phosphide
16871719	Zinc silicofluoride
7733020	Zinc sulfate

APPENDIX C
MARLIN LOGISTICS, LLC
BOND CALCULATIONS

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

Wildcat Loadout / C/007/033 | Total Required Bond Amount | Checked November 4, 2014
Bulk Oil Transloading Facility
Task ID # 4643

Direct Costs		
Demolition / Coal Loadout Facility	$212,052.00	
Demolition / Oil Transloading Facility	$252,720.00	TID # 4643
Backfill and Grading	$304,438.00	TID # 4511
Revegetation Add 6.83 acres = 88.62 acres total	$373,625.00	TID # 4593
Subtotal Direct Costs	$1,142,835.00	
Indirect Costs		
Mob/Demob	$114,283.00	10.0%
Contingency	$57,141.00	5.0%
Engineering Redesign	$28,571.00	2.5%
Main Office Expense	$77,713.00	6.8%
Project Mainagement Fee	$28,571.00	2.5%
Sub Total Indirect Costs	$306,280.00	26.8%
Total Reclamation Cost	$1,449,115.00	
Escalation Factor for 2014		1.019
Number of Years to 2016 (Next Midterm Review)		1.25
Escalation Dollar Amount to 2016	$34,489.00	0.0238
Total Escalated Reclamation Cost to 2016	$1,483,684.00	
Required Bond Amount (Rounded to Nearest $ 1,000)	$1,484,000.00	
Posted Bond 7/31/07	$1,144,000.00	
Difference Between Posted Bond and Required Bond	$340,000.00	
% Difference		-23.00%
Posted Bond Date Dec. 10, 2014 D.H. Hess	$1,481,000.00	

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

Wildcat Loadout C/007/033 Bond Amount Rev. May 2014

Direct Costs		
Subtotal Demolition and Grading	$464,488	
Subtotal Backfilling and Grading	$304,438	
Subtotal Revegetation	$371,546	
Subtotal Direct Costs	$1,140,471	
Indirect Costs		
Mob/Demob	$114,047	10.0%
Contingency	$57,024	5.0%
Engineering Redesign	$28,512	2.5%
Main Office Expense	$77,552	6.8%
Project Management Fee	$28,512	2.5%
Subtotal Indirect Costs	$305,646	
Total Cost	$1,446,118	
Escalation Factor		0.019
Number of Years		1.25
Escalation	$34,426	
Reclamation Cost.	$1,480,544	
Bond Amount (round to nearest $1,000) in 2016 dollars	$1,481,000	
Posted Bond 7/31/07	$1,144,000	
Difference between posted bond and required bond	$337,000	

INCORPORATED
EFFECTIVE:
DEC 10 2014
UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

Cost Factors

Means Number	Material	Unit Cost	Units
02 41 16.13 0100	Mixture of types, average	0.33	CF
Concrete Demo1	Concrete Demolition	11.38	CY
31 23 16.42 1300	Front End Loader 3 CY	1.79	CY
31 23 23.20 1014	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	2.9	CY
02 41 16.17 4200	On Site Disposal	9.15	CY
City Sanitation Price	City Sanitation	4	CY
02 41 16.13 0012	Steel Bld. Large	0.31	CY
	Utility Pole	100	EA
02 41 13.33 0800	Guard Rail	15.05	LF
02 41 13.60 1700	Chain link, posts & fabric remove only	3.86	LF
23 05 05.10 3600	Mechanical equipment heavy	1050	Ton
31 23 16.42 0260	Backhoe, hydraulic Bulk Bank Measure	1.76	CY
31 23 16.13 3080	Backfill trench Minimal Haul 2 1/4 CY	1.98	CY
02 65 10.30 0120	6000 gal. to 8000 gal.tank	1100	EA
02 65 10.30 1026	6000 gal. to 8000 gal.tank	880	EA
02 65 10.30 0130	9000 gal. to 12000 gal. tank	1650	EA
02 65 10.30 1029	9000 gal. to 12000 gal. tank	1050	EA
Reveg005		23.56	MSF
C007/0331		1380.73	AC
Reveg007		129	Ton
01 54 33 4360	D9R Semi-U EROPS (9-25) (2H2007)	19900.00	
01 54 33 4360	Hourly Cost	136.65	
01 54 33 4870	988 G EROPS (9-35) (2nd2007) 2005	21900.00	
01 54 33 4870	Hourly Cost	155.75	
01 54 33 3600	627 G Scraper	25600.00	
01 54 33 3600	Hourly Cost	237.10	
01 54 33 6950	6,000 Gal H2O Truck Diesel	7000.00	
01 54 33 6950	Hourly Cost	89.80	
01 54 33 7200	Pick-up Truck 4x4 1 Ton	660.00	
01 54 33 7200	Hourly Cost	15.55	
	Forman Average Outside	38.65	
	Labor	36.65	
	Heavy Equip. Operator (Heavy)	48.90	
	Heavy Equip. Operator (Med)	48.90	
Reveg 002		19.80	MSF
01 54 33 40 7300	Farm Tractor with DISC	31.05	HR
Great Basin	100,000 Barrel Steel Tank	50000	
Great Basin	20,000 Barrel Steel Tank	20000	
02 41 13.33 3200	Steel Pipe	8.28	LF
Calculated	Steel Pipe	10.37	LF
23 05 05.10 0350	Boiler	2225	EA
23 05 05.10 0.40	Vapor Combustor	810	EA
02 41 16.13 0012	5,000 Barrel. Tank	0.27	CF
02 41 13.80 0100	Lights	192	EA
	Pumps	227	EA
	Fire Protection	268	EA

Loading Bin 01	1424
Scales 02	7047
Substation 03	5823
Truck Dump West 04	4073
Crushing Plant West 05	1249
Radial Stacker West 06	1290
Reclaim Tunnel West 07	9490
Loadout Conveyor West 08	1587
Control Building West 09	1551
Truck Dump Reclaim 10	4807
Conveyor 11	1802
Crusher Screen Plant 12	9796
Lump Coal Belt 13	573
Stoker radial Stacker 14	3622
Conveyor 15	3538
Main Radial Stacker 16	21181
Loadout Reclaim 17	18862
Loadout Tower 18	28985
Office 19	5878
Powerline 20	2500
Shop 21	13363
Guardrail 22	15050
Culverts 23	2306
Miscellaneous 24	7000
Truck Dump New 25	4814
Conveyor New 26	1469
Radial Stacker 27	20260
Conveyor 28	11437
Office Trailer 29	To be sold
Oil Storage Tanks (4) 30	177883
4 Inch Piping 31	8396
6 Inch Piping 32	45930
Misc. Equip. Removal 33	19197
Lighting 34	2304
	464488

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loading Bin 01																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CY	15	15	12								FT		2700	CY	837
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			837
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	30	18	1								FT		20	CY	228
		Concrete's Vol. Demolished																1.3			
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													26	CY	47
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													26	CY	75
		Disposal Costs	On Site Disposal		9.15	CY													26	CY	238
		Subtotal																			587
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1424

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Scales 02																			
		Structure's Demolition Cost	Mixture of types, average	02 41 16.13 0100	0.33	CF	14	60	8								FT		6720	CF	2218
		Structure's Vol. Demolished																0.35	87	CY	
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																	87	CY	348
		Disposal Cost Non Steel	City Sanitation	City Sanitation Price	4	CY															
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2566
		Structure's Demolition Cost																			
		Structure's Vol. Demolished	Steel Bld. Large	02 41 16.13 0012	0.31	CF	14	60	8								FT		6720	CF	2083
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2083
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	14	70	0.5								FT		18	CY	205
		Concrete's Vol. Demolished																1.3	23	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													23	CY	41
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													23	CY	67
		Disposal Costs	On Site Disposal		9.15	CY													23	CY	210
		Subtotal																			523
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	10	12	0.25								FT		1	CY	11
		Concrete's Vol. Demolished																1.3	1	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													1	CY	2
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													1	CY	3
		Disposal Costs	On Site Disposal		9.15	CY													1	CY	9
		Subtotal																			25
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	340	20	0.25								FT		63	CY	717
		Concrete's Vol. Demolished																1.3	82	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													82	CY	147
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													82	CY	237
		Disposal Costs	On Site Disposal		9.15	CY													82	CY	749
		Subtotal																			1849
		Total																			7047

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Substation 03																			
		Structure's Demolition Cost	Mechanical equipment heavy	23 05 05.10 3600	1050	Ton								3			Ton		3	Ton	3150
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			3150
		Equipment's Disposal Cost																			
		Dismantling Cost	Chain link, posts & fabric remove only	02 41 13.60 1700	3.86	LF	250										LF		250	LF	965
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			965
		Equipment's Disposal Cost																			
		Dismantling Cost	Utility Pole		100	EA										13	EA		13	EA	1300
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			1300
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	25	15	0.5								FT		7	CY	79
		Concrete's Vol. Demolished																1.3	9	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													9	CY	16
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													9	CY	26
		Disposal Costs	On Site Disposal		9.15	CY													9	CY	83
		Subtotal																			204
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	25	15	0.5								FT		7	CY	79
		Concrete's Vol. Demolished																1.3	9	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													9	CY	16
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													9	CY	26
		Disposal Costs	On Site Disposal		9.15	CY													9	CY	83
		Subtotal																			204
		Total																			5823

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Truck Dump West 04																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	40	14	15								FT		8400	CF	2604
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2604
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY						50					CY		50		569
		Concrete's Vol. Demolished																1.3	65		
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													65		116
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													65		189
		Disposal Costs	On Site Disposal		9.15	CY													65		595
		Subtotal																			1469
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			4073

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Crushing Plant West 05																			
		Structure's Demolition Cost	Steel Bld, Large	02 41 16.13 0012	0.31	CF	20	15	10								FT		3000	CF	930
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			930
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	20	15	1								FT		11		125
		Concrete's Vol. Demolished																1.3	14		
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													14		25
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													14		41
		Disposal Costs	On Site Disposal		9.15	CY													14		128
		Subtotal																			319
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1249

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Radial Stacker West 06																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	150	8	8								FT		0	CF	0
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity	Removed Prior to October 2011																		
		Haulage	Sent to Lila Canyon																		
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			0
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	150	8	1								FT		44	CY	501
		Concrete's Vol. Demolished																1.3	57	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													57	CY	102
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod, Trip	31 23 23.20 1014	2.9	CY													57	CY	165
		Disposal Costs	On Site Disposal		9.15	CY													57	CY	522
		Subtotal																			1290
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1290

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Reclaim Tunnel West 07																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	190	14	8								FT		21280	CF	6597
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			6597
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	190	14	1								FT		99	CY	1121
		Concrete's Vol. Demolished																1.3	128	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													128	CY	229
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													128	CY	371
		Disposal Costs	On Site Disposal		9.15	CY													128	CY	1172
		Subtotal																			2894
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			9490

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout Conveyor West 08																			
		Structure's Demolition Cost	Steel Bld, Large	02 41 16.13 0012	0.31	CF	320	4	4								FT		5120		1587
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			1587
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1587

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Control Building West 09																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	30	15	8								FT		3600	CF	1116
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			1116
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	40	20	0.5								FT		15	CY	169
		Concrete's Vol. Demolished																1.3	19	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													19	CY	34
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													19	CY	56
		Disposal Costs	On Site Disposal		9.15	CY													19	CY	176
		Subtotal																			435
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1551

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		Truck Dump Reclaim 10																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	40	14	15								FT		8400	CF	2604
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2604
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY						75					CY		75	CY	854
		Concrete's Vol. Demolished																1.3	98	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													98	CY	175
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													98	CY	283
		Disposal Costs	On Site Disposal		9.15	CY													98	CY	892
		Subtotal																			2203
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			4807

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor 11																			
		Structure's Demolition Cost	Steel Bld, Large	02 41 16.13 0012	0.31	CF	250	4	4								FT		4000	CF	1240
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			1240
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	15	35	1								FT		19	CY	216
		Concrete's Vol. Demolished																1.3	25	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													25	CY	45
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													25	CY	73
		Disposal Costs	On Site Disposal		9.15	CY													25	CY	229
		Subtotal																			562
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1802

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Crusher Screen Plant 12																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	44	20	15								FT		13200	CF	4092
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			4092
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	35	30	8								FT		8400	CF	2604
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2604
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	57	50	1								FT		106	CY	1201
		Concrete's Vol. Demolished																1.3	137	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													137	CY	246
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													137	CY	398
		Disposal Costs	On Site Disposal		9.15	CY													137	CY	1256
		Subtotal																			3100
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			9796

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Lump Coal Bell 13																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	100	3	3								FT		900	CF	279
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			279
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY						10					CY		10	CY	114
		Concrete's Vol. Demolished																1.3	13	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													13	CY	23
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													13	CY	38
		Disposal Costs	On Site Disposal		9.15	CY													13	CY	119
		Subtotal																			294
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			573

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Stoker radial Stacker 14																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	100	10	10								FT		10000	CF	3100
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			3100
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	60	8	1								FT		18	CY	202
		Concrete's Vol. Demolished																1.3	23	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													23	CY	41
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													23	CY	67
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													23	CY	211
		Subtotal																			522
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			3622

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor 15																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	600	4	4								FT		9600	CF	2976
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2976
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11,38	CY	35	15	1								FT		19	CY	216
		Concrete's Vol. Demolished																1,3	25	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													25	CY	45
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													25	CY	73
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													25	CY	229
		Subtotal																			562
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			3538

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Main Radial Stacker 16																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	260	15	15								FT		58500	CF	18135
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			18135
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	280	10	1								FT		104	CY	1180
		Concrete's Vol. Demolished																1.3	135	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													135	CY	241
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													135	CY	391
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													135	CY	1234
		Subtotal																			3046
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			21181

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout Reclaim 17																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	750	4	8								FT		24000	CF	7440
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			7440
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	750	14	1								FT		389	CY	4426
		Concrete's Vol. Demolished																1.3	506	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													506	CY	905
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													506	CY	1466
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													506	CY	4626
		Subtotal																			11422
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			18862

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Nimber	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout Tower 18																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	35	40	60								FT		84000	CF	26040
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			26040
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	12	8	1								FT		4	CY	40
		Concrete's Vol. Demolished																1.3	5	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													5	CY	8
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													5	CY	13
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													5	CY	42
		Subtotal																			104
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	12	18	1								FT		8	CY	91
		Concrete's Vol. Demolished																1.3	10	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													10	CY	18
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													10	CY	29
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													10	CY	92
		Subtotal																			229
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	40	60	1								FT		89	CY	1012
		Concrete's Vol. Demolished																1.3	116	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													116	CY	207
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													116	CY	335
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													116	CY	1057
		Subtotal																			2611
		Total																			28985

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Office 19																			
	Structure's Demolition Cost	Steel Bld, Large	02 41 16.13 0012	0.31	CF	40	30	8								FT		9600	CF	2976
	Structure's Vol. Demolished																0.35	124	CY	
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	City Sanitation	City Sanitation Price	4	CY													124	CY	496
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Drive																			
	Disposal Cost steel																			
	Subtotal																			3472
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	66	30	0.5								FT		37	CY	417
	Concrete's Vol. Demolished																1.3	48	CY	
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													48	CY	85
	Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													48	CY	138
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													48	CY	436
	Subtotal																			1077
	Concrete Demolition																			
	Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	70	35	0.5								FT		45	CY	512
	Concrete's Vol. Demolished																1.3	59	CY	
	Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													59	CY	106
	Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													59	CY	171
	Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													59	CY	540
	Subtotal																			1329
	Total																			5878

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Powerline 20																			
		Structure's Demolition Cost	Utility Pole		100	EA										25	EA		25	EA	2500
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2500
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			2500

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Shop 21																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	40	45	20								FT		36000	CF	11160
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			11160
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	45	45	1								FT		75	CY	854
		Concrete's Vol. Demolished																1.3	98	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													98	CY	175
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													98	CY	283
		Disposal Costs	On Site Disposal	02 41 16.17 4200	9.15	CY													98	CY	892
		Subtotal																			2203
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			13363

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Guardrail 22																			
		Structure's Demolition Cost	Guard Rail	02 41 13.33 0800	15.05	LF	1000										FT		1000	FT	15050
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			15050
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			15050

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Culverts 23																			
		Excavate Culvert 12"	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.76	CY	650	1	2								FT		48	CY	85
		Backfill Culvert 12"	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY	650	1	2								FT		48	CY	95
		Excavate Culvert 15"	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.76	CY	400	1.3	2.6								FT		50	CY	88
		Backfill Culvert 15"	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY	400	1.3	2.6								FT		50	CY	99
		Excavate Culvert 18"	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.76	CY	310	1.5	3								FT		52	CY	91
		Backfill Culvert 18"	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY	310	1.5	3								FT		52	CY	102
		Excavate Culvert 24"	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.76	CY	1440	2	4								FT		427	CY	751
		Backfill Culvert 24"	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY	1440	2	4								FT		427	CY	845
		Excavate Culvert 36"	Backhoe, hydraulic Bulk Bank Measure	31 23 16.42 0260	1.76	CY	60	3	6								FT		40	CY	70
		Backfill Culvert 36"	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY	60	3	6								FT		40	CY	79
		Subtotal																			2306
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			2306

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Miscellaneous 24																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			
		Water Tank																			
		Equipment's Disposal Cost	6000 gal. to 8000 gal.tank	02 65 10.30 0120	1100	EA						8000					GAL		1	EA	1100
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs	9000 gal. to 12000 gal. tank	02 65 10.30 1029	1050	EA						8000					GAL		1	EA	1050
		Subtotal																			2150
		Water Tank																			
		Equipment's Disposal Cost	6000 gal. to 8000 gal.tank	02 65 10.30 0120	1100	EA						6000					GAL		1	EA	1100
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs	9000 gal. to 12000 gal. tank	02 65 10.30 1029	1050	EA						6000					GAL		1	EA	1050
		Subtotal																			2150
		Water Tank																			
		Equipment's Disposal Cost	9000 gal. to 12000 gal. tank	02 65 10.30 0130	1650	EA						10000					GAL		1	EA	1650
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs	9000 gal. to 12000 gal. tank	02 65 10.30 1029	1050	EA						10000					GAL		1	EA	1050
		Subtotal																			2700
		Total																			7000

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Truck Dump New 25																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	40	14	15								FT		8400	CF	2604
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			2604
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY						75					CY		75	CY	854
		Concrete's Vol. Demolished																1.3	98	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													98	CY	175
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													98	CY	284
		Disposal Costs	On Site Disposal		9.15	CY													98	CY	897
		Subtotal																			2210
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			4814

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor New 26																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	250	4	4								FT		4000	CF	1240
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			1240
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	15	15	1								FT		8	CY	91
		Concrete's Vol. Demolished																1.3	10	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													10	CY	18
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													10	CY	29
		Disposal Costs	On Site Disposal		9.15	CY													10	CY	92
		Subtotal																			229
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1469

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Radial Stacker 27																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	250	15	15								FT		56250	CF	17438
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			17438
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY	260	10	1								FT		96	CY	1092
		Concrete's Vol. Demolished																1.3	125	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													125	CY	224
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod. Trip	31 23 23.20 1014	2.9	CY													125	CY	363
		Disposal Costs	On Site Disposal		9.15	CY													125	CY	1144
		Subtotal																			2822
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			20260

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Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor 28																			
		Structure's Demolition Cost	Steel Bld. Large	02 41 16.13 0012	0.31	CF	1250	7	4								FT		35000	CF	10850
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			10850
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete Demolition	Concrete Demo1	11.38	CY						20					CY		20	CY	228
		Concrete's Vol. Demolished																1.3	26	CY	
		Loading Cost	Front End Loader 3 CY	31 23 16.42 1300	1.79	CY													26	CY	47
		Transportation Cost	12 Cy (16 Ton) dump Truck 1/2 mi. rod, Trip	31 23 23.20 1014	2.9	CY													26	CY	75
		Disposal Costs	On Site Disposal		9.15	CY													26	CY	238
		Subtotal																			587
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			11437

Ref.	Task	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Office Trailer 29																			
		Structure's Demolition Cost																			To be sold
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Drive																			
		Disposal Cost steel																			
		Subtotal																			
		Equipment's Disposal Cost																			
		Dismantling Cost																			
		Equipment's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			To be sold

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Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Oil Storage Tanks (4) 30																			
	Structure's Demolition Cost	100,000 Barrel Steel Tank	Great Basin	50000	EA			40	146									2	EA	100000
	Structure's Demolition Cost	20,000 Barrel Steel Tank	Great Basin	20000	EA			32	70									2	EA	40000
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			140000
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	100,000 Barrel Tanks																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	02 41 16.13 1140	7	/CY			1		728	728				2			122	CY	854
	Concrete's Vol. Demolished																1.3	159	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.67	/CY			5		183	915							159	CY	266
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 m	31 23 23.20 1020	2.9	/CY													159	CY	461
	Disposal Costs	Disposal on site	02 41 16 17 4200	9.15	/CF													159	CY	1455
	Subtotal																			3036
	20,000 Barrel Tanks																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	02 41 16.13 1140	7	/CY			1		370	370				2			61	CY	427
	Concrete's Vol. Demolished																1.3	79	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.67	/CY			5		92	460							79	CY	132
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 m	31 23 23.20 1020	2.9	/CY													79	CY	229
	Disposal Costs	Disposal on site	02 41 16 17 4200	9.15	/CF													79	CY	723
	Subtotal																			1511
	Tank Floors																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	02 41 16.13 1140	7	/CY			0.75	156		531			2				1342	CY	9394
	Concrete's Vol. Demolished							0.75	80		140			2			1.3	1745	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.67	/CY													1745	CY	2914
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 m	31 23 23.20 1020	2.9	/CY													1745	CY	5061
	Disposal Costs	Disposal on site	02 41 16 17 4200	9.15	/CF													1745	CY	15967
	Subtotal																			33336
	Total																			177883

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	4 Inch Piping 31																			
	Structure's Demolition Cost	Steel Pipe	02 41 13.33 3200	8.28	/LF	1011										FT		1011	LF	8371
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			8371
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	02 41 16.13 1140	7	/CY	1	1	1							34			1	CY	7
	Concrete's Vol. Demolished																1.3			
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.67	/CY													1.3	CY	2
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 1020	2.9	/CY													1.3	CY	4
	Disposal Costs	Disposal on site	02 41 16 17 4200	9.15	/CF													1.3	CY	12
	Subtotal																			25
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			8396

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Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	6 Inch Piping 32																			
	Structure's Demolition Cost	Steel Pipe	Calculated	10.37	/LF	4326										FT		4326	LF	44861
	Structure's Vol.																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			44861
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	ConcreteDemo1	7	/CY	4	2	1							144	FT		43	CY	301
	Concrete's Vol. Demolished																1.3	56	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1300	1.67	/CY													56	CY	94
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 1020	2.9	/CY													56	CY	162
	Disposal Costs	Disposal on site	02 41 16 17 4200	9.15	/CF													56	CY	512
	Subtotal																			1069
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			45930

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Misc. Equip. Removal 33																			
	Structure's Demolition Cost	Pumps		227	EA										12			12	EA	2724
	Subtotal																			2724
	Structure's Demolition Cost	Boiler	23 05 05.10 0350	2225	EA										1			1	EA	2225
	Subtotal																			2225
	Structure's Demolition Cost	Fire Protection		268	EA										4			4	EA	1072
	Structure's Demolition Cost	5,000 Barrel. Tank	02 41 16.13 0012	0.27	CF						30788				1			30788	CF	8313
	Subtoal																			9385
	Structure's Demolition Cost	Diesel Tank																		To be sold
	Subtotal																			
	Tank Foundation																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	Concrete Demo1	7	CY			2		1590	118							118		826
	Concrete's Vol. Demolished																1.3	153		
	Loading Cost	Front end loader 3 CY	31 23 16.42 1300	1.67	CY													153		256
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 1014	2.9	CY													153		444
	Disposal Costs	Disposal on site	02 41 16.17 4200	9.15	CY													153		1400
	Subtotal																			2926
	Sturcture's Demolition Cost																			
	Substation	Mechanical equipment heavy	23 05 05.10 3600	765	Ton							2				Ton		2	Ton	1530
	Fence	Chain link, posts & fabric remove only	02 41 13.60 1700	2.98	LF	105										LF		105	LF	313
	Subtotal																			1843
	Substation Foundation																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition	Concrete Demo1	7	CY	10	10	1										4	CY	28
	Concrete's Vol. Demolished																1.3	5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16.42 1300	1.67	CY													5	CY	8
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 1014	2.9	CY													5	CY	15
	Disposal Costs	Disposal on site	02 41 16.17 4200	8.65	CY													5	CY	43
	Subtotal																			94
	Total																			19197

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PRICE FIELD OFFICE

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Lighting 34																			
	Structure's Demolition Cost	Lights	02 41 13.80 0100	192	EA										12			12	EA	2304
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			2304
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition																		
	Concrete's Vol. Demolished																			
	Loading Cost	Front end loader 3 CY																		
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip																		
	Disposal Costs	Disposal on site																		
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition																		
	Concrete's Vol. Demolished																			
	Loading Cost	Front end loader 3 CY																		
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip																		
	Disposal Costs	Disposal on site																		
	Subtotal																			
	Concrete Demolition																			
	Demolition Cost	Concrete demolition																		
	Concrete's Vol. Demolished																			
	Loading Cost	Front end loader 3 CY																		
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip																		
	Disposal Costs	Disposal on site																		
	Subtotal																			
	Total																			2304

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Cleanup 01	10067
Regrading 02	256251
Topsoil 03	38119
	304438

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PRICE FIELD OFFICE

	Task	Equipment Cost	Hourly Operating Rate	Equipment Overhead	Operator's Hourly Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Cleanup 01 Wildcat loadout Cleanup Coal Pile																
D9R Semi-U EROPS (9-25) (2H2007)		19900.00	136.65	0.1	48.90	323.59	1	323.59	$/HR	1500	CY	187	CY/HR	8	HR	2596
988 G EROPS (9-35) (2nd2007) 2005		21900.00	155.75	0.1	48.90	357.10	1	357.10	$/HR	1500	CY	187	CY/HR	8	HR	2864
Labor					36.65	36.65	1	36.65	$/HR					16	HR	586
Forman Average Outside					38.65	38.65	1	38.65	$/HR					16	HR	618
6,000 Gal H2O Truck Diesel		7000.00	89.80	0.1	48.90	191.43	1	191.43	$/HR					16	HR	3063
Pick-up Truck 4x4 1 Ton		660.00	15.55	0.1		21.23	1	21.23	$/HR					16	HR	340
																10067

INCORPORATED
EFFECTIVE:
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UTAH
DIVISION OF OIL, GAS AND MINING
PRICE FIELD OFFICE

	Task	Equipment Cost	Hourly Operating Rate	Equipment Overhead	Operator's Hourly Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Regrading 02 Wildcat Loadout Recontour/Regrade																
D9R Semi-U EROPS (9-25) (2H2007)		19900.00	136.65	0.1	48.90	323.59	1	323.59	$/HR	38872	CY	187	CY/HR	207.9	HR	67265
627 G Scraper		25600.00	237.10	0.1	48.90	469.71	1	469.71	$/HR	38872	CY	332.6	CY/HR	116.9	HR	54896
988 G EROPS (9-35) (2nd2007) 2005		21900.00	155.75	0.1	48.90	357.10	1	357.10	$/HR					207.9	HR	74231
CLAB					36.65	36.65	1	36.65	$/HR					207.9	HR	7618
Foreman Average, Outside					38.65	38.65	1	38.65	$/HR					207.9	HR	8034
5,000 Water Truck Diesel		7000.00	89.80	0.1	48.90	191.43	1	191.43	$/HR					207.9	HR	39793
Pickup Truck 4X4 1 Ton		660.00	15.55	0.1		21.23	1	21.23	$/HR					207.9	HR	4413
																256251

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PRICE FIELD OFFICE

	Task	Equipment Cost	Hourly Operating Rate	Equipment Overhead	Operator's Hourly Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Topsoil 03 Wildcat Loadout Topsoil																
627 G Scraper		25600.00	237.10	0.1	48.90	469.71	1	469.71	$/HR	15549	CY	566	CY/HR	27	HR	12904
D9R Semi-U EROPS (9-25) (2H2007)		19900.00	136.65	0.1	48.90	323.59	1	323.59	$/HR	10000	CY	187	CY/HR	53	HR	17304
Labor						36.65	1	36.65	$/HR					27	HR	1007
Forman Average Outside						38.65	1	38.65	$/HR					27	HR	1062
6,000 Gal H2O Truck Diesel		7000.00	89.80	0.1	48.90	191.43	1	191.43	$/HR					27	HR	5259
Pick-up Truck 4x4 1 Ton		660.00	15.55	0.1		21.23	1	21.23	$/HR					27	HR	583
																38119

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PRICE FIELD OFFICE

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Revegetation Costs																			
	Ground Preparation	Backfill trench Minimal Haul 2 1/4 CY	31 23 16.13 3080	1.98	CY					81.79						AC		27809	CY	55062
	Seeding	Hydro Spreader (equip. & labor)	Reveg005	23.56	MSF					81.79						AC		3562.8	MSF	83939
	Seeding	Seed (Material costs)	C007/0331	1380.73	AC					81.79						AC		81.8	AC	112930
	Mulch 2 tons per acre	Hay Bale	Reveg007	129	Ton					81.78						AC		164	Ton	21156
	Mulch	Hydro Spreader (equip. & labor)	Reveg005	23.56	MSF					81.79						AC		3562.8	MSF	83939
	Subtotal																			273087
	6.82 AC Disturbance																			
	Scrape Area of Coal Fines	D9/Production Rate of 180	1 ACRE inch	280	Per HR			1 Inch		6.83	128	145	Ton	1 HR	128	CY		128	CY	280
	Hydro Seed	Equipment and Labor	Reveg 002	19.80	MSF					6.83								298	MSF	5900
	Wildcat Loadout Seed Mix	Approved Reclamation Seed Mix	C007/0331	1380.73	AC					6.83								6.83	AC	9430
	Mulch/Straw Spreader	Straw Bales/ 1 Ton per Acre	Reveg007	129	Ton					6.83								6.83	Ton	881
	Mulch/Straw Spreader	Equipment and Labor	Reveg005	23.56	MSF					6.83								298	MSF	7021
	Crimp/DISC Straw into Ground	Fram Tractor with DISc	01 54 33 40 7300	31.05	HR					6.83								16	HR	497
	Labor/Farm Tractor		Equipment	70.25	8 HR Day					6.83								2	Days	141
																				24150
	Reseeding																			
	Assume 25% reseeding rate																			74309
	Subtotal																			74309
	Total																			371546

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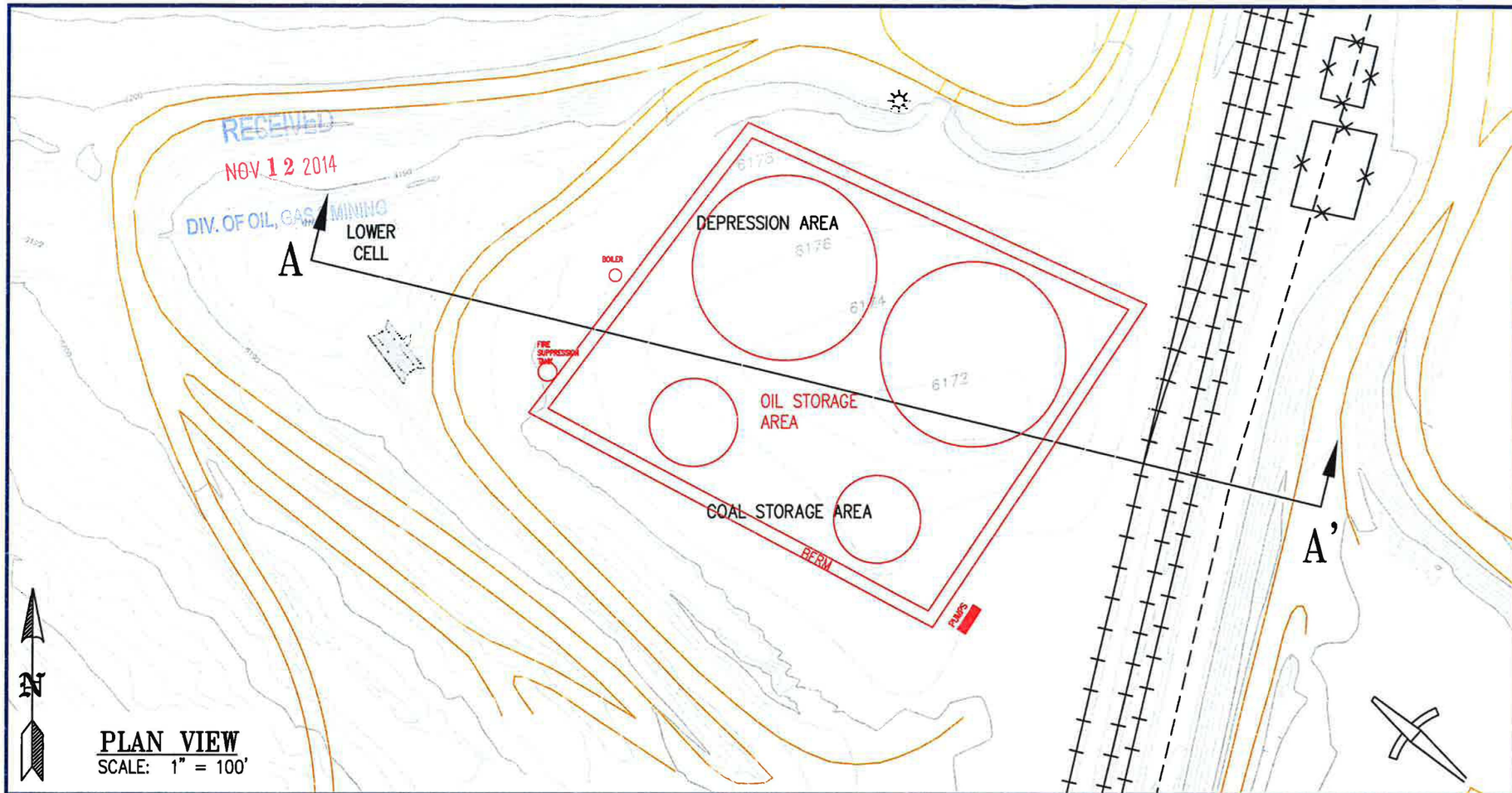

PLAN VIEW
SCALE: 1" = 100'

STAGE VOLUME
"DEPRESSION AREA"

ITEM	ELEVATION	VOLUME (Ac. Ft.)
BOTTOM OF DEPRESSION AREA	6172.0	0
MAXIMUM WATER LEVEL	6176.0	4.990
TRACK LEVEL	6178.0	11.534

VOLUME:

REQUIRED: 2.604 Ac. Ft.

EXISTING: 4.990 Ac. Ft.

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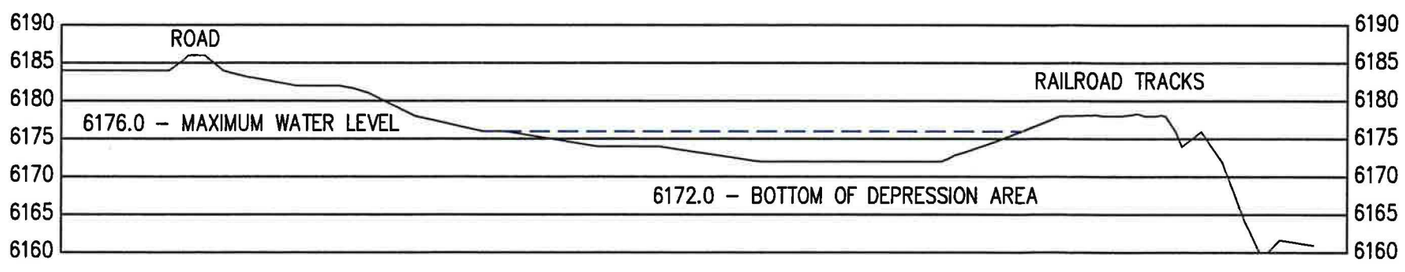
PRICE FIELD OFFICE

NOTE:

NOT A SEDIMENT POND.

PROFESSIONAL ENGINEER
No. 22-150287-2203
J. THOMAS PALUSO
STATE OF UTAH
11/7/14



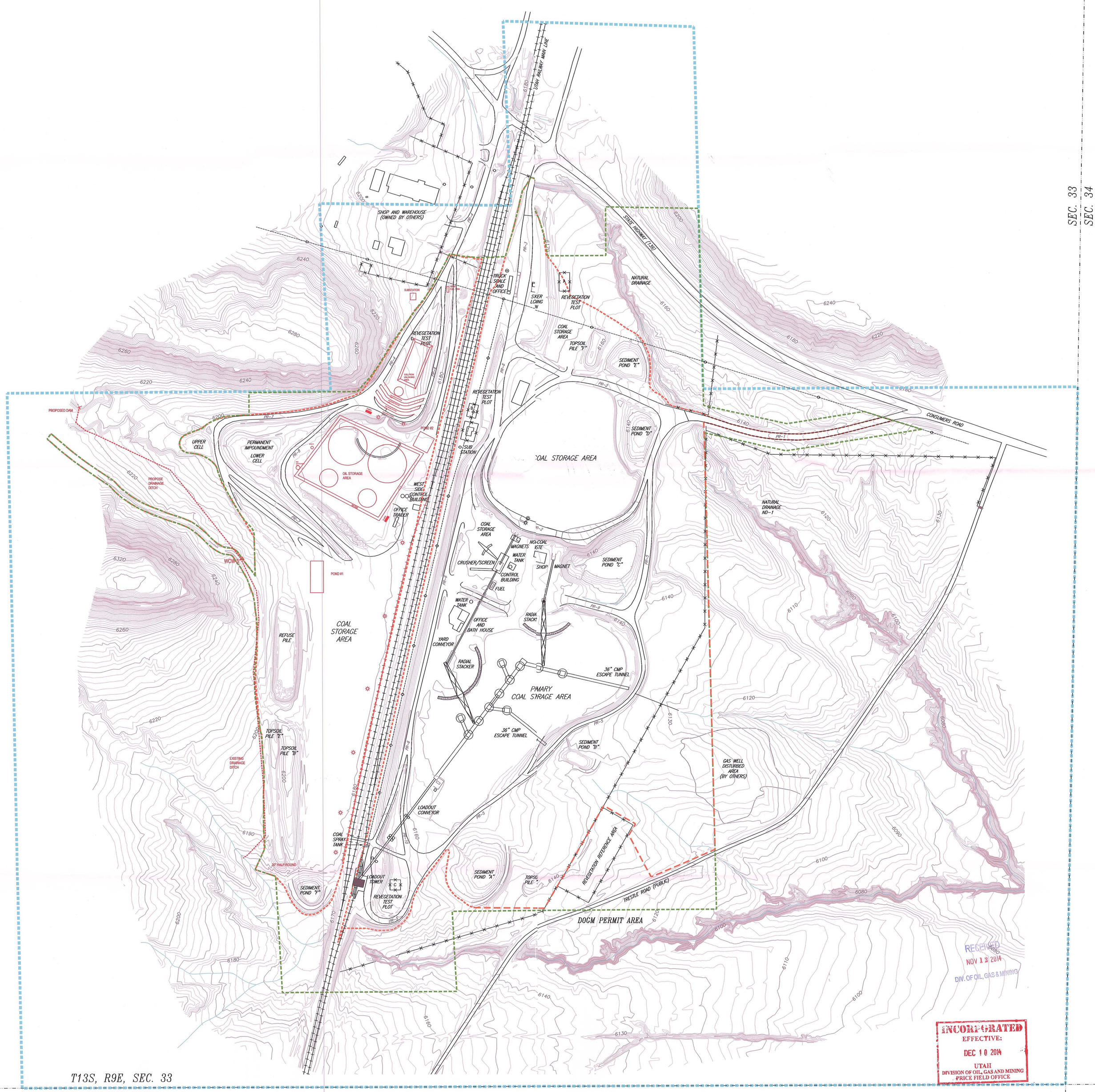
SECTION A–A'
VERTICAL EXAGGERATION 5X

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 20'

INTERMOUNTAIN POWER AGENCY

WILDCAT LOADOUT
DEPRESSION AREA
EXISTING

REVISION NUMBER: 2	SCALE: AS SHOWN
DATE: JULY 2010	PLATE 3I


SEC. 33
SEC. 34
UTAH RAILWAY MAIN LINE
STATE HIGHWAY (139)
SHOP AND WAREHOUSE (OWNED BY OTHERS)
TRUCK SCALE AND OFFICE
SKER LOING N
REVEGETATION TEST PLOT
NATURAL DRAINAGE
COAL STORAGE AREA
TOPSOIL PILE "F"
SEDIMENT POND "E"
SEDIMENT POND "D"
CONSUMERS ROAD
PROPOSED DAM
UPPER CELL
PERMANENT IMPOUNDMENT
LOWER CELL
OIL STORAGE AREA
WEST SIDE CONTROL BUILDING
OFFICE TRAILER
SUB STATION
PROPOSE DRAINAGE DITCH
WCM-3
POND #1
POND #2
COAL STORAGE AREA
MAGNETS
NON-COAL WASTE
WATER TANK
CRUSHER/SCREEN
CONTROL BUILDING
SHOP
MAGNET
SEDIMENT POND "C"
FUEL
WATER TANK
OFFICE AND BATH HOUSE
RADIAL STACKER
YARD CONVEYOR
RADIAL STACKER
36" CMP ESCAPE TUNNEL
PRIMARY COAL STORAGE AREA
36" CMP ESCAPE TUNNEL
SEDIMENT POND "B"
REFUSE PILE
TOPSOIL PILE "E"
TOPSOIL PILE "B"
EXISTING DRAINAGE DITCH
NATURAL DRAINAGE ND-1
GAS WELL DISTURBED AREA (BY OTHERS)
LOADOUT CONVEYOR
COAL SPRAY TANK
30" HALF-ROUND
LOADOUT TOWER
SEDIMENT POND "F"
REVEGETATION TEST PLOT
SEDIMENT POND "A"
TOPSOIL PILE "A"
REVEGETATION REFERENCE AREA
TRESTLE ROAD (PUBLIC)
DOGM PERMIT AREA
T13S, R9E, SEC. 33
T14S, R9E, SEC. 4
BLMRIGHT-OF-WAY (U-48027)
RECEIVED
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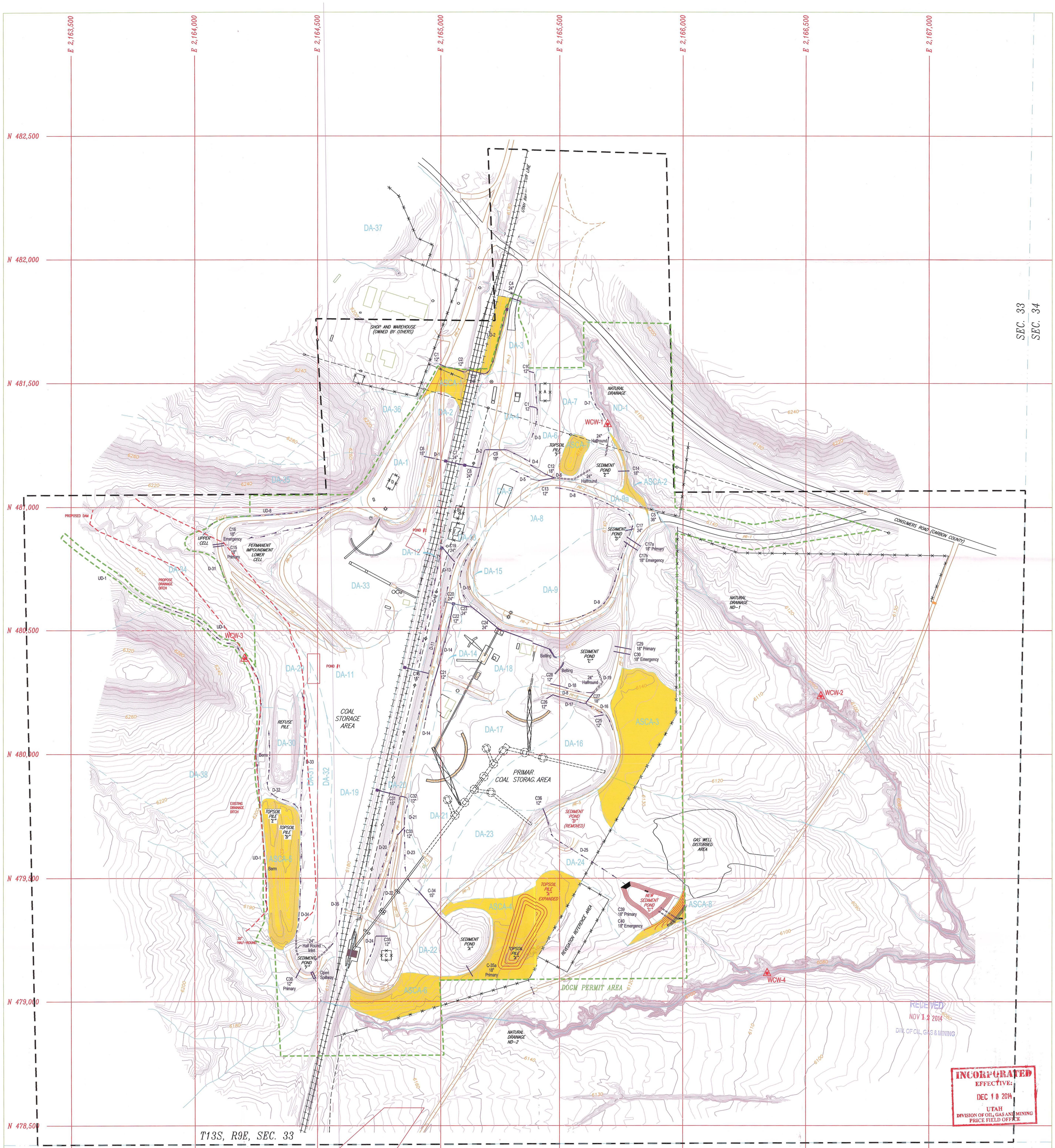
LEGEND
EXISTING BLM RIGHT OF WAY (U-48027)
DOGM PERMIT BOUNDARY
EXISTING DISTURBED AREA BOUNDARY (774 ACRES)
AES OIL LOADING TERMINAL
N
PROFESSIONAL ENGINEER
No. 03-160207-2202
THOMAS PALUSO
STATE OF UTAH
CONTOUR INTERVAL – 2'
PHOTOGRAPHY DATE: 10/22/2006
INTERMOUNTAIN POWER AGENCY
WILDCAT LOADOUT C/007/0030
EXISTING SURFACE FACILITY MAP
REVISION NUMBER: 5
SCALE: 1" = 150'
DATE: JULY 2010
PLATE 1



LEGEND:

- DOGM PERMIT AREA:
- BLM RIGHT-OF-WAY (U-48027):
- PRIMARY ROAD:
- FENCE LINE:
- CULVERT (CMP):
- DITCH:
- HALF-ROUND (CMP):
- WATER MONITORING STATION: WCW-3
- DRAINAGE AREA:
- ASCA AREA:

NOTE:

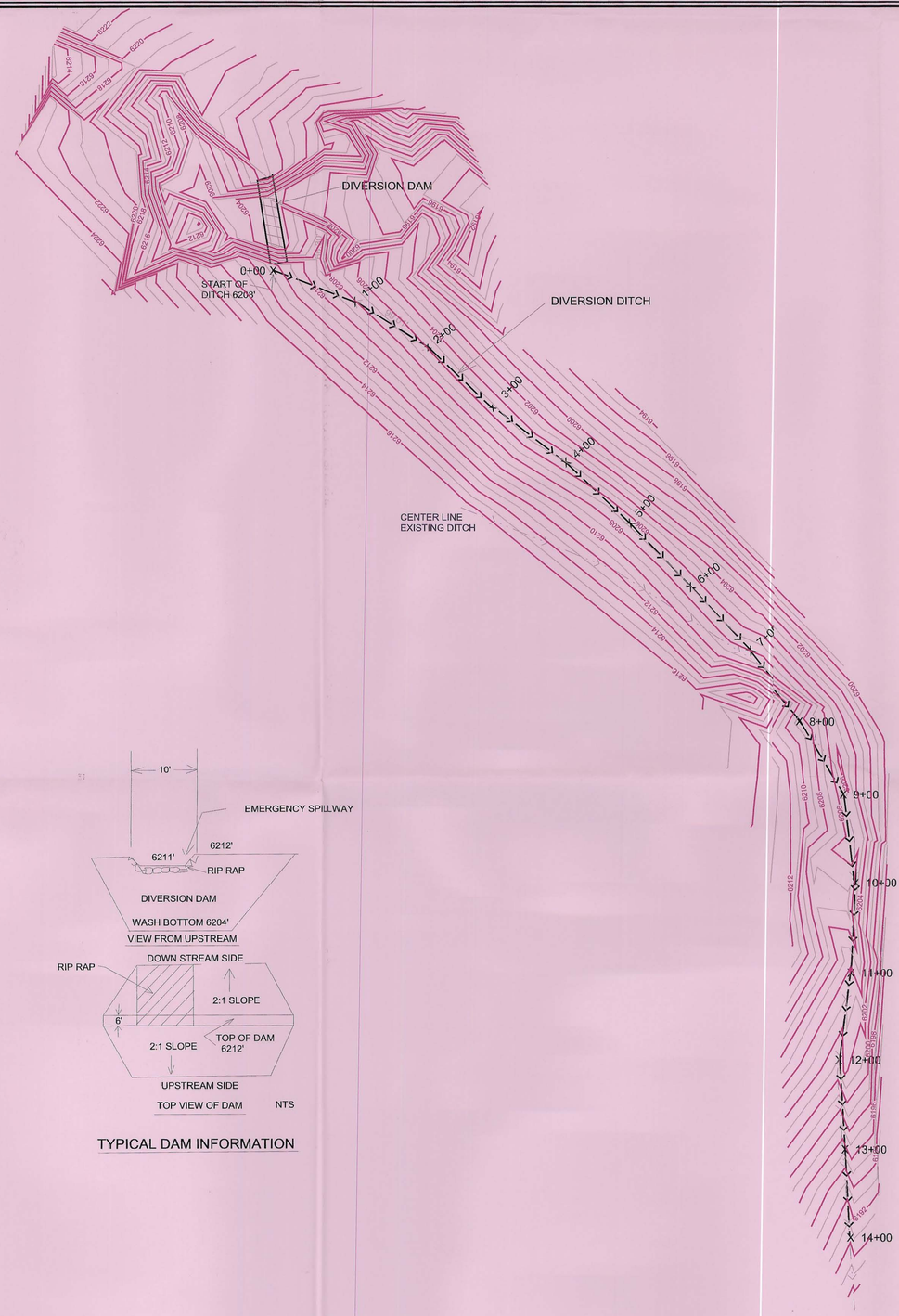
SEE PLATE 15 FOR EXTENDED WATERSHEDS.

CONTOUR INTERVAL – 2'
PHOTOGRAPHY DATE: 10/22/2006

INTERMOUNTAIN POWER AGENCY

WILDCAT LOADOUT
PROPOSED DRAINAGE MAP
RESPONSE TO DO-04

REVISION NUMBER:	SCALE:
2	1" = 150'
DATE: JULY 2010	PLATE 2A

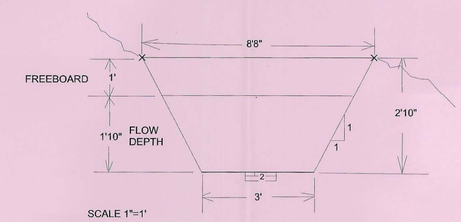


DIVERSION DITCH INFORMATION

STA	GROUND ELEVATION	BOTTOM DITCH ELEVATION	CUT FEET	
0+00	6212'	6208'	4	AT DIVERSION DAM
1+00	6208'	6207'	1	
2+00	6206'	6206'	0	
3+00	6205'	6205'	0	
4+00	6205'	6204'	1	
5+00	6205.5'	6203'	3.5	
6+00	6207'	6202'	5	
7+00	6208'	6201'	7	
8+00	6209'	6200'	9	
9+00	6205.5'	6199'	6.5	
10+00	6206'	6198'	8	
11+00	6204'	6197'	7	
12+00	6201'	6196'	5	
13+00	6195.5'	6195'	0.5	
14+00	6190.5'	6194'	0	AT EXISTING DITCH

TYPICAL DAM INFORMATION

TYPICAL DIVERSION DITCH CROSS-SECTION



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PRICE FIELD OFFICE

PROFESSIONAL ENGINEER
No. 22-158287-2014
J. THOMAS
PALUSO
STATE OF UTAH

0 80'
SCALE 1"=80'

EIS ENVIRONMENTAL & ENGINEERING CONSULTING 31 NORTH MAIN HELPER, UTAH 84526	
WILDCAT LOADOUT DRAINAGE MODIFICATION	
DRAWN BY: MORGAN MOON CO. L.L.C.	
SCALE 1"=80'	DRAWING NO. 1401

Traverse PC