



WASHOE COUNTY
COMMUNITY SERVICES DEPARTMENT
Planning and Building

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August 1, 2018

To: Washoe County Board of Adjustment

From: Chris Bronczyk, Planner, 775.328.3612, cbronczyk@washoecounty.us

Subject: Addendum to staff report for Special Use Permit Case No. WSUP18-0008 (Arconic)

The Nevada Division of Environmental Protection (NDEP) recently provided the compliance evaluation inspection (CEI), and industrial stormwater inspection reports for this project. NDEP's industrial stormwater and CEI memos are attached for reference and are hereby included as Exhibit N and Exhibit O to the staff report. As a result of NDEP's comments, staff would like provide the following new conditions of approval.

It is recommended that the following conditions be included as 1(p) and 1(q) as follows:

- p. Prior to the issuance of any building or grading permit, per the Nevada Division of Environmental Protection (NDEP) Compliance Evaluation Inspection memo, a full evaluation of the concrete shop pond must be completed and submitted to Washoe County Engineering, Washoe County Planning, and NDEP.
- q. If any new outfalls are established, there shall be appropriate BMP's utilized.

It is recommended that condition 2 (ee) from Traffic be changed as follows

- ee. ~~Provide~~ The applicant shall install a minimum 5 foot wide sidewalk along the property frontage, if, or, as determined by Washoe County Engineering.

INSPECTION REPORT

Nevada Division of Environmental Protection Bureau of Water Pollution Control

FACILITY PERMIT: NS0000021

FACILITY TITLE: ARCONIC

FACILITY DESCRIPTION: MANUFACTURING OPERATIONS

FACILITY LOCATION: 1 ERIK CIRCLE, VERDI, NV 89439

APPROVED OUTFALLS: 001 MONITORING WELL
002 MONITORING WELL
003 MONITORING WELL

DATE OF INSPECTION: 7/19/2018

TYPE OF INSPECTION: COMPLIANCE EVALUATION INSPECTION (CEI)

ATTENDEES: ANDREW DIXION, NDEP
KRISITE BLACK, NDEP
MICHELLE NENZEL, NDEP
LYNZIE DIEHL, ARCONIC
PATRICIA BILSKIS, ARCONIC

DISCHARGE RATE: 0

PERMITTED QUANTITY: 0

DATE OF REPORT: 7/31/2018

INTRODUCTIONS/FACILITY OVERVIEW

Schlosser Forge Company (Arconic) manufactures non-ferrous seamless rolled rings for the aerospace and power generation industries. The manufacturing facility is located in Verdi on 22 acres on Old Highway 40 and is directly adjacent to the Truckee River. The Verdi facility began operations in 1967. The facility was acquired by Alcoa in 2014. In November 2016, Arconic split with Alcoa and Arconic continues to manufacture the rolled rings. Currently, the facility has approximately 160 operators, with some processes that run 24 hour operations.

Arconic is currently in the process of upgrading their facility, specifically the non developed land located at the back of property. The expansion is expected to expand the facility staff to approximately 200 employees. Plans include 4 stages of expansion:

Phase 1 – Heat Treat expansion, creating a covered tool storage and a product staging area.

Phase 2 – Machine shop expansion and post forge inspection building. Further covered awnings structures.

Phase 3 – Further Heat Treat expansion.

Phase 4 – Further machine shop expansion and cold processing/QA/Storage and shipping building.

This is a zero-discharge system. The facility uses cooling water on the machinery that is collected in sumps located under the machines. The cooling water is maintained in a closed-loop, zero-discharge storage and reuse system.

The facility has a 1500 gallon oil water separator and a 50,000 gallon concrete tank that hold the cooling water. The facility also has two 10,000 gallon HDP storage tanks that can be used to temporarily hold excess flow during maintenance and emergency situations.

DISCHARGE MONITORING REPORTS

Arconic is a zero Discharge facility. A summary of the discharge monitoring report data is located in Tables 1 to 4. There have been no exceedances in the past year.

FACILITY WALKTHROUGH

NDEP Water Pollution Control's (WPC) Technical Services Branch conducted the 5 year permit inspection along with WPC's Stormwater Branch as they conducted an Industrial Stormwater inspection of the Arconic facility. Mark Quattrin, the Facility Manager of Arconic, gave an overview of the company's history and current operations. Representing Arconic during the inspection was Lynzie Diehl, Arconic EHS Manager and Patricia Bilkis, Arconic EHS Engineer. NDEP was given a walking tour through the forge/ machine shop, heat treat buildings, and the various process basins and tanks of the grey water system located on the east side of the Forge/Machine Shop Building.

Some of the machinery used during the forging and shaping processes require cooling

water. The water used for cooling is water from Arconic's zero discharge grey water system. Water from the Shop Pond is delivered on demand to the manufacturing equipment for cooling. This cooling water may come in contact with hydraulic fluid and equipment lubricants. The cooling water can also be applied manually with hoses near the machine. Reuse cooling water is also used in a smaller quench tank located in the machining building that is used to "freeze" half of the item. Spent cooling water is collected in a series of sumps located below the machinery and is then piped to a cleanout box for large debris removal. From the cleanout box, water flows by gravity to two in-series oil/water separators. Separated oil is collected in a 1,500-gallon above-ground high density polypropylene (HDP) used-oil storage tank for removal by a licensed waste-oil disposal company. Water from the oil/water separators is then piped to a 50,000-gallon concrete pond (Shop Pond) where any remaining surface oil is removed by an oil skimmer. Removed oils are discharged to the 1,500-gallon used-oil storage tank. The used-oil tank and the Shop Pond are equipped with high liquid level alarms. 600 gallon evaporator is also utilized to evaporate water from the Shop Pond. A schematic of this zero-discharge grey water system is located in Figure 3.

The 1,500 gallon waste oil tank vessel was in good condition. No leakage was noted from the insulated piping and the floor of the concrete secondary containment sump was clear. The tank is emptied every three months.

The two concrete oil/water separator units were full of oily wastewater. Oil is skimmed off the top of the liquid and deposited in the waste oil tank. Figure 16 shows the waste oil tank and the oil/water separators. Since the mixture contains both water and oil, excess water drops to the lower part of the tank where it can be pumped back into oil/water separator.

Eventually, the water will make it into the Shop Pond (Figure 12) where it can then be recycled for cooling water. NDEP didn't measure the freeboard in the Shop Pond, but it appeared to be approximately 2 feet. Figure 13 shows the original design plans of the concrete pond. The concrete pond was not constructed with leak detection, but was constructed with a bituthane membrane for additional waterproofing of the concrete structure. The pond was constructed in approximately 1978. It is unknown if an evaluation of the pond has ever been conducted but it is known that a full pond evaluation has not been completed in recent years.

Figure 14 shows the Shop Pond and oil skimming unit. Numerous spray jets direct the oil floating on the surface toward the northwest corner of the Shop Pond where it can be skimmed off. The oil skimming unit is a very simple design that operates using a rotating plastic hose that picks up oil and deposits it into an opening at the top of the unit and it flows by gravity to the waste oil tank.

There are also two 10,000 gallon plastic tanks within concrete secondary containment, as shown in Figure 15. The two HDP storage tanks were previously used to store hydraulic fluid associated with a removed piece of equipment (cogging press). These tanks have been taken off-line and are only used for emergency storage from the Shop Pond.

CONCLUSIONS

Arconic has plans to expand the Verdi facility in the upcoming years, but those plans for expansion do not include any work to be done on the zero-discharge grey water system.

NDEP found that Arconic is meeting the terms of its current Discharge Permit. It was noted that that Shop Pond is approximately 40 years old and should be fully evaluated to assess the integrity of the structure.

FINDINGS

None

RECOMMENDATIONS

No.	Recommendation
1	Complete a full evaluation of the concrete shop pond

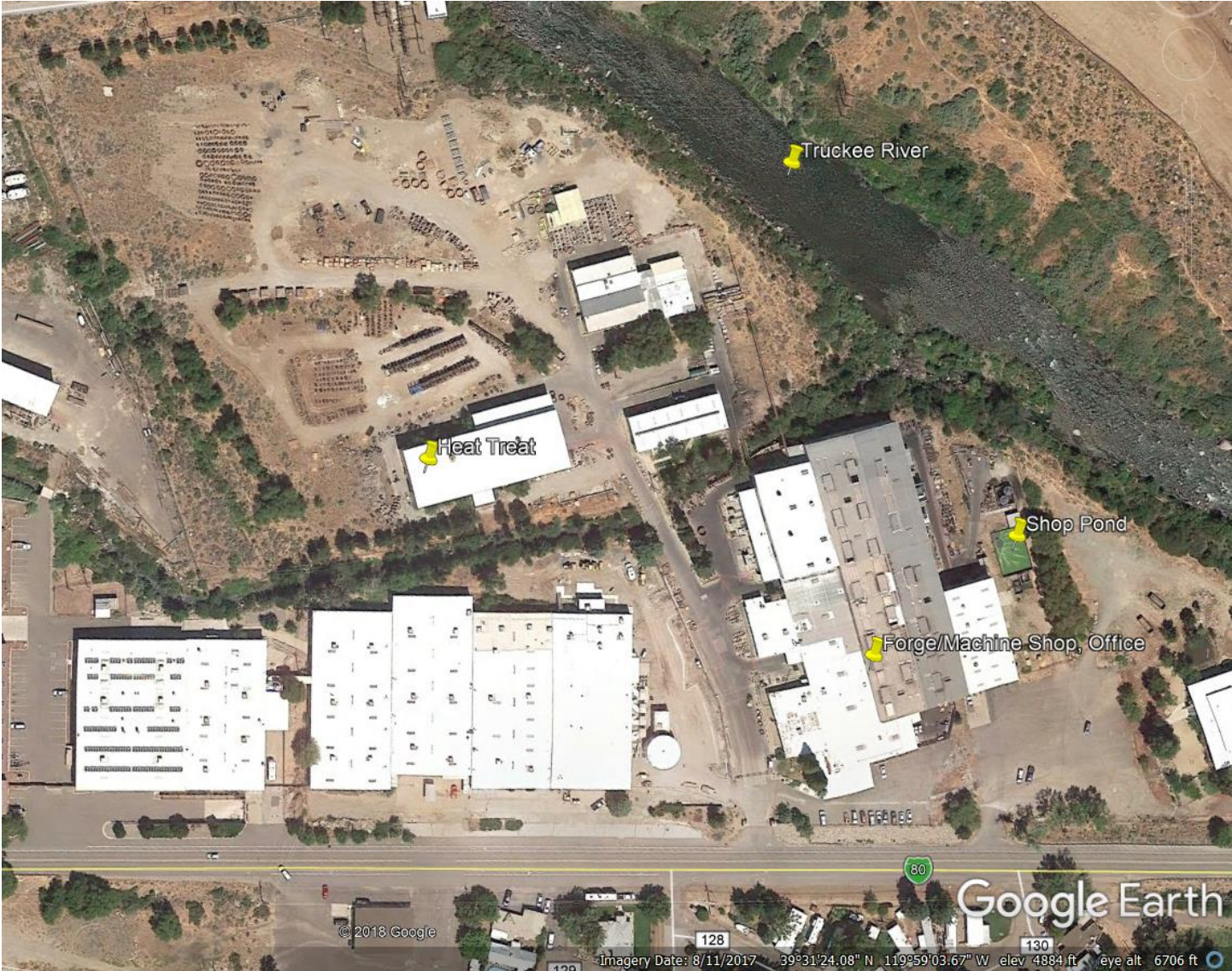


Figure 1 - Arconic facility aerial map, Google Earth



Figure 2 - Arconic Plans for future expansion

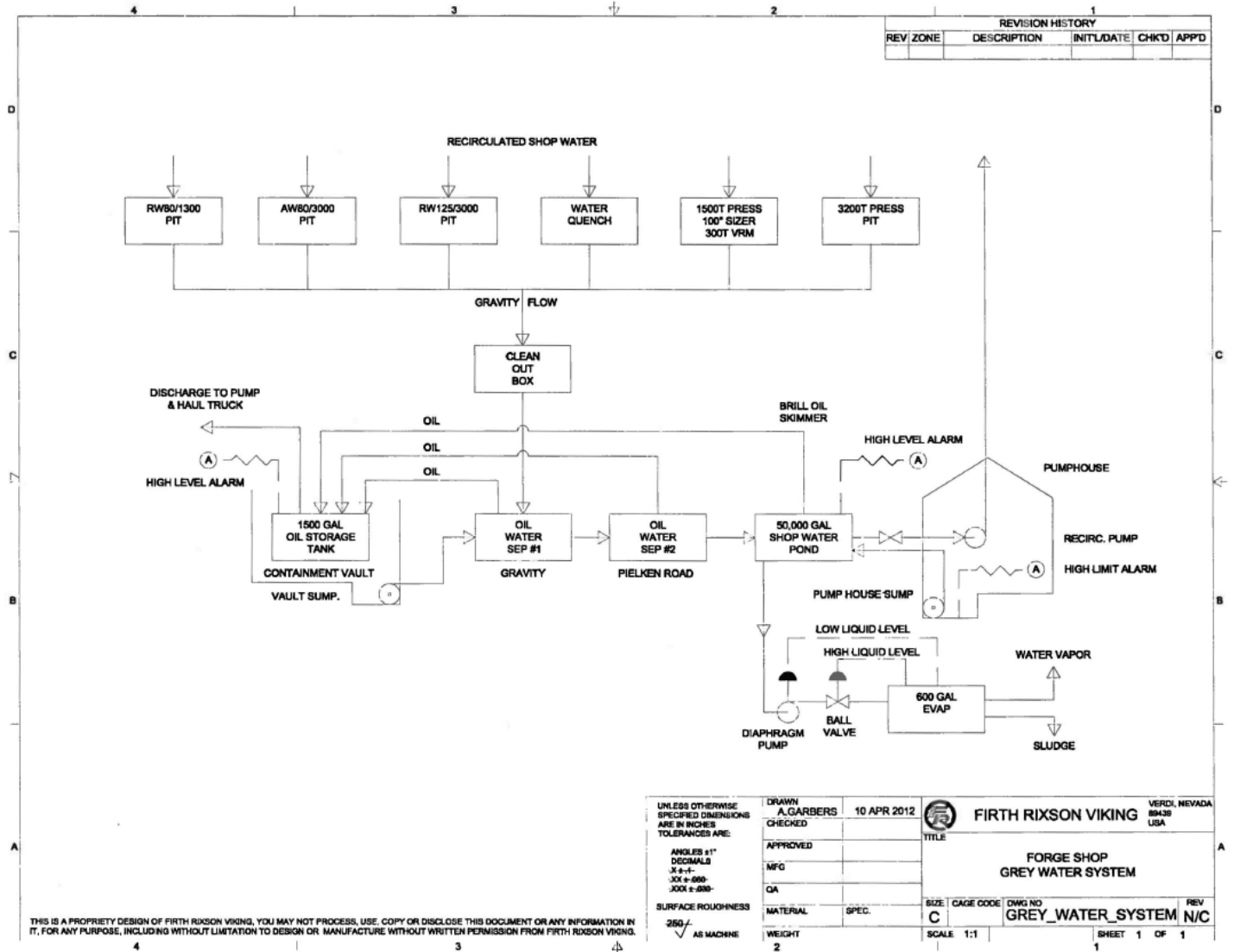


Figure 3 - Grey Water Schematic



Figure 4 - Machine with automatic cooling water distributor, sump located under machine

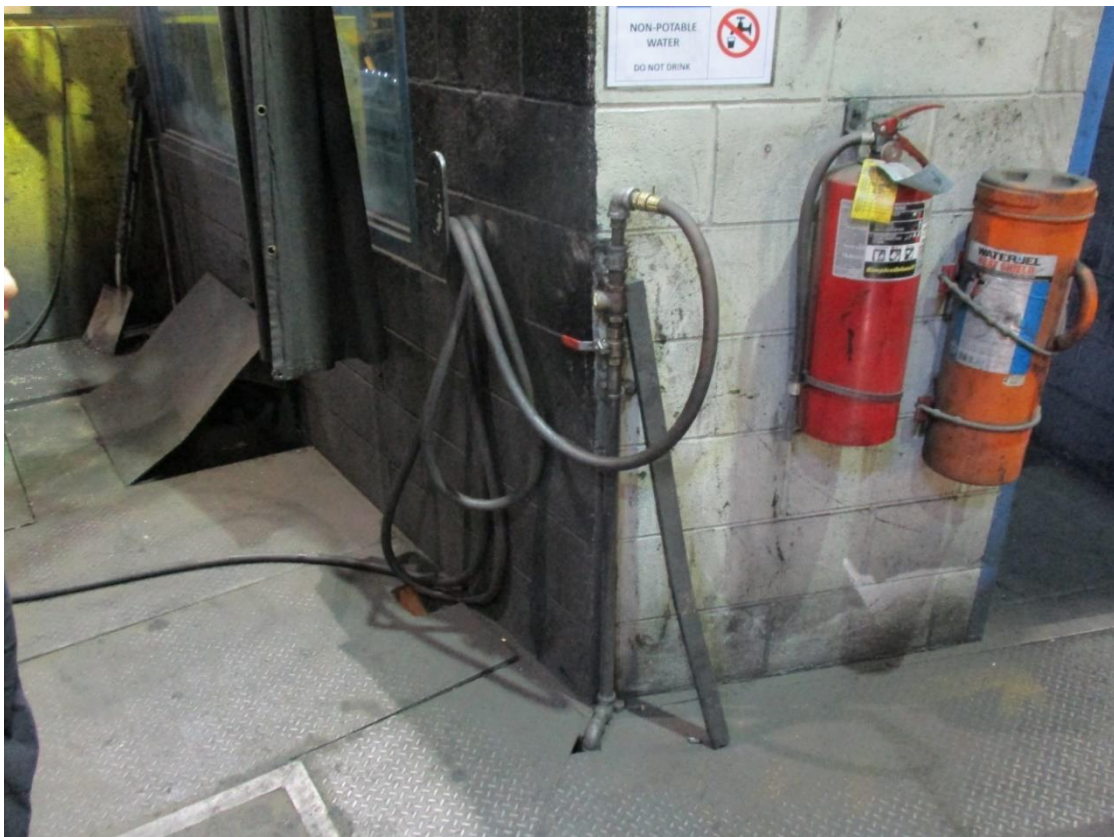


Figure 5 - Manual spray to distribute cooling water



Figure 6 - Small quench tank that utilizes recycled cooling water



Figure 7 - Small dip tank that uses recycled cooling water



Figure 8 - Recycled water systems clean out box



Figure 9 - Evaporator house



Figure 10 - 600 gallon Evaporator



Figure 11 - Shop Pond and storage tanks



Figure 12 - Shop Pond

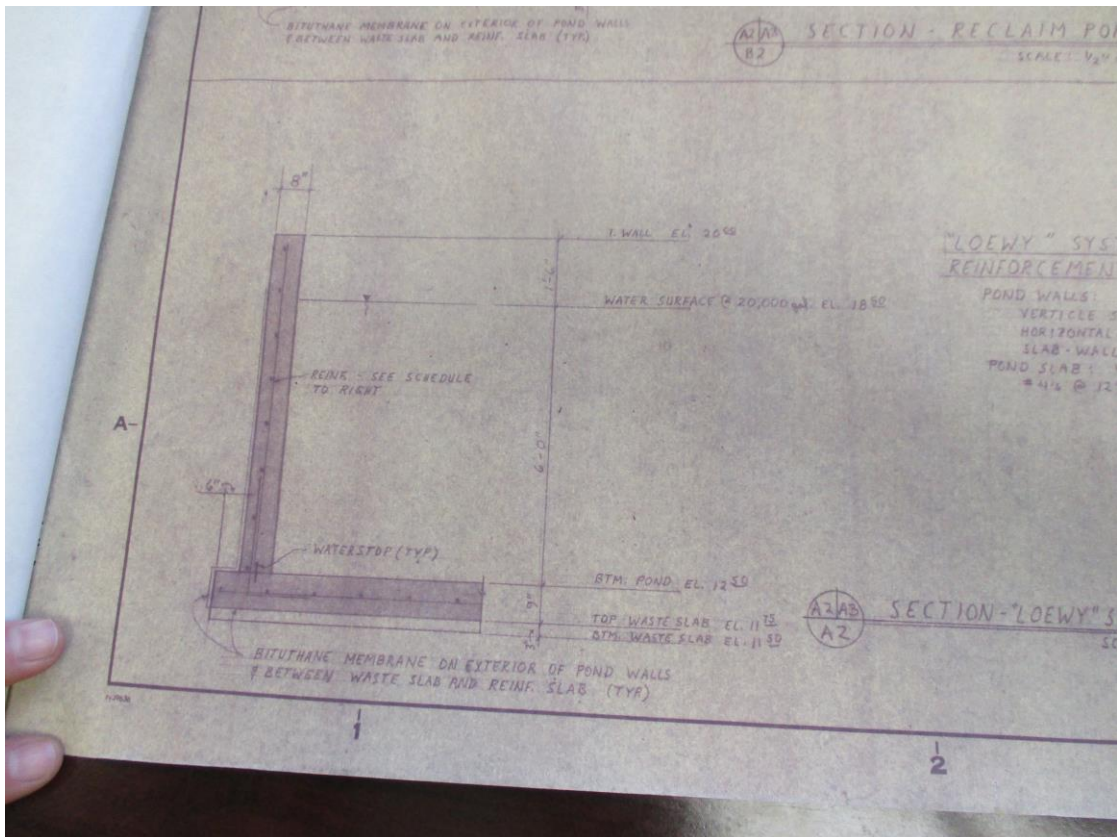


Figure 13 - Original design plans of Shop Pond walls



Figure 14 - Oil skimmer in Shop Pond



Figure 15 - Two 10,000-gallon storage tanks within concrete secondary containment



Figure 16 - Oil Water Separators in the background, Waste Oil Tank in the foreground



Figure 17 - Waste Oil Tank



Figure 18 - Monitoring Well 1 East of the Oil Water Separators



Figure 19 - Monitoring wells further East of the Oil Water Separators, with Monitoring Well 3 in the background adjacent to the river

Table 1 - Oil and Grease			
Date	Well 1	Well 2	Well 3
2nd QTR 2017	B	B	B
3rd QTR 2017	B	B	B
4th QTR 2017	B	B	B
1st QTR 2018	6	2	4
Limit	M&R (mg/L)		

Table 2 - Depth to water level below landsurface			
Date	Well 1	Well 2	Well 3
2nd QTR 2017	6.4	6.4	8.1
3rd QTR 2017	8.78	9.08	10.94
4th QTR 2017	10.57	8.4	13.3
1st QTR 2018	10.37	7.98	8.23
Limit:	M&R (feet)		

Table 3 - Chemical Oxygen Demand (COD)			
Date	Well 1	Well 2	Well 3
2nd QTR 2017	29	B	82
3rd QTR 2017	20	6.5	10
4th QTR 2017	11	B	10
1st QTR 2018	6.9	5	6.2
Limit	M&R (mg/L)		

Table 4 - Hydrocarbons, total petroleum			
Date	Well 1	Well 2	Well 3
2nd QTR 2017	B	B	B
3rd QTR 2017	B	B	B
4th QTR 2017	B	B	B
1st QTR 2018	0.83	B	B
Limit	1.0 mg/L		

B – Below Detection Limit/ No Detection

INSPECTION REPORT

Nevada Division of Environmental Protection (NDEP)
Bureau of Water Pollution Control (BWPC)

Facility Site Identification: ISW-1052
Facility: Schlosser Forge Company
Facility Location: 1 Erik Circle, Verdi NV
Date of Inspection(s): July 19, 2018
Type of Inspection: Industrial Stormwater General Permit NVR050000
Attendees: Andrew Dixon, NDEP
Kristie Black, NDEP
Michelle Nenzel, NDEP
Katrina Pascual, NDEP
Lynzie Diehl, Schlosser Forge Company
Patricia Bilskis, Schlosser Forge Company

INTRODUCTION:

Schlosser Forge Company has been an Industrial Stormwater General Permittee starting in 2009. The NDEP BWPC inspection included a review of the Stormwater Pollution Prevention Plan and an examination of the exterior areas of the site. A previous site tour was conducted on June 28, 2018 and included Andrew Dixon, Katrina Pascual, Lynzie Diehl, and Patricia Bilskis. During that tour, NDEP BWPC gave verbal recommendations to Schlosser Forge Company. Please see below for more information.

OBSERVATIONS:

NDEP BWPC found the following items during the inspection:

1. Near the northeast corner of the Forge/Machine Shop/Office Building, there is an area where it appears material had been pushed back into the tree line. A best management practice (BMP) should be added.
2. Near the northeast corner of the Forge/Machine Shop/Office Building in the interior, there were spills observed near the secondary containment that made it to the exterior. Housekeeping should be monitored.
3. Near the Forge Pedestrian Bridge that crosses the canal, there is an area on the north side where the soil needs to be removed and replaced with clean material.

In a previous site tour, NDEP BWPC found the following items to be addressed:

1. Housekeeping throughout the site needed to be better maintained.
2. The area near the TMWA ditch needed to be cleaned up and BMPs added.
3. Polymer totes were being stored outside without secondary containment.

These three items that were previously identified have been addressed.

SITE IMPROVEMENT COMMENTS:

1. We would like to see appropriately sized and an adequate quantity of storage basins.
2. If any new outfalls are established, there should be appropriate BMPs utilized.
3. The planned design that moves storage off the dirt and under cover meshes well with the objectives of the Industrial Stormwater General Permit.