Sparrows Point LLC

January 31, 2013

Mr. Andrew Fan US EPA Region III, 3LC20 1650 Arch Street Philadelphia, PA 19103-2029

Ms. Barbara Brown Project Coordinator Maryland Department of the Environment 1800 Washington Blvd Baltimore, Maryland 21230

Subject:

Interim Measures 2012 Annual Report Former Sludge Bin Storage Area, Rod & Wire Mill Consent Decree, Civil Action JFM-97-558

Dear Mr. Fan and Ms. Brown:

Enclosed please find the referenced 2012 annual report for the interim measures being conducted at the former Rod & Wire Mill area. This report is submitted to satisfy the annual reporting requirements for this interim measure specified in Section V.A. of the Consent Decree. The report was distributed electronically on January 31st, 2013 in accordance with the outlined reporting requirements; this correspondence provides paper copies for your use.

Please contact me at (314) 686-5611 should questions arise during your review of the enclosed progress report.

Sincerety

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Russell Becker Vice President, Remediation

Enclosure

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Interim Measures 2012 Annual Report Former Sludge Bin Storage Area, Rod & Wire Mill

Prepared for

Sparrows Point, LLC



January 31, 2013



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1.0 SUMMARY

During 2012, Sparrows Point, LLC operated the groundwater pump and treat Interim Measure at the former Rod & Wire Mill Sludge Bin Storage Area at Sparrows Point in accordance with the scope and schedule submitted in the July 2000 *Work Plan for Re-Establishment of Interim Measures, Former Sludge Bin Storage Area, Rod & Wire Mill* that was approved by U. S. EPA on November 3, 2000. The interim measure tasks included:

- Maintaining institutional controls at the former *in situ* leaching area,
- Groundwater treatment system monitoring, operation and maintenance,
- Semi-annual groundwater elevation monitoring, and
- Semi-annual sampling and analysis of groundwater.

Specifics of the interim measures tasks completed in 2012 are as follows:

- Institutional controls were maintained at the former sludge bin storage area to minimize and manage activities that could disturb soils at the site. These controls consist of notice sign boundary markers and continuation of an authorization program to conduct work in the area.
- Operation and maintenance of the groundwater recovery wells, transfer pipeline and treatment process equipment located at the existing wastewater treatment facility.
- Evaluation of the groundwater pump and treat system, including documentation of treatment flow, review of semi-annual groundwater elevation data, and review of effectiveness.
- Semi-annual sampling, analysis and evaluation of the groundwater impacted by former operations at the sludge bin storage area.

A total of 2,981,417 gallons of water were extracted from the two Former Sludge Bin Storage Area groundwater pumping wells (RW15-PZM020 and RW10-PZM020) during 2012. This compares to 3,471,639 gallons extracted in 2011. The average total pumping rate for 2012 was 8,160 gallons per day (gpd), or 5.6 gallons per minute (gpm). A total of 183 pounds (lbs) of cadmium and 6,442 pounds (lbs) of zinc were removed and treated during 2012. This compares to 179 lbs of cadmium and 8,418 lbs of zinc removed in 2011. The decrease in mass removal of zinc in 2012 as compared to 2011 is due to the decrease in volume of water pumped from both wells RW15-PZM020 and RW10-PZM020 in 2012.

Intermediate zone (approximately 20 to 30 feet below the ground surface) groundwater pumping, at the average annual 2012 pumping rate of 2.85 gallons per minute (gpm) for recovery well RW15-PZM020 and 2.82 gpm for recovery well RW10-PZM020, has historically demonstrated a radius of intermediate zone pumping influence that effectively controls movement the intermediate zone plume. The groundwater elevation data for the shallow zone (groundwater table surface to 15 feet below this surface), combined with the chemistry data, document a water table situation where contamination migration is effectively controlled in this groundwater zone. Groundwater elevation data for the deeper groundwater zone (greater than 50 feet in depth) suggest that heads in this zone may not be influenced by the pump and treat system; however, the chemistry data (further discussed below) indicate that this zone is minimally impacted. Groundwater quality as compared to 2011.

<u>Cadmium</u>—Cadmium concentrations in the two pumping wells (RW10-PZM020 and RW15-PZM020) are generally similar to concentrations observed in recent prior years. At most of the non-pumping wells the 2012 cadmium concentrations are also similar to prior years. An exception is RW06-PZM001 where the 2012 4th quarter cadmium concentration (25 mg/l) was unreasonably higher than historically has been observed and is considered to be a nonrepresentative outlier to be monitored going forward. In 2011, cadmium concentrations returned to levels similar to previous concentrations in RW06-PZM001 (2.3 mg/l and 1.7 mg/l in the 2nd and 4th quarters, respectively), but then spiked again in the 4th quarter 2012 to another unreasonably high concentration similar to what was observed in the 4th quarter results in 2010 (24 mg/l).

<u>Zinc</u>—Zinc concentrations for 2012 in the two pumping wells (RW10-PZM020 and RW15-PZM020) are generally similar to concentrations observed in recent prior years. In 2011, exceptions included the 4th quarter zinc concentrations for RW10-PZM004 (460 mg/l), RW20-PZM020 (100 mg/l), and RW10-PZM065 (460 mg/l). Each of these concentrations was unreasonably higher than historically has been observed and was considered to be a non-representative outlier to be monitored going forward. In 2012, zinc concentrations returned to levels similar to previous concentrations in all three of the wells that had outlier concentrations in 2011.

The Proposed Operating Plan for 2013 is to: maintain institutional controls at the former storage area, continue operation, maintenance, and monitoring of the groundwater pump and treat system, and complete semi-annual monitoring of groundwater consistent with procedures outlined in the approved July 2000 Work Plan and as modified in this report.

2.0 SUMMARY OF WORK PLAN FOR INTERIM MEASURES

This section summarizes the July 2000 Work Plan for Re-Establishment of Interim Measures:

- The work plan detailed the use of institutional controls for soils to establish a "Restricted Work Area" to control the exposure of on-site workers to soils in the Former Sludge Bin Storage Area.
- Groundwater monitoring network improvements were proposed including the use of 32 wells for monitoring the performance of the groundwater pump and treat system. This monitoring network (excluding well TS04-PZM007 destroyed in 2003) was to be used to collect water level and groundwater quality data.
- A groundwater pump and treat system was proposed that was subsequently installed and began operation in 2001. The groundwater pump and treat system consists of two intermediate depth zone recovery wells (RW10-PZM020 and RW15-PZM020) that are each pumped at a rate of between 5.0 and 12.9 gallons per minute (gpm) during operation. The expected normal operating rate for the treatment plant was set at a combined rate of 8.0 to 12.0 gpm with a maximum design flow of 25 gpm. Recovered groundwater is transported via a pipeline to the Humphreys Creek Wastewater Treatment Plant (HCWWTP) for subsequent treatment and discharge in accordance with the NPDES permit requirements for the facility.

3.0 MONITORING RESULTS FOR 2012

3.1 Groundwater Pump and Treat System Evaluation

The groundwater pump and treat system was evaluated with regard to: 1) the water levels measured in the various water bearing zones, and 2) the effectiveness of this system with respect to the mass of cadmium and zinc removed from groundwater.

3.1.1 Semi-Annual Water Level Monitoring

During 2012 water-level measurements for routine operations were manually measured semi- annually (April and October 2012) in all existing monitoring wells. A summary of the October water level measurements (depth to water and water elevation) is presented in Table 3-1.

The groundwater elevation data are also graphically presented as groundwater elevation contour maps in Figures 3-2 through 3-4. Figures 3-2, 3-3 and 3-4 represent the 4th quarter (October) 2012 data for the shallow, intermediate and deep water bearing zones. The intermediate water bearing zone is pumped and is therefore also referred to as the intermediate pumping zone.

The shallow water bearing zone (water table) includes piezometers screened to depths of approximately 15-feet below ground surface; the intermediate water bearing zone includes piezometers screened from approximately 20- to 30-foot depths; and the deep water bearing zone is defined as those piezometers screened from approximately 50- to 75-feet below ground surface. The water level results for each of these zones are discussed below.

Shallow Water Table Zone

Figure 3-2 presents the groundwater elevation contour map for the shallow water table zone, corresponding to the October2012 time period when the underlying zone (intermediate pumping zone) was being pumped.

Figure 3-2 indicates elevated groundwater centered at RW09-PZM004, roughly coincident with one of the intermediate zone pumping wells (RW10-PZM021). The elevated water table may be related to the movement and infiltration of surface water. As a result of the

elevated water table at RW09-PZM004, the shallow zone groundwater movement in the area north and east of RW09-PZM004 (proximity of the Rod & Wire Mill Site) is inferred to be north-northeastward (away from Bear Creek). West of RW09-PZM004 inferred shallow zone groundwater movement is westward. The groundwater chemistry data (see Section 3.2 chemistry discussion) reveal that elevated zinc and cadmium concentrations in shallow groundwater are primarily associated with the area east of RW09-PZM004 and, thus, are associated with shallow groundwater flow that is away from Bear Creek. At the western edge of the monitored shallow zone (near TS04-PDM004) shallow groundwater is inferred to be flowing toward Bear Creek. However, at this location and in nearby near-shore wells RW19-PZP000 and RW20-PZP000 both the cadmium and zinc concentrations in shallow groundwater are predominantly trace or non-detect (see Section 3.2 chemistry discussion).

Intermediate Pumping Zone

Figures 3-3 present groundwater elevations within the intermediate pumping zone during the 4th (Figure 3-3) quarters of 2012. These contours are not reflective of pumping conditions as the measurements were made after an equipment outage of the system as noted in the operational notes. Prior years have demonstrated the capture zone and effectiveness of this Interim Measure.

This system is maintaining a broad zone of influence extending from the pumping wells for a distance of at least 300 feet. This zone of influence is somewhat elongated and more extensive in an east to west direction. The zone of influence extends to Bear Creek to the west and beyond the eastern edge of the former Rod and Wire Mill to the east.

Deep Zone

Figure 3-4 presents the groundwater elevation contour map for the deep water bearing zone, corresponding to the October 2012 time period when the overlying zone (intermediate pumping zone) was being pumped.

Figure 3-4 indicates a north to northwesterly decrease in water levels, inferring north to northwestward groundwater flow within the deep water bearing zone. Pumping the intermediate zone does not appear to affect the deep water bearing zone.

3.1.2 Evaluation of Pump and Treat System Effectiveness

In 2012, a total of 2,981,417 gallons of water were extracted from the Former Sludge Bin Storage Area pumping wells and treated at the HCWWTP. This contrasts to a total volume of 3,471,639 gallons that were pumped and treated in 2011. The average pumping rate for the pump and treat system for 2012 was 8,160 gpd, or 5.6 gpm. Pumping rates of approximately 2.85 gpm were achieved in recovery well RW15-PZM020 and 2.82 gpm in RW10-PZM020. These pumping rates appear to effectively capture the most impacted groundwater beneath the Former Sludge Bin Storage Area, as revealed by Figures 3-1 through 3-3, discussed above.

A total of 183 pounds (lbs) of cadmium and 6,442 pounds (lbs) of zinc were removed and treated from the Rod & Wire Mill area in 2012. This compares to treated amounts of 179 lbs of cadmium and 8,418 lbs of zinc in 2011. The decrease in mass removal of zinc in 2012 as compares to 2011 is due to the decrease in volume of water pumped from both wells RW15-PZM020 and RW10-PZM020.

• Treated water volume (gal):

0	RW10-PZM020:	1,995,558 (2011);	1,481,883 (2012)
0	RW15-PZM020:	1,476,081 (2011);	1,499,534 (2012)

The averaged 2nd and 4th quarter metals concentrations were:

• Average Cadmium and Zinc Concentrations:

o RW10-PZM020:

• Cd: 10 ppm (2011);	12 ppm (2012)
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- Zn: 480 ppm (2011); 470 ppm (**2012**)
- RW15-PZM020:

• Cd: 1.0 ppm (2011); 3.3 ppm (**2012**)

• Zn: 34.5 ppm (2011); 51 ppm (2012)

Treated mass (lbs):

o RW10-PZM020:

• Cd: 167 (2011); 142 (2012)

• Zn: 7,993 (2011); 5,805(**2012**)

o RW15-PZM020:

•	Cd:	12 (2011);	41 (2012)
•	Zn:	425 (2011):	637 (2012)

The pump and treat system is removing significant amounts of cadmium and zinc from groundwater within the intermediate water bearing zone at the current pumping rates, and it is controlling groundwater flow and associated cadmium and zinc migration within the shallow zone and the intermediate water bearing zone.

3.2 Groundwater Chemistry Data

Groundwater chemistry data were collected on a semi-annual basis during the 2^{nd} and 4^{th} quarters. The locations of the wells are shown in Figure 3-1. The sampling occurred during the following months of 2012:

- April 2012
- October 2012

Tables 3-2 and 3-3 present the data from 2012 for total cadmium and zinc, respectively. The tables also show semi-annual data from 2001 through 2011. A comparison of the 2012 data with data from previous years indicates the following:

<u>Cadmium</u>—Cadmium concentrations in the two pumping wells (RW10-PZM020 and RW15-PZM020) are generally similar to concentrations observed in recent prior years. At most of the non-pumping wells the 2012 cadmium concentrations are also similar to prior years. An exception is RW06-PZM001 where the 2012 4th quarter cadmium concentration (25 mg/l) was unreasonably higher than historically has been observed and is considered to be a nonrepresentative outlier to be monitored going forward. In 2011, cadmium concentrations returned to levels similar to previous concentrations in RW06-PZM001 (2.3 mg/l and 1.7 mg/l in the 2nd and 4th quarters, respectively), but then spiked again in the 4th quarter 2012 to another unreasonably high concentration similar to what was observed in the 4th quarter results in 2010 (24 mg/l).

Zinc—Zinc concentrations in the two pumping wells (RW10-PZM020 and RW15-PZM020) are generally similar to concentrations observed in recent prior years. At most of the non-

pumping wells the 2012 zinc concentrations are also similar to prior years. Outlier values were observed in the 2011 4th quarter zinc concentrations for RW10-PZM004 (460 mg/l), RW20- PZM020 (100 mg/l), and RW10-PZM065 (460 mg/l). Each of these concentrations was unreasonably higher than historically has been observed and was considered to be a non-representative outlier to be monitored going forward. In 2012, zinc concentrations returned to levels similar to previous concentrations in all three wells that had outlier concentrations in 2011.

All of the analytical results from the most recent sampling event (4th quarter 2012) are depicted in plan view at the well locations in Figures 3-5 through 3-10. These figures indicate that the highest cadmium and zinc concentrations are in the monitoring wells located near and east-northeast of pumping well RW10-PZM020.

3.3 2012 Operations and Maintenance

Daily pumping records for the groundwater pump and treat system from January through December 2012 are provided in Appendix B. A summary of isolated operational outages which occurred in 2012 is provided in Appendix C. Overall, the groundwater treatment system operated as intended.

4.0 Proposed Operating Plan for 2013

The Proposed Operating Plan for 2013 includes the following requirements:

- Operation, maintenance and monitoring of the groundwater pump and treat system on a year round basis;
- Semi-annual monitoring of groundwater quality, including sampling and analysis for total cadmium and zinc from 31 monitoring wells; and
- Semi-annual groundwater level measurements and evaluation of groundwater flow characteristics;

Thirty-one wells in the monitoring network are proposed to be used to collect bi-annual groundwater samples for analysis of cadmium and zinc in 2012. Sampling and analysis will be performed at 14 shallow wells, 13 intermediate wells, and 4 deep wells located in the general area of the former Sludge Bin Storage Area. Sampling, analysis, and data validation will be performed in accordance with the November 1999 DCQAP. Water-level measurements will be collected semi-annually in conjunction with the sampling and analysis program. The routine bi-annual water level measurements will be performed manually in all 31 wells in the monitoring network.

FIGURES



















User Community





















TABLES

Table 3-1	
2012 Water Level Elevation D)ata

	Top of Casing									
Well Number	Elevation (ft)	Dete	Depth to	Water Level						
		Dale	Water	Elevation (ft)						
RW01-PZM020	12.72	10/25/2012	11.90	0.82						
RW02-PZM000	12.37	10/25/2012	6.70	5.67						
RW02-PZM020	13.00	10/25/2012	12.41	0.59						
RW03-PZM003	10.83	10/25/2012	5.72	5.11						
RW04-PZM003	11.09	10/23/2012	6.24	4.85						
RW05-PZP001	11.04	NM	NM	NM						
RW06-PZM001	12.17	10/25/2012	7.73	4.44						
RW07-PZM004	15.27	10/25/2012	8.36	6.91						
RW07-PZM017	12.95	10/25/2012	12.40	0.55						
RW08-PZM003	11.35	10/25/2012	6.14	5.21						
RW09-PZM004	15.22	10/23/2012	7.83	7.39						
RW10-PZM004	12.34	10/25/2012	3.80	8.54						
RW10-PZM020	12.46	10/25/2012	7.61	4.85						
RW10-PZM065	12.34	11/02/2012	4.36	7.98						
RW11-PZM004	15.35	10/23/2012	7.25	8.10						
RW12-PZM004	15.37	10/23/2012	8.36	7.01						
RW13-PZM020	14.62	10/23/2012	12.47	2.15						
RW14-PZM020	15.15	10/23/2012	13.02	2.13						
RW15-PZM020	12.70	10/25/2012	9.61	3.09						
RW16-PZM020	13.84	11/02/2012	12.41	1.43						
RW17-PZM019	13.67	11/02/2012	8.46	5.21						
RW18-PZM047	15.68	11/02/2012	10.44	5.24						
RW19-PZM020	13.49	11/02/2012	13.91	0.42						
RW19-PZM050	12.99	11/02/2012	14.47	1.48						
RW19-PZP000	13.49	11/02/2012	8.66	4.83						
RW20-PZM020	13.47	10/23/2012	12.49	0.98						
RW20-PZM050	13.03	10/23/2012	15.37	2.34						
RW20-PZP000	12.82	10/23/2012	8.77	4.05						
RW21-PZM023	12.91	10/23/2012	14.40	1.49						
TS04-PDM004	13.71	10/23/2012	10.11	3.60						
TS04-PPM007*	10.22	NM	NM	NM						
TS04-PZM023	10.09	11/02/2012	10.53	0.44						

NM- No Measurement

 * Microbac report indicates well was destroyed in 2003, possibly by a plow.

		20	01	20	02	20	003	20	04	20	05	20	006	20	007	20	008	20	09	20	10	20)11	20	12	
New Well	Former Well	1st Q	3rd Q	1st Q	3rd Q	1st Q	3rd Q	1st Q	3rd Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	UNITS
Shallow (Water Tal	Designation ble) Monitoring Wells													1											t	
RW02-PZM000	RW-3	0.36	0.67	0.47	0.29	0.29	0.067	0.17	0.21	0.34	0.26	0.12	0.034	0.47	0.03	0.057	0.30	0.17	0.15	0.11	0.033	0.11	0.11	0.11	0.31	mg/L
RW03-PZM003	RW-92	6.5	8.6	4.1	3.9	7.8	8.3	7.7	6.6	6.6	6.2	5.7	0.94	4.1	0.4	0.21	0.30	0.28	0.05	0.50	0.012	3.6	1.6	6.4	3.9	mg/L
RW04-PZM003	RW-91	0.57	0.52	0.31	0.32	0.55	0.71	0.73	0.9	0.67	0.73	0.24	0.72	0.4	0.49	0.69	0.18	0.38	0.20	0.65	0.72	0.78	0.64	0.61	0.69	mg/L
RW05-PZP001	RW-96	0.02	0.20	0.1	0.15	0.039	0.019	0.061	0.18	0.041	0.11	0.076	0.049	0.088	0.02	0.11	0.069	0.028	0.013	0.092	0.042	0.032	0.049	NS	NS	mg/L
RW06-PZM001	RW 94	1.3	2.1	1.8	2.8	1.2	4.2	2.6	6.1	2.9	7.3	3.2	1.1	3.5	1.5	1.5	16	3	1.5	1.4	24 (a)	2.3	1.7	4.9	25 (a)	mg/L
RW07-PZM004	RW-7	Note 2	0.005	0.003	0.017	0.005	0.005	0.005	0.012	0.005	0.005	0.016	0.011	0.02	0.01	0.005	0.018	0.035	0.075	0.0059	0.035	<0.00050	<0.00050	<0.00050	0.00095	mg/L
RW08-PZM003	RW-88	34	30	33	27	36	29	32	26	30	23	25	16	20	19	19	20	21	18	18	18	21	16	22	6	mg/L
RW09-PZM004	New Well "X"	Note 1	0.005	0.003	0.005	0.005	0.005	0.005	0.044	0.005	0.005	0.005	0.005	0.005	0.005	0.0003	0.0011	0.00079	0.00099	<0.00050	0.00084	0.00052	<0.00050	0.00068	<0.00050	mg/L
RW10-PZM004	RW-26	0.0025	0.045	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.0003	0.0032	0.00098	0.0005	<0.00050	<0.00050	<0.00050	11	0.0013	<0.00050	mg/L
RW11-PZM004	New Well "Y"	Note 1	14	30	33	34	37	20	24	18	32	31	24	21	32	19	41	16	35	22	23	20	25	35	NS	mg/L
RW12-PZM004	New Well "Z"	Note 1	1.1	0.36	0.28	0.85	2.3	1.8	3	2.3	3	1.7	0.12	1.2	2.5	0.069	0.11	0.05	0.044	0.090	0.11	0.38	0.21	1.30	1.60	mg/L
RW19-PZP000			0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.0005	0.00085	0.0033	0.0033	<0.00050	<0.00050	0.001	<0.00050	0.0017	<0.00050	mg/L
RW20-PZP000	RW-8		0.005	0.005	0.005	0.005	0.005	0.18	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.0003	0.025	0.0014	0.0013	<0.00050	<0.00050	<0.00050	<0.00050	0.0010	<0.00050	mg/L
TS04-PDM004	TS-04-PD		0.005	0.012	0.005	0.005	0.005	0.013	0.025	0.008	0.01	0.005	0.005	0.008	0.006	0.00057	0.0016	0.0028	0.0014	0.00085	0.0013	<0.00050	<0.00050	<0.00050	<0.00050	mg/L
TS04-PPM007	TS-04-PP		0.005	0.005	0.005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	mg/L										
Intermediate (Sand	2) Monitoring Wells	0.20	0.40	0.24	0.47	0.52	0.20	0.07	0.00	0.47	0.000	0.44	0.05	0.45	0.40	0.00	0.00	0.07	0.12	0.00	0.001	0.4	0.07	0.00	0.20	
RW01-P2I020	RW-1	1.2	0.10	0.34	0.47	0.55	0.09	1.6	1.7	1.5	0.062	0.41	0.25	0.45	0.12	0.02	0.30	0.37	0.13	0.20	0.068	0.4	0.27	0.22	0.30	mg/L
RW02-P2M017	RW-6	5.3	6.6	22	24	21	13	1.0	1.7	7.7	13	18	15	1/	15	15	14	7.0	6.5	3.6	10	8.0	10	5.1	0.12	mg/L
RW10-PZM020	RW-27	3.0	38	13	15	13	15	15	14	14	6.05	10	13	14	10	10	89	10.0	9.8	8.6	10	10	10	13	10	mg/L
RW13-PZM020	RW-4	Note 2	0.50	0.066	0.023	0.061	0.005	0.14	0.23	0.24	0.005	0.005	0.005	0.005	0.005	0.0003	0.0091	0.0110	0.0085	0.0032	0.0027	0.00062	0.0093	<0.00050	<0.00050	ma/L
RW14-PZM020	New Well "A"	Note 1	1.7	1.8	0.43	2.1	1.6	1.9	2.3	2.3	1.8	2.0	1.8	1.6	1.3	1.3	1.0	0.42	0.83	0.90	0.69	0.57	0.54	0.45	0.43	mg/L
RW15-PZM020	RW-24R	2.5	3.3	8	4.4	5.3	1.9	1.1	1.8	4.4	2.2	1.9	2.4	2.3	1.7	1.6	1.4	1.6	1.3	0.33	1.1	1	0.96	5.5	1.10	mg/L
RW16-PZM020	New Well "B"	Note 1	0.78	0.08	0.012	0.17	5.0	0.083	5.4	4	5.2	3.6	3.2	0.13	1.2	0.005	0.027	0.022	0.011	0.0065	0.055	<0.00050	0.0016	1.3	0.11	mg/L
RW17-PZM019	New Well "C"	Note 1	5.4	0.088	0.034	0.018	0.005	14	17	15	16	11	9.8	9.6	6.2	5.8	4.5	5.6	5.7	6.1	6.1	6.2	5.7	6.4	5.0	mg/L
RW19-PZM020	RW-12	0.03	0.016	0.13	0.15	0.025	0.082	0.17	0.28	0.32	0.2	0.15	0.20	0.15	0.15	0.094	0.11	0.11	0.13	0.061	0.096	<0.00050	0.029	0.011	0.013	mg/L
RW20-PZM020	RW-9B	0.58	0.25	0.13	0.021	0.039	3.4	0.005	0.22	0.19	0.014	0.013	0.022	0.022	0.005	0.005	0.046	0.019	0.0011	0.0026	<0.0050	<0.00050	0.0031	0.013	0.0038	mg/L
RW21-PZM023	RW-32	Note 2	6.8	6.7	6.4	6.3	6.6	6.3	5.8	4.7	3.8	2.9	2.6	2.7	2	1.9	1.9	1.8	1.7	1.7	1.8	3.9	1.8	1.8	1.9	mg/L
TS04-PZM023	New Well "D"	Note 1	11	4.3	3.8	3.2	1.1	1.2	1	1.1	0.84	0.80	0.64	0.38	0.35	0.19	0.17	0.13	0.28	0.39	0.31	0.25	0.015	0.0072	0.006	mg/L
Deep (Sand 3) Mor	itoring Wells																•									
RW10-PZM065	RW-28		0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.052	0.005	0.005	0.005	0.005	0.007	0.0003	0.0031	0.0025	0.0028	<0.00050	<0.00050	<0.00050	10	0.0013	<0.00050	mg/L
RW18-PZM047	RW-22		0.005	0.003	0.005	0.005	0.005	0.87	0.014	0.041	0.005	0.007	0.005	0.005	0.005	0.005	0.0051	0.0037	0.0024	0.0037	0.0034	0.0022	0.00079	<0.00050	<0.00050	mg/L
RW19-PZM050	RW-13		0.005	0.005	0.005	0.005	0.005	0.005	0.015	0.023	0.005	0.005	0.005	0.005	0.005	0.002	0.0016	0.0061	0.014	0.0044	0.0041	0.0027	0.0034	0.0017	<0.00050	mg/L
RW20-PZM050	RW-10		0.005	0.005	0.005	0.005	0.005	0.026	0.014	0.025	0.005	0.005	0.005	0.005	0.005	0.0003	0.0019	0.0050	0.022	0.029	<0.00050	0.001	<0.00050	0.0013	0.0012	mg/L

Note 1: New wells installed prior to 3rd quarter 2001.

Note 2: Replacement wells installed prior to 3rd quarter 2001. mg/L = milligrams per liter.

The shaded cells are non-detect results. The blank cells represent data not collected.

NS = Well destroyed. Not sampled.

(a) Unreliable outlier.

Prepared: January 2013

Summary of Zinc Monitoring Data for 2012 and Comparison with Prior Years

		2	001	2	002	2	003	2	004	2	005	2	006	2	007	2	008	2	009	2	010	2	011	2	012	Unit
New Well Designation	Former Well Designation	1st Q	3rd Q	1st Q	3rd Q	1st Q	3rd Q	1st Q	3rd Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	2nd Q	4th Q	Unit						
Shallow (Water Ta	hallow (Water Table) Monitoring Wells																									
RW02-PZM000	RW-3	18	29	26	13	14	3.7	12	13	16	17	5.1	0.97	20	1.1	2.6	14	8	4.5	4.2	1.1	4.3	3.9 (B2)	5	13	mg/L
RW03-PZM003	RW-92	250	240	160	170	250	200	240	190	210	150	170	37	170	120	140	130	150	110	140	0.13	140	110 (B2)	180	130	mg/L
RW04-PZM003	RW-91	12	9.3	7.1	6.2	12	13	14	16	13	13	6.3	13	9.5	10	15	4.9	9.5	5.5	16	14	14	12 (B2)	13	12	mg/L
RW05-PZP001	RW-96	0.82	6.1	3.4	3.7	1.2	0.56	1.8	5.2	0.87	3.9	3.0	1.3	2.9	0.64	6.2	2.3	0.76	0.35	3.7	1.2	1	1.4 (B2)	NS	NS	mg/L
RW06-PZM001	RW-94	19	14	15	21	17	25	20	39	23.0	47	26	15	32	19	23	110	26	36	14	160 (a)	17	14 (B2)	40	160	mg/L
RW07-PZM004	RW-7	Note 2	1.1	2.9	8.7	3.5	3.2	1.5	2	0.31	0.94	9.1	4.0	13	3.9	9.7	4.5	19.0	33	3.8	23	3.6	0.065 (B1)	0.15	0.17	mg/L
RW08-PZM003	RW-88	870	850	820	660	750	610	700	590	650	460	460	420	420	560	370	420	410	390	370	390	380	320 (B2)	370	330	mg/L
RW09-PZM004	New Well "X"	Note 1	2.8	8.5	1.9	5.1	3.2	2.0	4.3	0.043	0.07	0.040	0.042	0.039	0.04	0.02	0.0086	0.0063	0.02	0.019	0.011	0.058	0.024 (B1)	0.024	0.0078	mg/L
RW10-PZM004	RW-26	5.9	5.5	6.1	0.41	0.54	0.62	0.33	0.55	0.02	0.18	0.032	0.18	0.045	0.07	0.067	0.028	0.018	0.057	<0.0050	0.020	0.018	460 (B2) (a)	0.11	0.03	mg/L
RW11-PZM004	New Well "Y"	Note 1	1300	2800	3200	3500	3500	1900	2300	1400	2800	2700	2000	1800	2800	1600	3700	1400	3500	2400	2100	1900	2200 (B2)	3700	1800	mg/L
RW12-PZM004	New Well "Z"	Note 1	92	21	14	64	190	150	220	200	220	130	5.9	93	180	4.3	5.8	2.3	1.7	3.8	5.6	24	14 (B2)	110	110	mg/L
RW19-PZP000	RW-8		0.088	0.038	0.025	0.067	0.14	0.053	0.064	0.022	0.027	0.020	0.046	0.02	0.02	0.01	0.023	0.010	0.054	0.0073	0.014	0.067	0.025 (B1)	0.15	0.044 (B1)	mg/L
RW20-PZP000	RW20-PZP000		0.044	0.046	0.036	0.01	0.081	0.040	0.13	0.01	0.02	0.02	0.025	0.023	0.03	0.01	100	0.022	0.02	0.0053	0.0068	0.031	0.0081 (B1)	0.0095	<0.00050	mg/L
TS04-PDM004	TS04-PDM004		5.5	15	1.6	3.8	8.2	4.3	14	0.240	15	0.31	0.17	0.24	0.05	0.15	0.12	0.033	0.02	0.021	0.12	0.039	0.027 (B1)	0.26	0.41	mg/L
TS04-PPM007	TS04-PPM007		0.35	0.072	0.037	NS	NS	NS	NS	NS	NS	NS	NS	NS	mg/L											
Intermediate (Sand	d 2) Monitoring Wells																									
RW01-PZM020	RW-1	330	27	89	150	140	74	58	110	170	140	100	160	100	150	130	120	140	150	94	150	130	95 (B2)	70	100	mg/L
RW02-PZM020	RW-2	2200	48	13	2500	2800	3100	3300	3300	3200	2800	2700	2700	45	2900	1500	2200	2300	800	330	3300	3100	2600	3000	2600	mg/L
RW07-PZM017	RW-6	480	430	780	770	700	540	440	580	430	530	600	590	520	570	520	550	310	300	230	420	390	410 (B2)	260	330	mg/L
RW10-PZM020	RW-27	410	600	480	580	540	630	550	630	690	210	560	600	580	520	510	530	540	550	500	530	510	450 (B2)	470	470	mg/L
RW13-PZM020	RW-4	Note 2	120	15	3.4	3.2	0.16	0.12	0.16	0.059	0.081	0.030	0.048	0.037	0.07	0.029	0.017	0.020	0.076	<0.0050	<0.0050	0.028	0.07 (B1)	0.67	0.76	mg/L
RW14-PZM020	New Well "A"	Note 1	390	480	370	490	450	440	440	440	340	390	380	340	350	290	310	150	260	260	300	290	280 (B2)	280	260	mg/L
RW15-PZM020	RW-24R	490	330	170	120	150	190	170	150	91	52	120	47	39	33	34	33	47	28	65	29	32	37 (B2)	56	46	mg/L
RW16-PZM020	New Well "B"	Note 1	13	90	110	110	120	97	91	100	85	80	80	81	70	69	69	71	66	60	61	61	59	43	53	mg/L
RW17-PZM019	New Well "C"	Note 1	170	25	37	29	20	300	210	220	170	96	76	6.3	46	42	34	42	40	48	46	48	45 (B2)	62	47	mg/L
RW19-PZM020	RW-12	3.4	0.91	13	14	1.8	6.0	13	24	26	24	20	24	19	22	17	14	14	17	11	10	0.2	5.6 (B2)	4.6	5	mg/L
RW20-PZM020	RW-9B	180	190	160	62	97	150	160	130	150	120	130	120	130	83	52	2.0	120.0	0.16	2.0	56	120	100 (B2) (a)	130	100	mg/L
RW21-PZM023	RW-32	Note 2	63	60	60	58	58	58	50	39	35	29	27	25	22	22	21	20	19	19	20	42	20 (B2)	21	21	mg/L
TS04-PZM023	New Well "D"	Note 1	220	94	110	78	25	34	34	39	35	32	27	15	17	140	5.4	4.0	12.0	19	16	9	8.7 (B2)	5.2	2.6	mg/L
Deep (Sand 3) Mo	nitoring Wells																									
RW10-PZM065	RW-28		0.096	0.11	0.12	0.01	0.074	0.01	0.065	0.031	0.022	0.031	0.057	0.024	0.23	0.042	0.015	0.053	0.084	<0.0050	<0.0050	0.015	460 (B2) (a)	0.046	0.043 (B1)	mg/L
RW18-PZM047	RW-22		15	7	5.8	9.2	13	26	15	7.3	12	6.9	4.9	4.7	2.9	1.8	6.9	1.2	1.1	3.9	5.7	3.3	0.48 (B2)	0.52	0.4	mg/L
RW19-PZM050	RW-13		0.53	0.43	0.42	0.19	0.23	0.24	0.087	0.092	0.051	0.19	0.22	0.086	0.05	0.33	0.22	0.54	0.17	0.092	0.19	0.15	0.16 (B1)	0.076	0.052 (B1)	mg/L
RW20-PZM050	RW-10		0.057	0.38	0.042	0.25	0.33	0.42	0.19	0.29	0.081	0.32	0.11	0.2	0.2	0.31	0.041	0.14	110*	36	0.22	1	0.011 (B1)	0.12	0.031	mg/L
Note 1: New wells instal	ed prior to 3rd guarter 2001.		-	-		-	-	-	-	-	-	-	-	-	-		-	-	-			-	-	-	-	

Note 2: Replacement wells installed prior to 3rd quarter 2001.

Note 3: The 2008 4th Q results for RW20-PZP000 and RW20-PZM020 may relate to a transcription error, to be further evaluated during the next sampling round. mg/L = milligrams per liter.

The blank cells represent data not collected.

The shaded cells are non-detect results.

The italicized values have been qualified by the data validator as qualitatively invalid due to their presence in associated laboratory or field blanks. NS = Well destroyed. Not sampled.

* The reported concentration doesn't match historic values, which typically are less than 1 mg/L, and is considered to be an error in sampling/reporting convention for this well.

(a) Unreliable outlier value.

(B1) Target analyte detected in the method blank at or above the reporting limit.

(B2) Target analyte detected in the method blank at or above the reporting limit. Concentration found in the samples was 20 times the concentration found in the method blank.

Prepared: January 2013

Table_3-3_Zinc_con_2011_Draft

APPENDIX B

Daily Pumping Records for the Groundwater Pump and Treat System

January 2012											
	Volun	ne Pumped (Ga	llons)	Total (gpm)							
Date	Well #24	Well #27	Total	MP 214							
	(RW15)	(RW 10)	0.170								
1/1/2012	2,261	3,891	6,152	4.3							
1/2/2012	4,438	3,463	7,901	5.5							
1/3/2012	3,329	3,854	7,183	5.0							
1/4/2012	4,756	4,113	8,869	6.2							
1/5/2012	4,209	3,673	7,882	5.5							
1/6/2012	4,337	3,770	8,107	5.6							
1/7/2012	4,539	3,941	8,480	5.9							
1/8/2012	2,868	2,565	5,433	3.8							
1/9/2012	4,165	3,739	7,904	5.5							
1/10/2012	4,185	3,753	7,938	5.5							
1/11/2012	4,256	3,712	7,968	5.5							
1/12/2012	5,406	4,688	10,094	7.0							
1/13/2012	4,255	3,735	7,990	5.5							
1/14/2012	2,380	3,792	6,172	4.3							
1/15/2012	6,127	3,580	9,707	6.7							
1/16/2012	3,376	3,001	6,377	4.4							
1/17/2012	4,142	3,749	7,891	5.5							
1/18/2012	4,138	3,613	7,751	5.4							
1/19/2012	4,090	3,646	7,736	5.4							
1/20/2012	4,503	4,043	8,546	5.9							
1/21/2012	4,418	3,499	7,917	5.5							
1/22/2012	4,358	3,374	7,732	5.4							
1/23/2012	4,475	3,459	7,934	5.5							
1/24/2012	3,192	2,542	5,734	4.0							
1/25/2012	4,542	3,634	8,176	5.7							
1/26/2012	4,299	3,317	7,616	5.3							
1/27/2012	4,514	3,387	7,901	5.5							
1/28/2012	5,701	4,274	9,975	6.9							
1/29/2012	4,434	3,542	7,976	5.5							
1/30/2012	4,434	3,542	7,976	5.5							
1/31/2012	4,129	3,353	7,482	5.2							
Total	130,256	112,244	242,500	5.4							

February 2012													
	Volun	Total (gpm)											
Date	Well #24	Well #27	Total	MP 214									
	(RW15)	(RW 10)	lotal										
2/1/2012	3,961	3,200	7,161	5.0									
2/2/2012	4,730	3,487	8,217	5.7									
2/3/2012	4,643	3,428	8,071	5.6									
2/4/2012	4,564	3,415	7,979	5.5									
2/5/2012	5,144	3,852	8,996	6.2									
2/6/2012	4,581	3,432	8,013	5.6									
2/7/2012	4,510	3,397	7,907	5.5									
2/8/2012	4,685	3,592	8,277	5.7									
2/9/2012	3,277	2,526	5,803	4.0									
2/10/2012	4,283	3,303	7,586	5.3									
2/11/2012	4,200	3,300	7,500	5.2									
2/12/2012	4,921	3,272	8,193	5.7									
2/13/2012	6,603	4,236	10,839	7.5									
2/14/2012	5,120	3,151	8,271	5.7									
2/15/2012	5,183	3,171	8,354	5.8									
2/16/2012	5,208	3,255	8,463	5.9									
2/17/2012	4,766	3,046	7,812	5.4									
2/18/2012	5,083	3,295	8,378	5.8									
2/19/2012	5,031	5.8											
2/20/2012	4,906	3,401	8,307	5.8									
2/21/2012	5,234	3,839	9,073	6.3									
2/22/2012	4,694	3,344	8,038	5.6									
2/23/2012	4,655	3,478	8,133	5.6									
2/24/2012	4,525	3,482	8,007	5.6									
2/25/2012	3,232	2,499	5,731	4.0									
2/26/2012	4,450	3,442	7,892	5.5									
2/27/2012	4,372	3,459	7,831	5.4									
2/28/2012	4,323	3,456	7,779	5.4									
2/29/2012	5,423	4,279	9,702	6.7									
Total	136,307	98,348	234,655	5.6									

March 2012					
	Volume Pumped (Gallons) Total (g				
Date	Well #24	Well #27	Total	MD 214	
	(RW15)	(RW 10)	Total		
3/1/2012	4,387	3,463	7,850	5.5	
3/2/2012	4,398	3,502	7,900	5.5	
3/3/2012	4,231	3,384	7,615	5.3	
3/4/2012	4,032	3,216	7,248	5.0	
3/5/2012	4,281	3,430	7,711	5.4	
3/6/2012	4,329	3,459	7,788	5.4	
3/7/2012	4,296	3,744	8,040	5.6	
3/8/2012	4,753	3,592	8,345	5.8	
3/9/2012	4,749	3,360	8,109	5.6	
3/10/2012	4,656	3,024	7,680	5.3	
3/11/2012	5,189	3,335	8,524	5.9	
3/12/2012	3,798	2,458	6,256	4.3	
3/13/2012	5,061	3,316	8,377	5.8	
3/14/2012	5,033	3,292	8,325	5.8	
3/15/2012	5,047	3,290	8,337	5.8	
3/16/2012	6,302	4,103	10,405	7.2	
3/17/2012	4,962	3,276	8,238	5.7	
3/18/2012	4,788	3,151	7,939	5.5	
3/19/2012	4,887	3,180	8,067	5.6	
3/20/2012	4,606	2,891	7,497	5.2	
3/21/2012	5,008	3,151	8,159	5.7	
3/22/2012	4,895	3,161	8,056	5.6	
3/23/2012	4,933	3,138	8,071	5.6	
3/24/2012	5,491	3,554	9,045	6.3	
3/25/2012	4,828	3,121	7,949	5.5	
3/26/2012	5,138	3,323	8,461	5.9	
3/27/2012	4,679	3,028	7,707	5.4	
3/28/2012	3,716	2,296	6,012	4.2	
3/29/2012	5,186	3,319	8,505	5.9	
3/30/2012	4,736	3,015	7,751	5.4	
3/31/2012	5,018	3,153	8,171	5.7	
Total	147,413	100,725	248,138	5.6	

April 2012				
	Volume Pumped (Gallons)			Total (gpm)
Date	Well #24	Well #27		MD 214
	(RW15)	(RW 10)	Total	
4/1/2012	6,027	3,788	9,815	6.8
4/2/2012	5,316	3,345	8,661	6.0
4/3/2012	4,949	3,115	8,064	5.6
4/4/2012	5,002	3,225	8,227	5.7
4/5/2012	4,479	2,906	7,385	5.1
4/6/2012	4,874	3,155	8,029	5.6
4/7/2012	4,905	3,166	8,071	5.6
4/8/2012	4,746	3,126	7,872	5.5
4/9/2012	5,420	3,590	9,010	6.3
4/10/2012	4,523	2,956	7,479	5.2
4/11/2012	5,094	3,148	8,242	5.7
4/12/2012	4,844	3,038	7,882	5.5
4/13/2012	4,596	2,886	7,482	5.2
4/14/2012	4,230	3,224	7,454	5.2
4/15/2012	5,115	3,275	8,390	5.8
4/16/2012	5,185	3,326	8,511	5.9
4/17/2012	5,408	3,553	8,961	6.2
4/18/2012	4,981	3,274	8,255	5.7
4/19/2012	5,061	3,327	8,388	5.8
4/20/2012	5,158	3,389	8,547	5.9
4/21/2012	4,496	2,961	7,457	5.2
4/22/2012	4,992	3,371	8,363	5.8
4/23/2012	4,894	3,313	8,207	5.7
4/24/2012	4,894	3,313	8,207	5.7
4/25/2012	5,373	3,640	9,013	6.3
4/26/2012	4,214	2,895	7,109	4.9
4/27/2012	4,275	2,902	7,177	5.0
4/28/2012	4,168	2,876	7,044	4.9
4/29/2012	3,019	2,118	5,137	3.6
4/30/2012	4,003	2,859	6,862	4.8
Total	144,241	95,060	239,301	5.5

May 2012				
	Pump	ed Volume (Ga	llons)	Total (gpm)
Date	Well #24 (RW15)	Well #27 (RW 10)	Total	MP 214
5/1/2012	4 049	2 892	6 941	4 8
5/2/2012	4.062	2,906	6,968	4.8
5/3/2012	5.196	3.805	9.001	6.3
5/4/2012	4,200	3,008	7,208	5.0
5/5/2012	4,267	2,938	7,205	5.0
5/6/2012	3,920	2,802	6,722	4.7
5/7/2012	3,752	2,680	6,432	4.5
5/8/2012	3,958	2,898	6,856	4.8
5/9/2012	3,831	2,840	6,671	4.6
5/10/2012	3,789	2,684	6,473	4.5
5/11/2012	4,422	3,110	7,532	5.2
5/12/2012	3,838	2,711	6,549	4.5
5/13/2012	3,966	2,804	6,770	4.7
5/14/2012	3,739	2,696	6,435	4.5
5/15/2012	2,736	1,965	4,701	3.3
5/16/2012	3,767	2,729	6,496	4.5
5/17/2012	4,525	3,203	7,728	5.4
5/18/2012	3,160	2,265	5,425	3.8
5/19/2012	4,448	3,247	7,695	5.3
5/20/2012	3,061	2,214	5,275	3.7
5/21/2012	4,483	3,195	7,678	5.3
5/22/2012	3,754	2,738	6,492	4.5
5/23/2012	3,762	2,748	6,510	4.5
5/24/2012	4,084	2,716	6,800	4.7
5/25/2012	4,166	2,808	6,974	4.8
5/26/2012	3,890	2,652	6,542	4.5
5/27/2012	4,449	3,127	7,576	5.3
5/28/2012	3,339	2,346	5,685	3.9
5/29/2012	3,949	2,774	6,723	4.7
5/30/2012	3,914	2,747	6,661	4.6
5/31/2012	3,817	2,686	6,503	4.5
Total	122,293	86,934	209,227	4.7

June 2012						
	Pump	ed Volume (Ga	llons)	Total (gpm)		
Date	Well #24	Well #27	Total	MD 214		
	(RW15)	(RW 10)	Total			
6/1/2012	4,096	2,878	6,974	4.8		
6/2/2012	2,969	2,148	5,117	3.6		
6/3/2012	3,768	2,747	6,515	4.5		
6/4/2012	4,692	3,426	8,118	5.6		
6/5/2012	3,661	2,673	6,334	4.4		
6/6/2012	3,767	2,753	6,520	4.5		
6/7/2012	3,735	2,726	6,461	4.5		
6/8/2012	3,419	2,498	5,917	4.1		
6/9/2012	3,756	2,740	6,496	4.5		
6/10/2012	3,730	2,724	6,454	4.5		
6/11/2012	3,721	2,747	6,468	4.5		
6/12/2012	4,149	3,041	7,190	5.0		
6/13/2012	3,572	2,725	6,297	4.4		
6/14/2012	3,543	2,678	6,221	4.3		
6/15/2012	3,683	2,797	6,480	4.5		
6/16/2012	2,665	2,022	4,687	3.3		
6/17/2012	3,537	2,686	6,223	4.3		
6/18/2012	3,588	2,724	6,312	4.4		
6/19/2012	3,595	2,732	6,327	4.4		
6/20/2012	5,253	3,425	8,678	6.0		
6/21/2012	4,413	2,705	7,118	4.9		
6/22/2012	4,434	2,747	7,181	5.0		
6/23/2012	4,496	2,757	7,253	5.0		
6/24/2012	3,941	2,480	6,421	4.5		
6/25/2012	4,338	2,746	7,084	4.9		
6/26/2012	4,562	2,742	7,304	5.1		
6/27/2012	4,732	2,731	7,463	5.2		
6/28/2012	5,162	3,065	8,227	5.7		
6/29/2012	4,549	2,703	7,252	5.0		
6/30/2012	4,614	2,751	7,365	5.1		
Total	120,140	82,317	202,457	4.7		
July 2012						
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Pumped Volume (Gallons) Total (gpm)						
Date	Well #24	Well #27	Total	MD 214		
	(RW15)	(RW 10)	Total			
7/1/2012	4,583	2,618	7,201	5.0		
7/2/2012	4,377	2,456	6,833	4.7		
7/3/2012	4,720	2,651	7,371	5.1		
7/4/2012	4,730	2,624	7,354	5.1		
7/5/2012	4,829	2,665	7,494	5.2		
7/6/2012	5,086	2,775	7,861	5.5		
7/7/2012	4,859	2,653	7,512	5.2		
7/8/2012	4,763	2,599	7,362	5.1		
7/9/2012	4,648	2,535	7,183	5.0		
7/10/2012	4,488	2,433	6,921	4.8		
7/11/2012	5,279	2,659	7,938	5.5		
7/12/2012	5,183	2,606	7,789	5.4		
7/13/2012	5,135	2,582	7,717	5.4		
7/14/2012	5,424	2,711	8,135	5.6		
7/15/2012	5,175	2,588	7,763	5.4		
7/16/2012	4,991	2,507	7,498	5.2		
7/17/2012	5,060	2,591	7,651	5.3		
7/18/2012	4,572	2,348	6,920	4.8		
7/19/2012	3,603	2,513	6,116	4.2		
7/20/2012	2,271	2,989	5,260	3.7		
7/21/2012	3,966	3,130	7,096	4.9		
7/22/2012	4,968	4,019	8,987	6.2		
7/23/2012	3,870	3,047	6,917	4.8		
7/24/2012	4,021	3,179	7,200	5.0		
7/25/2012	3,877	3,157	7,034	4.9		
7/26/2012	3,628	2,961	6,589	4.6		
7/27/2012	3,892	3,177	7,069	4.9		
7/28/2012	3,895	3,172	7,067	4.9		
7/29/2012	3,882	3,164	7,046	4.9		
7/30/2012	4,311	3,514	7,825	5.4		
7/31/2012	3,541	2,887	6,428	4.5		
Total	137,627	87,510	225,137	5.0		

August 2012							
	Pump	Total (gpm)					
Date	Well #24 (RW15)	II #24 Well #27 N15) (RW 10) Total		MP 214			
8/1/2012	3,541	2,887	6,428	4.5			
8/2/2012	3,857	3,148	7,005	4.9			
8/3/2012	3,184	2,645	5,829	4.0			
8/4/2012	3,749	3,139	6,888	4.8			
8/5/2012	3,749	3,164	6,913	4.8			
8/6/2012	4,052	3,227	7,279	5.1			
8/7/2012	5,183	3,868	9,051	6.3			
8/8/2012	4,153	3,283	7,436	5.2			
8/9/2012	4,177	3,317	7,494	5.2			
8/10/2012	4,247	3,367	7,614	5.3			
8/11/2012	1,082	3,367	4,449	3.1			
8/12/2012	1,894	3,367	5,261	3.7			
8/13/2012	1,894	3,367	5,261	3.7			
8/14/2012	2,848	2,364	5,212	3.6			
8/15/2012	3,722	3,204	6,926	4.8			
8/16/2012	3,324	2,892	6,216	4.3			
8/17/2012	3,332	2,898	6,230	4.3			
8/18/2012	3,340	2,904	6,244	4.3			
8/19/2012	2,561	2,190	4,751	3.3			
8/20/2012	3,120	2,712	5,832	4.1			
8/21/2012	3,564	5,407	8,971	6.2			
8/22/2012	3,732	7,591	11,323	7.9			
8/23/2012	4,688	9,545	14,233	9.9			
8/24/2012	3,723	7,585	11,308	7.9			
8/25/2012	3,450	7,076	10,526	7.3			
8/26/2012	4,075	7,470	11,545	8.0			
8/27/2012	4,364	7,493	11,857	8.2			
8/28/2012	4,341	7,379	11,720	8.1			
8/29/2012	4,412	7,309	11,721	8.1			
8/30/2012	4,486	6,904	11,390	7.9			
8/31/2012	8,677	7,324	16,001	11.1			
Total	116,521	142,393	258,914	5.8			

September 2012						
Pumped Volume (Gallons) Total (gpm)						
Date	Well #24	Well #27	Total	MD 21/		
	(RW15)	(RW 10)	Total			
9/1/2012	4,411	7,311	11,722	8.1		
9/2/2012	4,342	6,993	11,335	7.9		
9/3/2012	4,623	6,953	11,576	8.0		
9/4/2012	4,412	6,683	11,095	7.7		
9/5/2012	4,412	6,683	11,095	7.7		
9/6/2012	4,974	7,612	12,586	8.7		
9/7/2012	4,542	6,951	11,493	8.0		
9/8/2012	4,589	7,013	11,602	8.1		
9/9/2012	4,605	7,056	11,661	8.1		
9/10/2012	3,592	5,385	8,977	6.2		
9/11/2012	4,962	6,967	11,929	8.3		
9/12/2012	4,954	7,035 11,989		8.3		
9/13/2012	4,844	6,857 11,701		8.1		
9/14/2012	4,955	6,937 11,892		8.3		
9/15/2012	4,817	6,834 11,651		8.1		
9/16/2012	4,736	6,883	11,619	8.1		
9/17/2012	5,555	8,079 13,634		9.5		
9/18/2012	4,777	6,946 11,723		8.1		
9/19/2012	4,628	6,916	11,544	8.0		
9/20/2012	5,113	6,846	11,959	8.3		
9/21/2012	5,077	6,576	11,653	8.1		
9/22/2012	4,881	6,245	11,126	7.7		
9/23/2012	5,179	6,932	12,111	8.4		
9/24/2012	4,051	5,627	9,678	6.7		
9/25/2012	4,866	6,856	11,722	8.1		
9/26/2012	5,634	7,937	13,571	9.4		
9/27/2012	4,723	6,738	11,461	8.0		
9/28/2012	4,773	6,800	11,573	8.0		
9/29/2012	4,728	6,734	11,462	8.0		
9/30/2012	4,736	6,744	11,480	8.0		
Total	142,491	206,129	348,620	8.1		

October 2012						
	Pumped Volume (Gallons) To					
Date	Well #24 (PW15)	Well #27 (RW 10)	Total	MP 214		
10/1/2012	3 070	5.667	9.646	67		
10/2/2012	4 730	6 738	11 468	8.0		
10/2/2012	4,750	6 780	11,400	8.0		
10/3/2012	4,737	6 767	11,537	8.0		
10/5/2012	4 766	6 769	11,505	8.0		
10/5/2012	4,700	6 767	11,555	8.1		
10/7/2012	4 767	6 771	11,040	8.0		
10/8/2012	5 726	8 098	13 824	9.6		
10/9/2012	146	188	334	0.2		
10/10/2012	0	0	0	0.0		
10/11/2012	0	0	0	0.0		
10/12/2012	0	0	0	0.0		
10/13/2012	0	0	0	0.0		
10/14/2012	0	0	0	0.0		
10/15/2012	0	0	0	0.0		
10/16/2012	0	0	0	0.0		
10/17/2012	0	0	0	0.0		
10/18/2012	0	0	0	0.0		
10/19/2012	0	0	0	0.0		
10/20/2012	0	0	0	0.0		
10/21/2012	0	0	0	0.0		
10/22/2012	0	0	0	0.0		
10/23/2012	0	0	0	0.0		
10/24/2012	2,798	4,708	7,506	5.2		
10/25/2012	3,996	6,975	10,971	7.6		
10/26/2012	3,846	6,846	10,692	7.4		
10/27/2012	3,931	6,985	10,916	7.6		
10/28/2012	3,881	6,899	10,780	7.5		
10/29/2012	3,498	5,861	9,359	6.5		
10/30/2012	4,225	7,097	11,322	7.9		
10/31/2012	4,142	7,154	11,296	7.8		
Total	68,803	107,070	175,873	3.9		

System down for maintenance between 10/10 - 10/23

November 2012						
Pumped Volume (Gallons) Total (gpm)						
Date	Well #24	Well #27	Total	MD 214		
	(RW15)	(RW 10)	Total			
11/1/2012	4,077	7,201	11,278	7.8		
11/2/2012	4,022	7,129	11,151	7.7		
11/3/2012	4,297	7,080	11,377	7.9		
11/4/2012	4,676	7,348	12,024	8.4		
11/5/2012	5,111	8,352	13,463	9.3		
11/6/2012	4,350	7,101	11,451	8.0		
11/7/2012	3,522	5,748	9,270	6.4		
11/8/2012	4,300	7,053	11,353	7.9		
11/9/2012	4,189	7,053	11,242	7.8		
11/10/2012	4,168	7,043	11,211	7.8		
11/11/2012	4,229	7,173	11,402	7.9		
11/12/2012	4,823	8,151	12,974	9.0		
11/13/2012	4,191	7,083 11,274		0.0		
11/14/2012	4,576	6,964 11,540		8.0		
11/15/2012	4,604	6,820 11,424		7.9		
11/16/2012	4,496	6,732	11,228	7.8		
11/17/2012	4,613	7,010 11,623		8.1		
11/18/2012	4,519	6,989 11,508		0.0		
11/19/2012	3,258	5,726	5,726 8,984			
11/20/2012	4,076	7,469	11,545	8.0		
11/21/2012	4,806	8,919	13,725	9.5		
11/22/2012	4,042	7,513	11,555	8.0		
11/23/2012	4,027	7,482	11,509	8.0		
11/24/2012	3,943	7,463	11,406	7.9		
11/25/2012	3,879	7,418	11,297	7.8		
11/26/2012	3,225	6,179	9,404	6.5		
11/27/2012	3,911	7,438	11,349	7.9		
11/28/2012	3,798	7,219	11,017	7.7		
11/29/2012	3,868	7,446	11,314	7.9		
11/30/2012	3,877	7,468	11,345	7.9		
Total	125,473	215,770	341,243	7.4		

December 2012						
	Pump	Total (gpm)				
Date	Well #24	Well #27	Total	MD 217		
	(RW15)	(RW 10)	Total			
12/1/2012	3,821	7,342	11,163	7.8		
12/2/2012	3,991	7,449	11,440	7.9		
12/3/2012	4,947	9,011	13,958	9.7		
12/4/2012	3,949	7,191	11,140	7.7		
12/5/2012	3,371	6,140	9,511	6.6		
12/6/2012	3,914	7,247	11,161	7.8		
12/7/2012	3,937	7,430	11,367	7.9		
12/8/2012	3,906	7,380	11,286	7.8		
12/9/2012	3,798	7,178	10,976	7.6		
12/10/2012	4,562	8,628	13,190	9.2		
12/11/2012	3,865	7,310	11,175	7.8		
12/12/2012	4,032	5,188	9,220	6.4		
12/13/2012	3,710	3,910	7,620	5.3		
12/14/2012	3,913	4,206	8,119	5.6		
12/15/2012	3,548	3,874	7,422	5.2		
12/16/2012	3,610	3,903	7,513	5.2		
12/17/2012	2,750	2,974	5,724	4.0		
12/18/2012	3,672	4,070	7,742	5.4		
12/19/2012	4,094	4,482	8,576	6.0		
12/20/2012	3,444	3,743	7,187	5.0		
12/21/2012	3,344	3,429	6,773	4.7		
12/22/2012	3,124	3,125	6,249	4.3		
12/23/2012	3,168	3,164	6,332	4.4		
12/24/2012	3,408	3,403	6,811	4.7		
12/25/2012	2,417	2,412	4,829	3.4		
12/26/2012	3,053	3,049	6,102	4.2		
12/27/2012	2,524	2,554	5,078	3.5		
12/28/2012	1,452	1,175	2,627	1.8		
12/29/2012	3,052	2,475	5,527	3.8		
12/30/2012	952	756	1,708	1.2		
12/31/2012	4,641	3,185	7,826	5.4		
Total	107,969	147,383	255,352	5.7		

al 1,499,534 1,481,883 2,981,417

APPENDIX C

Explanation of Treatment System Down-time

2012 Operational Notes for the Rod and Wire Mill Interim Measure Treatment System

8/11-8/14 CADMIUM SYSTEM DOWN TO REPAIR LEAK ON CAUSTIC RECIRC LINE.

10/9-10/24 CADMIUM SYSTEM DOWN TO REPLACE CAUSTIC FEED PUMP AND ASSOCIATED PIPING.

12/28 CADMIUM SYSTEM DOWN 18 HOURS.DUE TO PLUGGED CAUSTIC FEED LINE.

12/30 CADMIUM SYSTEM DOWN 16 HOURS.DUE TO PLUGGED CAUSTIC FEED LINE

APPENDIX A

Water Levels, Purge Records and

Microbac Laboratory Data¹

¹ Laboratory data is only included in the CD digital version of this report

Report #

Client: Severstal	Site: ROI) & WIRE
Well I.D .: RW07 PZM017	Tag: BA-1	514132
Date of Purging: <u>4/24/, 7</u> Start Time: <u>12:</u> Date of Collection: <u>4/24/, 7</u> Time of Colle	20_ Finish Time: <u>13:00</u> ction: <u>12:45</u>	Weather: <u>48 '</u>
Well Status:		
Good	Grout	
Good	Casing	
Good	Lock	
Good	Obstructions	
Diameter of Well Casing (inches)		2
Depth Measurements Performed (PVC/Metal)		PVC
Depth to Water from Top of Casing (0.01 ft.) prio	r to purging	/3.92
Depth to Bottom from Top of Casing (0.01 ft.)		
Depth of Water in the Well (gallon)		
Depth to Water from Top of Casing (0.01 ft.) after	r purging	
Depth to Water from Top of Casing (0.01 ft.) at the	me of sampling	13.90
Number of minutes purged 0	3 6 9	Sample Reading
Temperature (°C) 16.7	11.7 164 16.4	11.11 11.14
$\frac{1}{2}$	2,71 3,37 4,99	4.99 4.11
Specific Conductance (umhos/cm) 3540	3 80 3450 5350	3350 3350
Dissolved Oxygen (mg/l) 4.77	4.65 4.18 3.5	7 3.55 3.55
Oxidation Reduction (eH) 687.0	707.2. 574.7 437	6 735.6 435.6
Purging EquipmentWellPeristaltic PumpOdorBladder PumpColor	Observation <u>NoNC</u> T <u>Clean</u>	
Rate of Purge /60 milliliters / r	<u>ninute</u>	
Comments:		
Reference SOP Field-014 Readings were performed on date of sampling	4/24/12	(Tech - 7A)

Report	#

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Client: Severstal			Site:	ROD	WIRE	
Well I.D.: pw 07 Pzm 004	/		Tag:	BA . 94	5711	
Date of Purging: <u>404/12</u> Start Date of Collection: <u>404/12</u> Tim	Time: <u>12</u> ne of Col	2:05 Fin lection:	nish Time: 12:20	121 25	Weather: _	48 F
Well Status:						
Good 🖌		Gro	out			
Good		Cas	sing			
Good		Loc	:k			
Good		Obs	structions _			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0 Depth to Bottom from Top of Casing (Depth of Water in the Well (gallon)	7/Metal) 1.01 ft.) pi (0.01 ft.)	rior to purg	zing		2 PVC 9.3	3
 Volume of water in the Well (gallon) Depth to Water from Top of Casing (f) 	(01 ft))af	er nurgin	Cr.			
Depth to Water from Top of Casing (0	01 ft.) at	time of sa	s mpling	_	9,2	
Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)) 14.8 10.00 449 5.59 187,9	3 14.7 10128 439 5.55 Zio.8	6 14.7 10.09 454 5.34 219.4	9 14.6 9.46 485 5.62 254.6	12 14.6 9.46 485 5.62 254.6	Sample Reading 14. C 9. 48 485 5. 62 254. 5
Purging Equipment Well Observation Peristaltic Pump Odor <u>Alerte</u> Bladder Pump Color <u>Clere</u> Rate of Purge 150 milliliters / minute						
Comments:						
Reference SOP Field-014						
Readings were performed on date of	f sampli	ng 4	124	12	(Tech – 7	r k)

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Penor:	π	
ncpore	π	

Client: Severstal			Site:	ROD	& WIRE					
Well I.D .: Rw 14 Pzm Ozc	>		Tag:	BA-9	65708					
Date of Purging: <u>4/24/12</u> Start Date of Collection: <u>4/24/12</u> Tim	Time: <u>//</u> ne of Col	:40 Fin lection: <u>/</u>	nish Time: 1:55	<u> Z:00</u>	Weather: _	48 F				
Well Status:										
Good		Gro	out							
Good	Good Lock									
Good LOCK										
		00	in actions.		· · · · · · · · · · · · · · · · · · ·					
Diameter of Well Casing (inches)				-						
Depth Measurements Performed (PVC	Metal)			-	<u> </u>					
Depth to water from Top of Casing (0 Depth to Bottom from Top of Casing (0	001 ft.) pt 001 ft.)	nor to purg	ung	-	<u> </u>	<u> </u>				
Depth of Water in the Well (gallon)	,			-						
Volume of water in the Well (gallon)	01 0 . (、 ·		-						
 Depth to Water from Top of Casing (0 Depth to Water from Top of Casing (0) 	1.01 ft.) at 1.01 ft.) at	ter purging	g mpling	-	14.5	·				
Depin to water nom sop of claing to	.07 n.7 at	ume or sa	mbume	-		. <u></u>				
	0	2	ć	0	1.2	Sample Reading				
Number of minutes purged	()		<u> </u>	<u> </u>	12	11. •				
nH	5 17	5 16	<u>76.8</u>	<u>7611</u> 5.97	5.17	5 87				
Specific Conductance (umbos/cm)	2930	3020	3040	302.0	3020	3020				
Dissolved Oxygen (mg/l)	3,31	Z. 33	2,35	2104	2.03	2.03				
Oxidation Reduction (eH)	<u>241,1</u>	212,3	212,6	<u>205,3</u>	2061	206.1				
Purging Equipment Well Observation Peristaltic Pump Odor <u>sloub</u> Bladder Pump Color <u>cloan</u>										
Rate of Purge <u>/50 mi</u>	lliliters	<u>minute</u>								
Comments:										
Reference SOP Field-014										
Readings were performed on date o	f sampli	ng 4	124	12	(Tech - 71	()				

Report	#
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Client: Severstal			Site:	ROD	& WIRE			
Well I.D.: <u>240 04 PZm 00</u>	3		Tag:	<u>BA - 8</u>	1 2491			
Date of Purging: <u>Hoy/iz</u> Start Date of Collection: <u>Hoy/iz</u> Tim	Time: <u>//</u> ie of Col	::15 Fin Election:	nish Time: //:30	<u>)/:25</u>	Weather: _	48 ^r		
Well Status:								
Good		Gro	out					
Good		Cas	ing					
Good	Jood Lock							
Good		Obs	structions					
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0 Depth to Bottom from Top of Casing (Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0 Depth to Water from Top of Casing (0)	/Metal) .01 ft.) pt 0.01 ft.) .01 ft.) af .01 ft.) at	tion to purg ter purging time of sa	ging g mpling		2 PVC 5.//	 Sample		
Number of minutes purged	()	3	6	a	c I	Reading		
Temperature (°C)	14.5	14.5	14,4	14.+	14.5	14.5		
рН	6.89	6,94	6.94	6.90	6.90	6.90		
Specific Conductance (umhos/em)	975	1030	1037	1070	1070	1070		
Dissolved Oxygen (mg/l)	2.02	50.5	2,10	1.97	1.99	1.97		
Oxidation Reduction (eH)	201.6	163.7	65.1	165.1	165.7	_163.6		
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge50	Wo Od Co	ell Obser	vation 					
Comments:		···						
Reference SOP Field-014 Readings were performed on date or	f samplin	ng 4	24	/ <u>_12</u>	(Tech – 7			

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Report #

1

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		Site:	ROD &	WIRE_					
Well I.D.: RW03 PZM 003		Tag: _	BM 81	- 2412					
Date of Purging: <u>4/34/12</u> Start Date of Collection: <u>4/34/12</u> Tir	Time: <u>/o:zo</u> Fin ne of Collection: /	ish Time:_ • : 35	<u>10:40</u> \	Veather: _	48°°				
Well Status:									
Good	Gro	ut							
Good	Cas	ing							
Good	Good Lock								
Good	Obs	tructions _							
Diameter of Well Casing (inches)			_						
Depth Measurements Performed (PV)	(Metal)	ina	_	4.00					
Depth to Bottom from Top of Casing ((0.01 ft.)	mg	_	7100					
Depth of Water in the Well (gallon)	. ,		_						
Volume of water in the Well (gallon)			_			· · ·			
Depth to Water from Top of Casing ((0.01 ft.) after purging	, malia <i>c</i>	_	3.01	ar (- 4a 14				
Deput to water from rop of Casing (C	nor to at time of sar	nhunfi							
					Sample Reading				
Number of minutes purged	() 3	<u></u>	9	_12					
Temperature (°C)	<u> 13.0 12.9</u>	$\frac{131}{2}$	<u>_/3.2</u>	13.2	13.2				
pri Specific Conductores (unhorized)	5.33 5.25	2121	6:20	1700	1700				
Dissolved Oxygen (mg/l)	4.23 3.60	3.00	3.04	3.11	3.11				
Oxidation Reduction (eH)	JJJ. / JJ0.9	359.2	360.9	362.5	362,1				
· · ·		m							
Purging Equipment	Well Observ	vation							
Peristaltic Pump	Odor <u>Nave</u>								
Bladder Pump	Color 📩	Light Bi	₩₩219						
Rate of Purge m	<u>illiliters / minute</u>								
Comments:									
Keterence NOP Field-ULA						-			

Chent. <u>Deversiai</u>			Site:	ROD	& WIRE	
Well I.D.: <u>RW 01 PZM 0</u>	20		Tag:	BA- C	(- 4133	
Date of Purging: <u>4/24/2</u> St Date of Collection: <u>4/24/2</u>	tart Time: <u>//</u> Time of Col	945 Fin llection: 1	nish Time	<u>11:08</u>	Weather: _	48 F
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			
G000		Ob	structions			
Depth Measurements Performed (J Depth to Water from Top of Casin Depth to Bottom from Top of Casin Depth to Bottom from Top of Casin Depth of Water in the Well (gallor Volume of water in the Well (gallor Depth to Water from Top of Casin	² VC/Metal) g (0.01 ft.) pi ng (0.01 ft.) i) on) g (0.01 ft.) at	rior to pur	zing	-		2.7
Depth to Water from Jop of Casin Depth to Water from Top of Casin	g (0.01 π.) ar g (0.01 ft.) at	time of sa	g mnling	-	12.2	<u></u>
Number of minutes purged	()	3	<u>б</u>	- 4	10	Sample Reading
Temperature (°C)	15.0	15.1	15.3	15.3	15.2	15.7
Hq	5,65	5.6Z	5.61	5.61	5.63	5.63
Specific Conductance (umhos/c	m) 1012	1013	963	969	967	968
Dissolved Oxygen (mg/l)	4.24	4.16	3.72	3.79	3.80	3,80
Oxidation Reduction (eH)	<u> 516,5</u>	395.9	402,5	403.3	403.3	403.3

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	Report #
Microbac Laboratories, Inc. Groundwater Monitoring Report	

Client: Severstal			Site:	ROD	& WIRE		
Well I.D.: 200 12 PZM 004			Tag:	<u>BA - 94</u>	' - 5704	/	
Date of Purging: <u>42412</u> Start Date of Collection: <u>42412</u> Tin	Time: _9 ne of Col	:oo Fir lection: <u>(</u>	nish Time: ? : /5	9:20	Weather: _	48 °F	
Well Status:							
Good		Gro	ut				
Good V		Cas	ing				
Good Lock							
Good Obstructions							
Discontage of Wall (pairs (inchas)					2		
Depth Measurements Performed (PV)	[/Metal]			-	PVC		
Depth to Water from Top of Casing ().01 ft.) pr	ior to purg	ging	-	7.25		
Depth to Bottom from Top of Casing	(0.01 ft.)		_	-			
Depth of Water in the Well (gallon)				-			
Depth to Water from Top of Casing ()01 ft) af	ler nurging	r	-			
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	- mpling -		7.20		
	•	6	0	17	15	Sample Reading	
Number of minutes purged	×	2	4	8	12	15	
Temperature (°C)	13.3	13.3	13.6	13,5	13.5	13.5	
Hq	6,24	4.25	5.91	5.67	5,66	5.66	
Specific Conductance (umhos/cm)	661	562	1073	1076	1075	1075	
Dissolved Oxygen (mg/l)	3.86	3.79	3.52	3,51	3.51	3.51	
Oxidation Reduction (eH)	<u>Z35.7</u>	ZG Z . [291,3	301.5	301.5	301.5	
·							
Purging Equipment	We	ell Obser	vation				
Peristaltic Pump	Od	ог					
Bladder Pump	Co	lor					
Rate of Purge 150 m	<u>illiliters</u> /	<u>minute</u>					
					<u></u>		
Comments:				·			
			·····				
Reference SOP Field-014	<u> </u>					_, _, _	
Readings were performed on date of	or samplu	ng 4		<u></u> .	(1ech – 🔽	~)	

					Report #	H
M	licroba	c Labor er Mon	atories,	Inc.		
			noring i	Report		
Client: Severstal			Site:	ROD	& WIRE	
Well I.D.: Lws 13 Pzm 02	0		Tag:	BA-9	4-57	09
Date of Purging: <u>4/24/12</u> Start Date of Collection: <u>4/24/12</u> Tin	Time: <u></u> ne of Col	?:30 Fi llection: _	nish Time 8 : 45 -	: <u>8!50</u>	Weather:	48 01=
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			·····
000a		Ob.	structions			
Depth Measurements Performed (PVC Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (C/Metal) 0.01 ft.) pi (0.01 ft.) 0.01 ft.) at 0.01 ft.) at	fior to purg fter purgin, time of sa	<u>r</u> ing g mpling		PVC 13,90	>
Number of minutes purged	()	3	6	()	12	Sample Reading
Temperature (°C)	15.3	15.4	15.4	15.4	15.4	15.4
pH	5,11	5,83	5,90	5,90	5.91	5,51
Specific Conductance (umhos/em)	2210	2640	2640	2630	2630	2630
Dissolved Oxygen (mg/l)	3.96	3.91	Z, 99	<u> 7.48</u>	2.51	2.98
Oxidation Reduction (eH)	488.1	250.3	190,4	191.3	191,6	191.4
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge 150	W Od Co illiliters	ell Obser lor <u>Node</u> lor <u>Clear</u> / minute	vation ĩ ĩ			
Comments:	····				<u></u>	

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Page 74 of 555

Client: Severstal	Site:	ROD	& WIRE	
Well I.D .: <u>Rw 02 Pzm 0</u>	20 Tag:	B= -8	- 413	4
Date of Purging: <u>4/24/17</u> St Date of Collection: <u>4/24/17</u>	nt Time: <u>9:30</u> Finish Time: ime of Collection: <u>9:45</u>	<u>9:50</u>	Weather:	49°'
Well Status:				
Good	Grout			
Good	Casing		<u> </u>	
Good	Lock			
0000	Obstructions			
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casin Depth of Water in the Well (gallon Volume of water in the Well (gallon	- (0.01 ft.) prior to purging g (0.01 ft.)		2 PYC 15.7	2
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casin Depth of Water in the Well (gallon Volume of water in the Well (gallon Depth to Water from Top of Casing Depth to Water from Top of Casing	 VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling 		2 PV 15.7	2
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon Volume of water in the Well (gallon Depth to Water from Top of Casing Depth to Water from Top of Casing	- VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling		2 PYC 15.7 	Samp Readi
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C)	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling $\frac{0}{15.1} = \frac{3}{15.1} = \frac{6}{15.1}$		2 PVC 15.7 	2 8 Readi
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casin Depth of Water in the Well (gallon Volume of water in the Well (gallon Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C) pH	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling	- - - - - - - - - - - - - - - - - - -	2 PYC 15.7 	2 8 Readi 5.14
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cr	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling $\frac{0}{5.11} \frac{3}{5.15} \frac{6}{5.15}$ $5.12 \frac{5.15}{5.15} \frac{5.15}{5.15}$ (1) 1/3000 11140 1(020)		2 PVC 15.7 	22 Samp Readi
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C) oH Specific Conductance (umhos/er Dissolved Oxygen (mg/l)	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) after purging (0.01 ft.) at time of sampling $\frac{0}{5.11} \frac{3}{5.15} \frac{6}{5.15}$ $\frac{5.12}{5.15} \frac{5.15}{5.15}$ (0.020) 3.16 2.67 2.62	4 	2 PVC 15.7 	2 Samp Readi
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C) oH Specific Conductance (umhos/er Dissolved Oxygen (mg/l) Dxidation Reduction (eH)	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling $\frac{0}{5.12} \frac{3}{5.15} \frac{6}{5.15}$ $\frac{5.12}{5.15} \frac{5.15}{5.15}$ $\frac{3.16}{2.67} \frac{2.62}{2.62}$	() 	2 PVC 15.7 15.4 15.4 15.4 12 15.1 5.16 10260 2.55 2.75.0	8 Samp Readi 15. 5./4 1077 2.54 275.1
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cr Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	VC/Metal) (0.01 ft.) prior to purging g (0.01 ft.) (0.01 ft.) after purging (0.01 ft.) at time of sampling $\frac{0}{5.12} \frac{3}{5.15} \frac{6}{5.15}$ $\frac{5.12}{5.15} \frac{5.15}{5.15}$ $\frac{113000}{3.16} \frac{11140}{2.67} \frac{1020}{2.62}$	4 	2 PVC 15.7 	Samp Readi
Diameter of Well Casing (inches) Depth Measurements Performed (P Depth to Water from Top of Casing Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing Depth to Water from Top of Casing Number of minutes purged Temperature (°C') pH Specific Conductance (umhos/cr Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	$\frac{0}{(0.01 \text{ ft.}) \text{ prior to purging}} = \frac{0}{(0.01 \text{ ft.})}$ $(0.01 \text{ ft.}) \text{ after purging} = \frac{0}{(0.01 \text{ ft.}) \text{ after purging}} = \frac{0}{(0.01 \text{ ft.}) \text{ at time of sampling}}$ $\frac{0}{(0.01 \text{ ft.}) \text{ at time of sampling}} = \frac{0}{(0.01 \text{ ft.}) \text{ at time of sampling}} = \frac{0}{(0.01 \text{ ft.}) \text{ at time of sampling}}$ $\frac{0}{(0.01 \text{ ft.}) \text{ at time of sampling}} = \frac{0}{(0.01 \text{ ft.}) \text$	0 	2 PYC 15.7 	2 Samp Readi 15. 5./6 2.54 275./

Reference SOP Field-014

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Readings were performed on date of sampling____ /____. (Tech + /____

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Report	#		

Client: Severstal	·····		Site:	ROD	& WIRE	-		
Well I.D .: RWOZ PZAL 000			Tag:	BA-	81-413	28		
Date of Purging:	t Time of A		- i-t-m	-	TT F F F F F F F F F F	in E		
Date of Collection: 4/24/12 Star	t time: <u>¶</u> me of Co	1335 F1	nish lime	10:15	Weather:	48		
			10.10	_				
Well Status:								
Good		Gr	out					
Good	Casing							
Good	d Lock							
0000	Good Obstructions							
Diameter of Well Casing (inches)					2			
Depth Measurements Performed (PV	C/Metal)			-	PYC			
Depth to Water from Top of Casing (0.01 ft.) pr	rior to pur	ging	-	4.2	4		
Depth to Bottom from Top of Casing	(0.01 ft.)			-				
Depth of Water in the Well (gallon)				-				
Depth to Water from Top of Caving (0.01 0 .) ef	9						
Depth to Water from Top of Casing (0.01.11.1241 0.01.1ft).at	time of s	g moling	-	4.10			
Departo vider nom rop er clang.		unic or se	արուբ	-				
						Sample		
						Reading		
Number of minutes purged	<u> () </u>	<u>,</u>	<u> </u>		12			
Temperature (°C)	13.9	1317	13.7	13.4	13.4	13.5		
pH	7.10	7.13	7.05	7,10	<u>_7,08</u>	7.05		
Specific Conductance (umhos/cm)	823	829	832	832	836	839		
Dissolved Oxygen (mg/l)	7.23	4.84	6.78	6.75	6.78	6.77		
Oxidation Reduction (eH)	277.6	329.1	35310	353.0	552.1			
Purging Equipment	W	ell Obser	vation					
Peristaltic Pump	Od	or Novi	e anon					
Bladder Pump	Co	lor Clea	<u>~</u>					
Rate of Purge m	<u>illiliters /</u>	/ minute						
·····								
~								
Comments:	<u>_</u>	<u> </u>				·····		
Poteron as SOB Field 014								
Relefence SUP Field-014	feamali	na U	1.24		(Tech -	- <i>u</i>		
Readings were performen on date (n sampni	ug <u>7</u>		<u> </u>	(1 ccu - 7	<u>a</u>)		

					Report #	
M	licroba	c Labor	atories,	Inc.		
Gro	undwat	er Mon	itoring l	Report		
Client: Severstal			Site:	ROD	& WIRE	
Well I.D.: Rwjg Pzm O	<u>50</u>		Tag:	Bm 8	1- 4978	·
Date of Purging: <u>4/25/17</u> Start Date of Collection: <u>4/25/12</u> Tir	Time: <u>/</u> ne of Col	E: Fi llection: _	nish Time: /2:/5	- -	Weather: .	5/ •F
Well Status:						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (0.01 ft.) pr (0.01 ft.) 0.01 ft.) af 0.01 ft.) at	rior to pur îer purgin time of sa	ging g mpling		/3./ 	5
Number of minutes purged	()	3	6	9	12	Sample Reading
Temperature (°C)	16.9	14.7	16.7	16,5	16.5	16.5
pH	4. Or	6.51	6.53	4.50	6.50	6,50
Specific Conductance (umhos/cm)	283	281	281	185	281	281
Ovidation Reduction (eH)	7.07	7.06	4219	7.91	<u>7.87</u>	7.91
Oxidation Reddenon (eff)	3 10.1		761.0	761.9	- 761.7	
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge 250	Wa Od Co illiliters	ell Obser or <u>Novie</u> lor <u>Cleas</u>	vation E			
Comments:						
Reference SOP Field 014				··· ··		
Readings were performed on date of	of sampli	ng 🖌	125	12 1	Tech	17 44)
			·	, (1001	····)

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Report #

Client: Severstal	·····	Site:	ROD	& WIRE	
Well I.D .: RLJZI PZM 023		Tag:	Ba - 9	4:5706	
Date of Purging: <u>4/25/12</u> Start Tin Date of Collection: <u>4/25/12</u> Time of Well Status:	//: 25 me: <u>(6:35</u> Fi of Collection: _	inish Time: /*: //* //: /*	11:45	Weather: _	51 • F
Well Status.					
Good Good Good Good	Gr Ca Lc Ot	out sing ck ostructions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/M Depth to Water from Top of Casing (0.01 Depth to Bottom from Top of Casing (0.0 Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 Depth to Water from Top of Casing (0.01	ft.) prior to pur ft.) prior to pur ft.) after purgir ft.) at time of s	-ging ng ampling		2 PVC /4/, /	/ <u>3</u>
Number of minutes purged	_03	6	9	12	Sample Reading
Temperature (°C)	16.5 16.6	14,6	16.2	16.2	16.2
pH <u>z</u> Specific Conductance (umbos/cm) 4	133 <u>2,33</u>	2,56	2,55	2,55	2,55
Dissolved Oxygen (mg/l)	140 <u>1640</u> 174 7,80	4,71	3,99	3,99	3.99
Oxidation Reduction (eH)	688.7	621.1	621.3	621.3	621.3
Purging Equipment Peristaltic Pump Bladder Pump	Well Obser Odor Color				
Rate of Purge millili	<u>iters / minute</u>				
Comments:					
Reference SOP Field-014	<u> </u>	····.		·····	
Readings were performed on date of sa	ampling 4	25	12	(Tech - s	

Report	#	
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Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rwzo Pzm OS	0		Tag:	BM 8	1 4983	
Date of Purging: <u>4/26/17</u> Start Date of Collection: <u>4/25/17</u> Tim	Time: <u>//</u> ne of Col	:00 Fin lection: 1	nish Time: //://5	<u>۱۱://</u> ها ۲	Weather: _	51 0,2
Well Status:						
Good		Gro	out			
Good		Cas	ing			
Good		Loc	:k			
Good		Obs	structions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0 Depth to Bottom from Top of Casing (0 Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0 Depth to Water from Top of Casing (0]/Metal)).01 ft.) pr (0.01 ft.) (.01 ft.) af	tior to purg ter purging time of sa	ging g mpling		2 PVC /0.2/	, 7 7 8
Number of minutes purged	0	3	6	9	12	Sample Reading
Temperature (°C)	16,2	16.3	16.3	16,3	16.3	16.3
Н	11.44	11,45	11.45	11.45	11.45	11,45
Specific Conductance (umhos/cm)	388	388	387_	387	317	387
Dissolved Oxygen (mg/l)	11.06	9.97	9.32	1,32	9.31	1.31
Oxidation Reduction (eH)	240,1	237.2	236.9	236.9	236,9	236.9
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge	We Od Co Illiliters /	ell Obser or <u>Jowe</u> lor <u>Clea</u>	vation 5 a			
Comments:						
Reference SOP Field-014 Readings were performed on date o	f samplir	ng 4	2.5	/ <u>/r</u> .((Tech - 74)

Report #

Client: Severstal		·	Site:	ROD	& WIRE	
Well I.D.: Rw /1 PZM 004			Tag:		•	
Date of Purging: <u>4/25/, 2</u> Start Date of Collection: <u>4/25/, 2</u> Tim	Time: <u>#</u> : e of Col	<u>30</u> Fin lection: <u>1</u>	nish Time: 8 : 45	<u> ಶ:</u> ತಂ	Weather: _	51 "
Well Status:						
Good		Gro	out			
Good		Cas	ing			
Good		Loc	:k			
Good		Obs	structions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0. Depth to Bottom from Top of Casing (0. Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0. Depth to Water from Top of Casing (0.	/Metal) .01 ft.) pr 0.01 ft.) .01 ft.) af .01 ft.) at	tior to purg ter purging time of sa	aubliuf g	-	2 PVC 5,90	
Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH))]4.6 3.75 4470 6.50 576,9	3 14.4 3.81 9471 6.53 516.1	6 14.3 3.85 9475 6.51 516.1	9 14.3 4.12 4475 6.53 516.4	12 14,3 4,12 9475 6.53 516,4	Sample Reading 14.3 4.12 9475 6.53 516.4
Purging Equipment Peristaltic Pump Bladder Pump	We Od Col	ell Obser or lor	vation			
Rate of Purge /50 mil	<u>lliliters /</u>	<u>minute</u>				
Comments:			······		· · · · · · · · · · · · · · · · · · ·	
Reference SOP Field-014 Readings were performed on date of	samplin	ng	/	·	(Tech -)

Report #

Client: <u>Severstal</u>	Site: ROD & WIRE
Well I.D.: 200 04 P2M 004	Tag: <u>3A - 94 - 3 /01</u>
Date of Purging: <u>4/25/12</u> Start Time: <u>7:00</u> Date of Collection: <u>4/25/12</u> Time of Collection	Finish Time: <u>7:20</u> Weather: <u>49</u>
Well Status:	
Good	Grout
Good	Casing
Good	Lock
Good	Obstructions
Diameter of Well Casing (inches)	2
Depth Measurements Performed (PVC/Metal)	PVC
Depth to Water from Top of Casing (0.01 ft.) prior to	purging 4.87
Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (unlian)	
Volume of water in the Well (gallon)	
Depth to Water from Top of Casing (0.01 ft.) after pu	rging
Depth to Water from Top of Casing (0.01 ft.) at time	of sampling 4.85
Number of minutes pursued (1)	Sample Reading
Number of minutes purged $-\frac{1}{24.9}$	
pH //·59 //·	55 11.55 11.63 11.53 11.53
Specific Conductance (umhos/cm) <u>527</u> <u>52</u>	7 530 530 535 535
Dissolved Oxygen (mg/l) 57.01 5.0	5.15 5.15 5.15 5.15
Oxidation Reduction (eH) <u>478.2</u> <u>47</u>	8.0 478,0 476.2 4.76,2 476.2
Purging EquipmentWell OlPeristaltic PumpOdorBladder PumpColor	Dservation Internation
Rate of Purge 190 milliliters / min	<u>ute</u>
Comments:	
Paferonce SOP Field 014	
Readings were performed on date of sampling	\sim / 25 / /1 (Tech)

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Report	#	

Client: Severstal	Site:	ROD & WIRE
Well I.D.: Rwol Pzm DO1	Tag: _B	A- 81-7935
Date of Purging: <u>//25/12</u> Start Tin Date of Collection: <u>//25/12</u> Time o	ne: <u>¶:00</u> Finish Time: <u>Ø</u> f Collection: <u>¶:15</u>	:20 Weather:
Well Status:		
Good	Grout	
Good	Casing	
Good	Lock	
Good	Obstructions	
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Me Depth to Water from Top of Casing (0.0) Depth to Bottom from Top of Casing (0.0 Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.0)	etal) ft.) prior to purging l ft.) ft.) after purging	2 PVC 5.05
Depth to Water from Top of Casing (0.01	ft.) at time of sampling	<u> </u>
Number of minutes purgedTemperature (°C)pHSpecific Conductance (umhos/cm)Dissolved Oxygen (mg/l)44Oxidation Reduction (eH)41	0 3 6 4.7 14.5 14.5 .19 6.22 6.20 85 289 781 83 4.26 4.26 9.8 479.8 479.1 6	Sample Reading 9 12 14.1 14.1 14.1 6.18 6.17 6.17 281 781 781 4.27 4.29 4.28 199.1 479.1 475.1 7
Purging Equipment Peristaltic Pump Bladder Pump	Well Observation Odor Color	
Rate of Purge millili	<u>ters / minute</u>	
Comments:		
Reference SOP Field-014 Readings were performed on date of sat	mpling 4 / 25 /)	2 (Tech - TH)

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Report	#	
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Client: Severstal			Site:	ROD	<u>&</u> V	WIRE _	
Well I.D.: 20108 PZm 003		······	Tag:	Ba	81	2488	
Date of Purging: <u>4/25/12</u> Start T Date of Collection: <u>4/25/12</u> Time	ſime: 7: e of Col	50 Fir lection: 7	nish Time: : 45	7:50	We	eather: _	42=
Well Status:							
Good		Gro	out				
Good		Cas	ing				
Good		Loc	k				
Good		Obs	structions.				
Diameter of Well Casing (inches) Depth Measurements Performed (PVC: Depth to Water from Top of Casing (0. Depth to Bottom from Top of Casing (0. Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0. Depth to Water from Top of Casing (0.	/Metal) 01 ft.) pr 0.01 ft.) 01 ft.) af 01 ft.) at	ior to purg ier purging time of sa	ying g mpling			2 24.13 4.73	
Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	() 14.4 4.12 16.47 4.05 54.1.1	3 14,4 4,11 1645 4.08 548,4	6 14.1 4.05 1644 4.04 547.1	9 1411 4.05 1644 4.03 547,1		12 14 . 1 4.05 16 45 4.00 547.1	Sampie Reading /4.1 4.05 /645 4.01 547.1
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge	Wo Od Co	ell Obser lor <u>Aads</u> lor <u>Cea</u>	vation				
Comments:	·						
Reference SOP Field-014							
Readings were performed on date of	fsampli	ng 4	1 25	12	. (T	ech	Fu)

Report #	
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Client: Severstal	Site: ROD & WIRE
Well I.D.: RW PZM 019	Tag: BA 94 5710
17 Date of Purging: <u>4/25/</u> , Start Time: <u>9:00</u> Date of Collection: <u>4/25/</u> Time of Collectic	Finish Time: <u>9120</u> Weather: <u>557</u> m: <u>9115</u>
Well Status:	
Good Good Good	Grout Casing Lock Obstructions
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after pu Depth to Water from Top of Casing (0.01 ft.) at time	
Number of minutes purged03Temperature (°C)15.915pH2.755.5Specific Conductance (umhos/cm)345053Dissolved Oxygen (mg/l)8.674.4Oxidation Reduction (eH)602.5257	Sample Reading <u>6</u> <u>9</u> <u>12</u> <u>71</u> <u>76.2</u> <u>76.2</u> <u>76.2</u> <u>71</u> <u>5.72</u> <u>5.75</u> <u>5.75</u> <u>50</u> <u>5600</u> <u>5620</u> <u>54</u> <u>4.00</u> <u>3.84</u> <u>3.84</u> <u>3.247.1</u> <u>245.6</u> <u>243.6</u> <u>243.6</u>
Purging Equipment Well O Peristaltic Pump Odor A Bladder Pump Color C Rate of Purge 150 milliliters / min	bservation four Plean
Comments: <u>Reference SOP Field-014</u> Readings were performed on date of sampling	4 / 25 / 12 (Tech - TA)

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Report	#		

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: PLOIG PZM 020			Tag: <u>3A94-5707</u>			
Date of Purging: <u>4/25/12</u> Start Date of Collection: <u>4/25/12</u> Tim	Time: 9 : e of Col	30 Finlection:	nish Time: 9:45	<u>9:50</u>	Weather: _	5105
Well Status:						
Good		Gro	out			
Good <u> </u>		Cas	sing			
Good		Loc				
Good		Obs	structions _		<u> </u>	·······
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0. Depth to Bottom from Top of Casing (1. Depth of Water in the Well (gallon)	/Metal) .01 ft.) pr 0.01 ft.)	ior to purg	ing	-	2 14.9	
 Volume of water in the Well (gallon) Depth to Water from Top of Casing (0) 	01 fr.).af	ler nurgin	(7	-		
Depth to Water from Top of Casing (0.	.01 ft.) at	time of sa	npling	-	14,8	7
Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	() 16.4 4.31 1047 5.09 412.0	े 16.4 4.39 1049 5112 माय.9	6 4.40 1045 5.25 419.5	9 16.5 5.67 5710 5.23 273.8	12 14,5 5,77 5760 5,26 257,3	Sample Reading 16.5 5.78 5740 5.27 257.4
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge	We Od Co I <u>Jiliters</u>	ell Obser or lor / minute	vation			
Comments:						
Reference SOP Field-014 Readings were performed on date of	f sampliı	ng	/	/	(Tech -)

Report #	
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Client: Severstal			Site:	ROD	& WIRE	
Well I.D.: RWZOPZM 000			Tag:	BAS	458	L
Date of Purging: <u>4/25/12</u> Start T Date of Collection: <u>4/25/12</u> Time	fime: <u>⁄o</u> e of Coll	<u>. 10</u> Fir lection: <u>/</u>	iish Time: 0 	10130	Weather: _	55 *
Well Status:						
Good		Gro	ut			
Good		Cas	ing			
Good		Loc	k			
Good		Obs	tructions_	· · · · · · · · · · · · · · · · · · ·		
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC/	Metal)			-	DVL	
Depth to Water from Top of Casing (0.	01 ft.) pr	ior to purg	ing	-	3.37	
Depth to Bottom from Top of Casing (C).01 ft.)			-		
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing (0.0	01 ft.) afi	er purging	Ę			
Depth to Water from Top of Casing (0.0	01 ft.) at	time of sa	mpling	_	5 30	· · · · · · · · · · · · · · · · · · ·
Number of minutes purged	()	2	6	0	12	Sample Reading
Temperature $\int C$	1/40		15.1			/5.3
nH	7.85	8.00	8.92	5.31	1,37	8.32
Specific Conductance (umhos/cm)	210	211	2.14	229	229	225
Dissolved Oxygen (mg/l) 6.13	23519	6.05	5.40	4.41	4.40	4.40
Oxidation Reduction (eH)	235.9	<u>244,9</u>	209.1	19015	190.5	190,5
Purging Equipment Peristaltic Pump	We Odi Col	ell Obser or <u>NoNe</u>	vation			
Rate of Purge <u>150 mil</u>	<u>liliters /</u>	<u>minute</u>				
Comments:			,			
Reference SOP Field-014	···		<u> </u>	······································		
Readings were performed on date of	samplir	ng 🖌	125	12	(Tech - 7	4)

	Report #
Microbac Lal Groundwater M	boratories, Inc. Ionitoring Report
Client: <u>Severstal</u> Well I.D.: <i>Rus Zo P2m 020</i>	Site: ROD & WIRE Tag: BA - 81 - 4182
Date of Purging: <u>4/25/12</u> Start Time: <u>10:30</u> Date of Collection: <u>4/25/12</u> Time of Collection	_ Finish Time: <u>//:00</u> Weather: <u>57°</u> m: <u>/0:45</u>
Well Status:	
Good Good Good Good	Grout Casing Lock Obstructions
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after pu Depth to Water from Top of Casing (0.01 ft.) at time	urging
Number of minutes purged()3Temperature (°C)//4/2//6/2pHZ.82Z.3Specific Conductance (umhos/cm)4//504//6Dissolved Oxygen (mg/l)4//64//6Oxidation Reduction (eH)4//64//7	Reading 6 9 12 9 15.7 15.7 15.7 14 2.85 2.87 2.87 2.87 20 4/180 4/190 4/180 4/190 11 3.18 2.155 2.85 2.85 3.1 491.5 500.7 500.7 500.7
Purging Equipment Well Of Peristaltic Pump Odor A Bladder Pump Color A Rate of Purge 150 milliliters / min	bservation (a.I.C Lean ute
Comments:	
Reference SOP Field-014 Readings were performed on date of sampling	<u> </u>

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Client: Severstal		Site: R	OD & WIRE	
Well I.D.: 200 18 P2m 047		Tag: 🗾	A 8) 4555	
Date of Purging: <u><i>Mester</i></u> Start Time Date of Collection: <u><i>Mester</i></u> Time of	e: <u>/3: 20</u> Finish [[Collection: <u>/3135</u>	Time: <u>/3</u> !	<u>чо</u> Weather: _	5105
Well Status:				
Good	Grout _			
Good	Lock	No CA	P Nº /12	
Good	Obstruct	ions		
Diameter of Well Casing (inches)			ړ	
Depth Measurements Performed (PVC/Met	tal)		NC	
Depth to Water from Top of Casing (0.01 f	t.) prior to purging		15,96	<u> </u>
Depth of Water in the Well (gallon)	11.)			
Volume of water in the Well (gallon)	() ofter purpling			
Depth to Water from Top of Casing (0.01 fi Depth to Water from Top of Casing (0.01 fi	L) at time of samplir	ıg	15,90	
Number of minutes purged()Temperature (°C)_/(_pH/(_Specific Conductance (umhos/cm)_//2Dissolved Oxygen (mg/l)Oxidation Reduction (eH)_/33	$\begin{array}{c} 3 \\ 6 \\ 6 \\ 6 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7$	<u> </u>) <u>12</u> (<u>/61</u> 	Sample Reading /6.(6.73 455 3.36 477
Purging Equipment Peristaltic Pump Bladder Pump	Well Observatio Odor Color	n		
Rate of Purge 150 millilit	<u>ers / minute</u>			
Comments: No CAP NO	1.5 DALNIG	20 4	Issia ma	y Barech.
Reference SOP Field-014				
Readings were performed on date of san	apling <u>4</u> /2	<u>5 12</u>	. (Tech – 72	4)

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Client: Severstal	Site:	OD & WIRE	
Well I.D.: Rw19 PZM000	Tag: 	4 81 - 4900	
Date of Purging: <u>4/25/12</u> Start Time: <u>/2:40</u> Date of Collection: <u>4/25/12</u> Time of Collection	_ Finish Time: <u>13</u> n: 12:55	10 Weather:	51° F
Well Status:			
Good	Grout		
Good	Casing		
Good	Lock		
Good	Obstructions		
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after pu Depth to Water from Top of Casing (0.01 ft.) at time	purging rging of sampling	2 74/C 8.90	
Number of minutes purged () 3) 10	Sample Reading
Temperature ($^{\circ}C$) /6.2 /5			15.1
pH 9.68 9.0	18 10:05 1	10109	/4,01
Specific Conductance (umhos/em)	m 244 2	14 244	244
Dissolved Oxygen (mg/l) <u>9.67</u> <u>10.</u>	01 10.05 10	,05 10.04	10.05
Oxidation Reduction (eH) 276.(27	7.1 277.6 27	7.7 277.6	277.6
Purging Equipment Well Of Peristaltic Pump Odor A Bladder Pump Color C Rate of Purge 160 milliliters / min	oservation MC Maan Ute		
Comments:		<u> </u>	
Reference SOP Field-014 Readings were performed on date of sampling	4 25 11	. (Tech – – – – – – – – – – – – – – – – – – –)

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Client: Severstal			Site:	ROD	& W	IRE	
Well I.D.: Rw/9 PZM 020			Tag:	Ba-	8 1*	4979	
Date of Purging: <u>4/25/12</u> Start Date of Collection: <u>4/25/12</u> Tim	Time: <u>/2</u> ne of Colle	20 Fin ection: <u>/</u>	ush Time: 2/35	<u>/2:38</u>	Weat	her:	51.00
Well Status:							
Good		Gro	ut				
Good		Cas	ing				
Good		Loc	k				
Good		Obs	tructions				
Disputer of Wall Caging (inches)						2	
Depth Measurements Performed (PVC	/Metal)					PUL	
Depth to Water from Top of Casing (0	.01 ft.) prie	or to purg	ing	-		14.24	,
Depth to Bottom from Top of Casing ((0.01 ft.)		2	-			
Depth of Water in the Well (gallon)				-			
Volume of water in the Well (gallon)	01.0.1.0			•			<u> </u>
Depth to Water from Top of Casing (0)	01 ft.) afte	r purging		-		444	
Depin to water from 100 of Casing (0	.or n. rat i	inte or sai	mpung	-		19.21	
	0	2		0		2	Sample Reading
Number of minutes purged	()			<u> </u>		<u>-</u>	
Jemperature (°C)	10.1	16.7	16.9	17.0			11.0
pri Specific Conductores (umbes/om)	1907	6.86	6.13	5.33	<u>S_</u>	<u>.53</u>	3153
Dissolved Oxygen (mg/l)	9.51	8.36	7 44	1000		<u> </u>	10240 4 Al
Oxidation Reduction (eH)	411.0	417.7	3100	7100	C 	<u>16</u>	214.6
Oxidation reduction (erry						<u> </u>	3. 1. 9
Purging Equipment Peristaltic Pump Bladder Pump	Wel Odo Colo	ll Observ Ir <u>Alang</u> Dr <u>Clear</u>	vation				
Rate of Purge <u>/50 mi</u>	<u>lliliters / :</u>	<u>minute</u>					
Comments:							
Reference SOP Field 014	<u> </u>		<u></u>		<u></u>		
Readings were performed on date of		a 4	125	12	(Tec)	-	, <u>,</u>
readings were performed on date of	r samhuni	5			(1001	1 - 7 4	r)

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Microbac Laboratories, Inc. Gascoyne Division Bethlehem Steel Corporation Elevations @ the Former Rod & Wire Mill Area

19	Well Designation	Total Depth (ft.)	Depth to Water (ft.)
	RW01-PZM020 X V	30	11.90
	RW02-PZM000	10	6.70
	RW02-PZM020 🗡 🖌	30	12.41
	RW03-PZM003 x -	15	5.72
	RW04-PZM003 Xr	15	6.24
	RW05-PZM001 🗶	10	
	RW06-PZM001 × ~	10	7.73
	RW07-PZM004 X 🖌	14	8.36
	RW07-PZM017 x 🗸	30	2.46
	RW08-PZM003 X /	14	6.14
	RW09-PZM004 *	14	7.93
	RW10-PZM004 🗶 🖉	14	3.80
	RW10-PZM020	30	7.61
11	RW10-PZM065 🗡 🖌	70	4.36
	RW11-PZM004 × ~	14	7.25
	RW12-PZM004 X	14	8.36
	RW13-PZM020 X	30	12.47
	RW14-PZM020 X V	30	13.02
	RW15-PZM020 × -	32	9.61
	RW16-PZM020 x	30	12.41
	RW17-PZM019 X	29	8.46
11.1	RW18-PZM047 X	60	10.44
Area and	RW19-PZM020 🗶 🖌	30	13.91
	RW19-PZM050 ×	60	14.47
	RW19-PZM000 🗡 🖌	10	8.66
	RW20-PZM020 × -	32	12.49
	RW20-PZM050 × ✓	60	15.37
1	RW20-PZM000	10	8.77
	RW21-PZM023 × ✓	33	14,40
	TS04-PDM004 × ~	15	10.11
	TS04-PPM007	17	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	TS04-PZM023 X	33	10.53

Note: 1. Groundwater elevations were performed on

Report #_

Microbac Laboratories, Inc. Groundwater Monitoring Report

			Site:	ROD	& WIRE	
Well I.D .: Rw 13 PZM 020			Tag:	BA 94	1:5709	(4) D
Date of Purging: <u>10/23/12</u> Star Date of Collection: <u>20/23/12</u> Tin	Time: 🚣 ne of Co	2 2:25 Fi llection: 2	nish Time 240	. 1245	Weather:	55-60
Well Status:						
Good		Gr	sant			
Good		Cas	ing			
Good		Loc	sing	and the second second second second		
Good		Ob	structions			
					2	
Diameter of Well Casing (inches)	(A (atal)				~	
Depth Measurements Performed (PV)	$\mathcal{O}(Metal)$	rior to pur	ina		PVC	7
Depth to Bottom from Top of Casing	(0.01 ft)	nor to pur	ging		1217	(
Depth of Water in the Well (gallon)	(0.01 10.)					
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing ().01 ft.) af	ter purgin	2			
Depth to Water from Top of Casing (I).01 ft.) at	time of sa	mpling	2	12.3	8
						Sample Reading
Number of minutes purged	()	_3	6	9		
Temperature (°C)	18,0	18,2	18.2	18.2	18.2	18.2
pH	5,61	5.83	5.83	5.83	5.83	5,83
Specific Conductance (umhos/cm)	2.23	2.75	2.81	2.81	2.81	1815
Dissolved Oxygen (mg/l)	2,90	2.18	1,97	1,97	1.97	1.97
Oxidation Reduction (eH)	1129	1130	1130	1130	1130	1130
						a Siere Data
Purging Equipment	w	ell Obser	vation			
Peristaltic Pump	Od	OT ALAI	C			
Bladder Pump	Co	lor plen	,			
	00	ion Liter	<u> </u>			
Rate of Purge 150 m	illiliters	/ minute				
Comments:						
Reference SOP Field-014						
Readings were performed on date of	of sampli	ng 10	1 23	1 12.1	(Tech -	T4)

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Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rw 11 Pzm ood			Tag:	BA 94	5703	
Date of Purging: <u>10/27/12</u> Start Time Date of Collection: <u>10/23/12</u> Time	me: <u>/</u> a of Col	<mark>s:⊘o</mark> Fin lection:∠	nish Time: 2:15	12120	Weather: _	55-60 *
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			•
Good		Obs	structions_			
Diameter of Wall Cacing (inches)					~2	
Depth Measurements Performed (PVC/N	(etal)			-	ive	
Depth to Water from Top of Casing $(0,0)$	1 ft.) pr	ior to pure	zing		7.25	
Depth to Bottom from Top of Casing (0.0	01 ft.)			200		
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)	a alter ma		e ¹⁸			
Depth to Water from Top of Casing (0.01	l fi.) af	ter purgin	g			
Depth to Water from Top of Casing (0.0)	ft.) at	time of sa	mpling	5	7.20	
						Sample
Number of minutes purged	0	3	6	9	12	Reading
Temperature (°C)	1.6	21.6	21.7	21.7	21.7	21,7
pH 3.	.68	3.68	3.71	3.71	3.74	3.75
Specific Conductance (umhos/cm) §	.66	5.66	7.84	7.84	6.97	6.97
Dissolved Oxygen (mg/l)	51.	4.12	3.74	3.74	3.21	3.21
Oxidation Reduction (eH)	40	440	442	442	441	441
					17. ¹ 2	
Purging Equipment	We	ell Obser	vation			
Peristaltic Pump	Od	OF NON	E			
Bladder Pump	Co	lor clea	WL.			
· · · · · · · · · · · · · · · · · · ·						
Rate of Purge 150 milli	liters /	<u>minute</u>				
Comments:						
Reference SOP Field-014						
Readings were performed on date of s	ampli	ng 10	/ 23	12 .	(Tech	14)
hent. severstal			Site:	ROD	& WIRE	
---	--	--	----------------------------	-------	-----------------------	-----------------
ell I.D.: RWZI PZM C	23		Tag:	BA-	94-570	26
ate of Purging: <u>10/23/12</u> Sta ate of Collection: <u>10/23/12</u> T	art Time: <u>8</u> Time of Col	:30 Fi llection: <u>t</u>	nish Time 8 : 45	8:55	Weather:	55-60
ell Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			,
Good		Ob	structions		-	
ameter of Well Casing (inches) pth Measurements Performed (P pth to Water from Top of Casing pth to Bottom from Top of Casin pth of Water in the Well (gallon) hume of water in the Well (gallon pth to Water from Top of Casing pth to Water from Top of Casing	VC/Metal) (0.01 ft.) pr g (0.01 ft.) a) (0.01 ft.) af (0.01 ft.) at	tior to purg ter purgin time of sa	g g mpling		2 PVC 14.40 	 Z Sample
						Reading
mber of minutes purged	()		6	9	. <u>12</u>	15
nperature (°C)	17.7	17.7	17.7	17.7	17.7	17:7
·· · · · · · · · · · · · · · · · · · ·	3.67	4.94	5.40	5.40	5.41	5.41
colued Oxygen (mg/l)	1) 10.38	1038	10.31	10.31	10.31	70.31
idation Reduction (eH)	561	561	545	566	565	565
				566		
ging Equipment	We	ell Obser	vation			
istaltic Pump	Od	or Nove				
dder Pump	Со	lor <u>Clear</u>				
(D	milliliters	minute				

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rw 20 Pzm 050	and the second		Tag:	BA	81- 498	3
Date of Purging: 10/23/12Star Date of Collection: 20/23/12Tim	t Time: 1 me of Col	10 Fin Election:	nish Time 9:25	<u>9:30</u>	Weather: _	55-60
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PV	C/Metal)				PVC	
Depth to Water from Top of Casing (0.01 ft.) pi	rior to pur	ging		15.37	f
Depth to Bottom from Top of Casing	(0.01 ft.)			e di se		
Depth of Water in the Well (gallon)				-		
Depth to Water from Top of Casing (0.01.ft).at	fer nurain		×		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	g mnling		15.30	>
				-		
						Sample
	~	2		20	10	Reading
Number of minutes purged		3			12	15
Temperature (°C)	18,1	18.1	18.0	18,1	18,1	
on Specific Conductance (umbos/cm)	2011	10,12	242	10,09	70109	70101
Dissolved Oxygen (mg/l)	500	645	5.40	641	5.20	5,20
Ovidation Reduction (eH)	370	3.03	3140	340	540	360
vidation Reduction (err)	219	369	260	260	_360_	200
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	IOT NONE				
Bladder Pump	Со	lor <u>Clea</u>	n_			
	^					
		/ man to man to a				
Rate of Purge <u>150</u> m	illiliters	minute				
Rate of Purge <u>150 m</u>	illiliters	minute				

Well I.D.: $\underline{\mathcal{R}\omega} \ \overline{\mathcal{Z}O} \ \mathcal{P}_{\mathcal{P}\mathcal{H}} \ \overline{\mathcal{OOO}}$ Tag: $\underline{\mathcal{B}A} \ \mathcal{P}\mathcal{H} \ \mathcal{P}\mathcal{P}\mathcal{H}$ Date of Purging: $\underline{\mathcal{L}o} \ \mathcal{L}s \$	Well I.D.: <u>Rus ZO P2m 000</u> Date of Purging: <u>10/23/12</u> Start Time: <u>9:35</u> Date of Collection: <u>10/23/12</u> Time of Collection Well Status: Good	_ Tag: _ Finish Time: _ 9:55 9:5	<u>8</u> A 9:55	94 4931 Weather: _	
Date of Purging: $16/22/12$ Start Time: $9/35$ Finish Time: $9/35$ Weather: $55 - 60$ Date of Collection: $16/22/12$ Time of Collection: $9-55$ $9/350$ Well Status: Good Good Casing Cook Cook Casing Cook CasingCook Casing CookCookCookCookCookCookCookCook	Date of Purging: <u>10/23/12</u> Start Time: <u>9:35</u> Date of Collection: <u>10/23/12</u> Time of Collection Well Status: Good	_ Finish Time: on: <u>9:55 9:5</u> 6	9:55	Weather: _	
Date of Collection: $\frac{10/22/12}{10}$ Time of Collection: $\frac{9-55}{9.50}$ Well Status: Good Grout Good Casing Good Lock Good Obstructions biameter of Well Casing (inches) 2 vepth Measurements Performed (PVC/Metal) PVC vepth Measurements Performed (PVC/Metal) PVC vepth to Water from Top of Casing (0.01 ft.) prior to purging $8,777$ epth to Bottom from Top of Casing (0.01 ft.) after purging end/price epth to Water in the Well (gallon) end/price olume of water in the Well (gallon) end/price epth to Water from Top of Casing (0.01 ft.) after purging $8,70$ sample $8,70$ umber of minutes purged 0 3 6 9 12 sample $8,70$ Sample Reading umber of minutes purged 0 3 6 9 12 emperature (°C) 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9	Date of Collection: 10/23/12 Time of Collection Well Status: Good	on: 9:55 9:5	5		55-60
Well Status:GoodGroutGoodCasingGoodLockGoodLockGoodObstructionsDiameter of Well Casing (inches) 2 bepth Measurements Performed (PVC/Metal) PVC bepth Measurements Performed (PVC/Metal) PVC bepth to Water from Top of Casing (0.01 ft.) prior to purging 5.77 bepth of Water in the Well (gallon) $$	Well Status: Good				
GoodGroutGoodCasingGoodLockGoodObstructionsbiameter of Well Casing (inches) 2 vepth Measurements Performed (PVC/Metal) PVC vepth Measurements Performed (PVC/Metal) PVC vepth to Water from Top of Casing (0.01 ft.) prior to purging 8.77 vepth to Bottom from Top of Casing (0.01 ft.) 9 vepth to Water in the Well (gallon) 9 ohume of water in the Well (gallon) 9 epth to Water from Top of Casing (0.01 ft.) after purging 8.70 sample 8.70 muber of minutes purged 0 3 6 9 12 20.9 2.90 20.9 2.90 20.9 2.90 20.9 2.90 20.9 2	Good				
GoodGroutGoodCasingGoodLockGoodObstructionsWatter for Top of Casing (0.01 ft.) prior to purging 8.77 Pepth Measurements Performed (PVC/Metal) PVC Pepth to Water from Top of Casing (0.01 ft.) prior to purging 8.77 Pepth to Bottom from Top of Casing (0.01 ft.)	Good				
GoodCasingGoodLockGoodObstructionsDiameter of Well Casing (inches) 2 Pepth Measurements Performed (PVC/Metal) PVC Pepth to Water from Top of Casing (0.01 ft.) prior to purging 8.77 Pepth to Bottom from Top of Casing (0.01 ft.) 9 Pepth to Water in the Well (gallon) 9 Pepth to Water from Top of Casing (0.01 ft.) after purging 8.70 Pepth to Water from Top of Casing (0.01 ft.) after purging 8.70 Pepth to Water from Top of Casing (0.01 ft.) at time of sampling 8.70 SampleReadingPepth to Water from Top of Casing (0.01 ft.) at time of sampling 8.70 Sample constructions 8.70 Pepth to Water from Top of Casing (0.01 ft.) at time of sampling 8.70 Pepth to Water from Top of Casing (0.01 ft.) at time of sampling 8.70 Performed (°C) 20.9 20.9 20.9 Performed (°C)	Valid III III III III III III III III III I	Grout			
GoodLockGoodObstructionsDiameter of Well Casing (inches) \rightarrow bepth Measurements Performed (PVC/Metal) PVC bepth to Water from Top of Casing (0.01 ft.) prior to purging $\pounds, 77$ bepth to Bottom from Top of Casing (0.01 ft.) \neg bepth to Water in the Well (gallon) \neg olume of water in the Well (gallon) \neg epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) after purging \blacksquare epth to Water from Top of Casing (0.01 ft.) at time of sampling \blacksquare sample \blacksquare \blacksquare generature (°C) 20.9 20.9 I 7.30 6.95 4.93 42.3 42.5 42.4 42.4 42.4 42.4 42.4 42.4 42.4 42.4 42.4 42.6 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80 9.80	Good	Casing			
ObstructionsDiameter of Well Casing (inches)Depth Measurements Performed (PVC/Metal) PVC Pepth to Water from Top of Casing (0.01 ft.) prior to purging $g.77$ Pepth to Bottom from Top of Casing (0.01 ft.) $g.77$ Pepth of Water in the Well (gallon) $g.77$ Obstructions $g.77$ Pepth to Water from Top of Casing (0.01 ft.) $g.77$ Pepth to Water from Top of Casing (0.01 ft.) after purging $g.70$ Pepth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Pepth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Pepth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Pepth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Peptitic Conductance (umhos/cm) $g.93$ 42.3 42.5 42.4 42.4 42.4 42.4 42.9 $g.93$ 43.93 42.3 42.5 42.4 42.4 42.4 42.4 42.9 4.93 42.9 4.93 42.5 43.93 42.5 43.94 42.9 44.93 42.9 45.94 9.50 45.94 9.50 45.94 9.50 45.94 9.50 45.94 9.50 45.94 9.50 45.94 9.50	Good	Lock			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to purging the bottom from Top of Casing (0.01 ft.) PVC PVC (S, 77) Pepth to Bottom from Top of Casing (0.01 ft.) PVC (S, 77) Pepth to Water in the Well (gallon) Pepth to Water from Top of Casing (0.01 ft.) after purging Pepth to Water from Top of Casing (0.01 ft.) after purging Pepth to Water from Top of Casing (0.01 ft.) after purging Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.) at time of sampling Pepth to Water from Top of Casing (0.01 ft.)	Good	Obstructions			
Pepth Measurements Performed (PVC/Metal) PVC Depth to Water from Top of Casing (0.01 ft.) prior to purging $g.77$ Depth to Bottom from Top of Casing (0.01 ft.) $g.77$ Depth of Water in the Well (gallon) $g.77$ Outme of water in the Well (gallon) $g.70$ Peth to Water from Top of Casing (0.01 ft.) after purging $g.70$ Peth to Water from Top of Casing (0.01 ft.) after purging $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Sample $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of sampling $g.70$ Peth to Water from Top of Casing (0.01 ft.) at time of g.93 $g.93$ Peth to Water from Top of Casing (0.01 ft.) at time	Diameter of Well Casing (inches)			~	
Sampleumber of minutes purged 0 3 6 9 12 12 20.9	Depth Measurements Performed (PVC/Metal)			PVC	
bepth to Bottom from Top of Casing (0.01 ft.)weight to Water in the Well (gallon)	Depth to Water from Top of Casing (0.01 ft.) prior to	purging	-	8.77	
The formation of water in the well (gallon) Solume of water in the Well (gallon) The peth to Water from Top of Casing (0.01 ft.) after purging Top of Casing (0.01 ft.) after purging The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampling The peth to Water from Top of Casing (0.01 ft.) at time of sampli	Depth to Bottom from Top of Casing (0.01 ft.)				
epth to Water from Top of Casing (0.01 ft.) after purging epth to Water from Top of Casing (0.01 ft.) at time of sampling $\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Volume of water in the Well (gallon)				
epth to Water from Top of Casing (0.01 ft.) at time of sampling 8.70 umber of minutes purged 0 3 6 9 12 emperature (°C) 20.8 20.9 20.9 20.9 20.9 20.9 I 7.30 6.95 6.94 6.93 6.93 6.93 excific Conductance (umhos/cm) 393 423 425 424 424 issolved Oxygen (mg/l) 4.19 3.11 2.90 2.90 2.90 2.90 vidation Reduction (eH) 984 980 980 980 980 980 980	Depth to Water from Top of Casing (0.01 ft.) after pu	rging			
Sample Readingumber of minutes purged 0 3 6 9 12 emperature (°C) 20.8 20.9 20.9 20.9 20.9 20.9 4 7.30 6.95 6.94 6.93 6.93 6.93 becific Conductance (umhos/cm) 393 42.3 42.5 42.4 424 issolved Oxygen (mg/l) 4.16 3.11 2.91 2.90 2.90 xidation Reduction (eH) 984 980 980 980 980 980	Depth to Water from Top of Casing (0.01 ft.) at time of	of sampling		8.70	
Sample Readingumber of minutes purged 0 3 6 9 12 emperature (°C) 20.8 20.9 20.9 20.9 20.9 20.9 H 7.30 6.95 6.94 6.93 6.93 6.93 becific Conductance (umhos/cm) 393 423 425 424 424 issolved Oxygen (mg/l) 4.19 3.11 2.90 2.90 2.90 xidation Reduction (eH) 984 980 980 980 980 980					Campla
umber of minutes purged 0 3 6 9 12 emperature (°C) 20.8 20.9 <td< th=""><th></th><th></th><th></th><th></th><th>Reading</th></td<>					Reading
emperature (°C) 20.8 20.9 42.4 42.6 20.9 <th>Number of minutes purged () 3</th> <th>6</th> <th>9</th> <th>12</th> <th>E</th>	Number of minutes purged () 3	6	9	12	E
H 7.30 6.95 6.94 6.93 6.93 6.93 becific Conductance (umbos/cm) 393 423 425 424 424 424 issolved Oxygen (mg/l) 4.19 3.11 2.90 2.90 2.90 2.90 xidation Reduction (eH) 984 980 980 980 980 980	Temperature (°C) 20.8 20	19 2019	20.9	20.9	2019
becific Conductance (umhos/cm) 393 423 425 424 424 424 issolved Oxygen (mg/l) 4.19 3.11 2.91 2.90 2.90 2.90 xidation Reduction (eH) 984 980 980 980 980 980	H 7.30 6.9	15 6,94	6.93	6,93	6,93
issolved Oxygen (mg/l) <u>4.19</u> 3.11 2.91 2.90 2.90 2.90 xidation Reduction (eH) <u>984</u> <u>980</u> <u>980</u> <u>980</u> <u>980</u> <u>980</u> <u>980</u>	Specific Conductance (umhos/cm) <u>393</u> <u>423</u>	3 425	424	424	424
xidation Reduction (eH) <u>984 980 980 980 980 980</u>	Dissolved Oxygen (mg/l) 4.19 3.1	1 2.91	2,90	2,90	2.90
	Dividation Reduction (eH) <u>984</u> <u>984</u>	2 980	980	980	980
		*			
wall Observation	Purging Equipment Well Of	oservation			
n ging Equipment wen Observation	eristaltic Pump Odor M	ONE			
ristaltic Pump Odor <u>None</u>	ladder Pump Color <u>C</u>	lean			
adder Pump Color <u>Clean</u>	ate of Purge /50 milliliters / min	ute			
	Number of minutes purged()3Cemperature (°C)20.920oH7.306.9Specific Conductance (umhos/cm)39342.3Dissolved Oxygen (mg/l)4.193.11Oxidation Reduction (eH)984984	6 19 20,9 35 6,94 3 425 7 2,91 0 980	9 20,9 6,93 424 2,90 980	12 Zo.9 4.93 424 Z.90 980	Read 201 42 21 91
ristaltic Pump Odor Monte	ladder Pump Color C	lean			
ristaltic Pump Odor <u>None</u>	ladder Pump Color <u>C</u>	lear			

T	4.4
Penort	++
REDUIL	TT

Client: Severstal			Site	ROD	& WIRE	
Well I.D .: Rw 20 P2m 02	20		Tag	BA 94	4982	
Date of Purging: <u>voles/12</u> Sta Date of Collection: <u>voles/12</u> T	art Time: <u>7</u> Time of Co	0:00 Fi llection: J	nish Time 10:15	. 1020	Weather:	55.60
Well Status:						
Good		C				
Good		Gro	out			
Good		Lo	sing			
Good		Ob	structions			1
0000		00	50 000000			
Diameter of Well Casing (inches)					4	
Depth Measurements Performed (P	VC/Metal)		100		PVC	
Depth to Water from Top of Casing	(0.01 ft.) pr	rior to purg	ging	-	12.49	1
Depth to Bottom from Top of Casin	g (0.01 ft.)			-		
Depth of Water in the Well (gallon)						
Depth to Water from Top of Casing	1) (0.01 ft) at	Har purgin	· ·			
Depth to Water from Top of Casing	(0.01 ft) at $(0.01 ft)$ at	time of sa	mpling	1	12.42	
Depuis to white hom rop or ousing	(0.01 n.) u	anne or su	mpning	č.	16145	
						Sample Reading
Number of minutes purged	0	_3	6	9	12	-
Temperature (°C)	18.5	18.4	18.4	18.4	18.4	18.4
pН	74.01	5,06	5.06	5,06	5106	5.06
Specific Conductance (umhos/cn	1) 5:06	4.01	4,01	4.01	4,01	4.01
Dissolved Oxygen (mg/l)	2.17	2.00	2100	2,00	2,00	2.00
Oxidation Reduction (eH)	1033	1033	10.53	1033	1033	10.33
			- 12			
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	OF NONE				
Bladder Pump	Co	lor Clean	2			
Rate of Purge	nilliliters	/ minute				2
Comments:						
Reference SOP Field-014						
Readings were performed on date	of samplin	ng 🗸 o	123	112 .1	Tech - 7	TH)
	1	-				,

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: TS 04 Pom 004	/		Tag:	No	Trag	
Date of Purging: <u>/0/23/12</u> Start Date of Collection: <u>/0/23/12</u> Tim	Time: <u>7</u> 1e of Col	30 Fin lection:	nish Time: •• 45	10.50	Weather: _	55-60
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck	f.		2 2
Good		Ob	structions	Pre-		
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	(Metal)			- X - C -	PVI	ŭ
Depth to Water from Top of Casing (0	0.01 ft.) pr	ior to pure	zing		10.11	
Depth to Bottom from Top of Casing ((0.01 ft.)	I				
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)					****	
Depth to Water from Top of Casing (0	.01 ft.) af	ter purgin	g			
Depth to Water from Top of Casing (0	.01 ft.) at	time of sa	mpling		10.0	=
2007						Sample
Number of minutes purged	0	3	6	0	12	Reading
Temperature (°C)	701			707	7. 7	70.7
nH	1.00	6012	2016	1 1.7	1.1.7	6.67
Specific Conductance (umbos/cm)	6.33	6.51	6.66	61.1	Shi	5/1
Dissolved Oxygen (mg/l)	4.67	410	U UU	11.44	1100	4.44
Ovidation Reduction (eH)	515	4160	512	512	513	5/3
Oxidation Reduction (CII)	515	213	3/3_			
Dunging Fauinmont	332	all Ohaar	ration			
Paristoltio Pump	Od	en Obser				
Pladder Pump	Co	lor	<u> </u>			
	Co	III Cles	7.5			
Rate of Purge mi	lliliters	/ minute				
Comments:					ζ	
Reference SOP Field-014	farmi		/ =-	1	(Tech -	T()
ceadings were performed on date o	i sampli	ng 10	63	<u>, , , , , , , , , , , , , , , , , , , </u>	(1601 - 7)

-		1.
D	anor	6 - 44
- DA	CINH	1 11

Client: Severstal			Site	ROD	& WIRE	
Well I.D .: Rw of PEM Doy			Tag	BA 94	5701	
Date of Purging: <u>20/23/12</u> Start Date of Collection: <u>20/23/12</u> Tir	Time: <u>/</u> ne of Co	<u>3:45</u> Fi llection:	nish Time 14:00	14:05	Weather:	55-60
Well Status:			12			
Good		Gro	out			
Good		Cas	sing	i de		
Good		Loc	ck			10
Good		Ob	structions			
Denth Measurements Performed (DV((Matal)			-	eve	
Depth to Water from Top of Casing (01 f	rior to mur	nina	-	7 42	
Depth to Bottom from Top of Casing ((0.01 ft) p	nor to purg	sing	-	ده ز	
Depth of Water in the Well (gallon)	(0.01 10.)					
Volume of water in the Well (gallon)			28			
Depth to Water from Top of Casing (().01 ft.) at	fter purgin	<u>n</u>			
Depth to Water from Top of Casing (().01 ft.) at	time of sa	mpling	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	7.7-	1
				1.11		
						Sample
						Reading
Number of minutes purged	0	3	6	9	_12_	15
Femperature (°C)	22.0	22.2	22.1	22.1	22.1	1.55
H	10.14	10.81	10.81	10.80	10.80	10.80
Specific Conductance (umhos/cm)	36396	522	528	527	527	522
Dissolved Oxygen (mg/l)	3.34	2.99	3.08	3.08	3.08	3.08
Dxidation Reduction (eH)	884	881	883	882	882	\$82
urging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	or None				
Bladder Pump	Co	lor Clean	L			
tate of Purge 150 m	illiliters	/ minute				
	2			Sec. 1	1 2	
Some outo:		No.			- 9.21-	
ouunents	E U E	1				
eference SOP Field-014					1.14	
	0 11					

Chent: Severstal			Site:	ROD	& WIRE	
Well I.D .: Lw14 PZM OZC	>		Tag:	BA 94	5708	
Date of Purging: <u>10/23/12</u> Start Date of Collection: <u>10/23/12</u> Tin	Time: /4 ne of Col	<u>/:/o</u> _Fin lection:_	nish Time 14:25	1430	Weather: _	55-60
Well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck	-	free second	
Good		Ob	structions	N. C.	<u> </u>	
Dimension (III)					2	
Diameter of Well Casing (inches)	Matal				- 2	
Depth to Water from Top of Casing (101 ft	ior to pur	aina	-	13.0	2
Depth to Water from Top of Casing ((0.01 ft)	tor to purj	ging	11		
Depth of Water in the Well (gallon)	(0.01 10.)					
Volume of water in the Well (gallon)			an s	6		
Depth to Water from Top of Casing (I).01 ft.) af	ter purgin	g	-		
Depth to Water from Top of Casing ((Depth to Water from Top of Casing (().01 ft.) af).01 ft.) at	ter purgin time of sa	g ampling		12.8	7
Depth to Water from Top of Casing ((Depth to Water from Top of Casing (().01 ft.) af).01 ft.) at	ter purgin time of sa	g Impling	-	12.8	7
Depth to Water from Top of Casing ((Depth to Water from Top of Casing (().01 ft.) af).01 ft.) at	ter purgin time of sa	g ampling	-	12.8	7 Sample
Depth to Water from Top of Casing ((Depth to Water from Top of Casing (().01 ft.) af).01 ft.) at	ter purgin time of sa	g ampling	-	12.8	ZSample Reading
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged).01 ft.) af).01 ft.) at	ter purgin, time of sa	g ampling 6	9	12	7 Sample Reading 15
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C)).01 ft.) af).01 ft.) at 	ter purgin, time of sa 3 <u>18.4</u>	g ampling 6 /8,3	<u> </u>	12.8 ⁻ 12 18.3	7 Sample Reading
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH).01 ft.) af).01 ft.) at 	3 18.4 5.93	g mpling <u>6</u> <u>18.3</u> <u>5.89</u>	9 18.3 5.87	12.8 12 18.3 5.86	7 Sample Reading 15 13.3 5.86
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm)).01 ft.) af).01 ft.) at ().01 ft.) at ().01 ().02 ().02 ().02 ().02 ().02 ().02 ().02 ().02 ().02 ().01 ft.) af	3 18.4 5.93 3:06	g mpling 6 8.3 5.89 5.00	9 18.3 5.87 3.01	12.8 12 18.3 5.86 3.00	7 Sample Reading 15 13.3 5.86 3.01
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l)	0.01 ft.) af 0.01 ft.) at <u>19.0</u> <u>4.10</u> <u>3.20</u> <u>2.53</u>	3 18.4 5.93 3.06 2.34	g mpling <u>6</u> <u>18.3</u> <u>5.83</u> <u>3.00</u> <u>2.14</u>	9 18.3 5.87 3.01 2.14	12.8" 12.8" 18.3 5.86 3.00 2.13	7 Sample Reading 15 13.3 5.86 3.01 2.13
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	0 19.01 ft.) at 0 19.0 4.10 3.20 2.53 1450	3 18.4 5.93 2.34 1450	g mpling <u>6</u> <u>18.3</u> <u>5.89</u> <u>3.00</u> <u>2.14</u> <u>1450</u>	4) 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 18.3 5.86 3.01 2.13 1450
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	0.01 ft.) af 0.01 ft.) at 19.0 19.0 4.10 3.20 2.53 1450	3 18.4 5.93 3.06 2.34 1450	g mpling <u>6</u> <u>18.3</u> <u>3.00</u> <u>2.14</u> <u>1450</u>	9 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 18.3 5.86 3.01 2.13 1455
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment	0.01 ft.) af 0.01 ft.) at 19.0 4.10 3.20 2.53 1450	3 18.4 5.93 3:06 2.34 1450 ell Obser	g mpling <u>_6</u> <u>_18,3</u> <u>_5,89</u> <u>_3.00</u> <u>_2.14</u> <u>_1450</u> vation	9 18.3 5.87 3.01 2.14 1450	12.8 12. 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 18.3 5.86 3.01 2.13 1455
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump	0.01 ft.) af 0.01 ft.) at 0.01 ft.) at 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02	3 18.4 5.93 3.06 2.34 1450 ell Obser or xloxé	g mpling <u>6</u> <u>18.3</u> <u>3.00</u> <u>2.14</u> <u>1456</u> rvation	9 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 18.3 5.86 3.01 2.13 1455
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump	0.01 ft.) af 0.01 ft.) at <u>19.0</u> <u>4.10</u> <u>3.20</u> <u>2.53</u> <u>1450</u> Wo Od Co	3 18.4 5.93 3.06 2.34 1450 ell Obser or <u>Xlové</u> lor <u>Clea</u>	g mpling 	9 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 13.3 5.56 3.01 2.13 1450
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump	0.01 ft.) af 0.01 ft.) at <u>19.0</u> <u>4.10</u> <u>3.20</u> <u>2.53</u> <u>1450</u> Wd Od Co	3 18.4 5.93 3.06 2.34 1450 ell Obser for <u>2/64</u>	g mpling <u>6</u> <u>18.3</u> <u>3.00</u> <u>2.14</u> <u>1450</u> vation	4 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Reading 15 13.3 5.86 3.01 2.13 1453
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump	0.01 ft.) af 0.01 ft.) at <u>19.0</u> <u>4.10</u> <u>3.20</u> <u>2.53</u> <u>1450</u> Wo Od Co	3 18.4 5.93 3.06 2.34 1450 ell Obser or <u>Xlove</u> lor <u>Clea</u>	g mpling <u>6</u> <u>18.3</u> <u>5.88</u> <u>3.00</u> <u>2.14</u> <u>1450</u> vation	9 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Sample Readin 15 18.3 5.86 3.01 2.13 1455
Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge m	0.01 ft.) af 0.01 ft.) at 0.01 ft.) at 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02	3 18.4 5.93 3.06 2.34 1450 ell Obser or 2.04 lor <u>Clea</u>	g mpling <u>_6</u> <u>_18.3</u> <u>_5.83</u> <u>_3.00</u> <u>_2.14</u> <u>_1450</u> vation	9 18.3 5.87 3.01 2.14 1450	12.8 12.8 18.3 5.86 3.00 2.13 1450	7 Readin 15 18.3 5.86 3.01 2.13 1457

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	Site:	ROD & WIRE	
Well I.D .: RW 04 PZM 003	Tag: 🖌	84 81 2491	
Date of Purging: 10/23/12 Start Time	: <u>/4:40</u> Finish Time:/	5! 00 Weather: 55-6	0
Date of Collection: <u>/o/23/12</u> Time of	Collection: <u>1435</u>		
Wall Status		a44	
wen status.		All States	
Good	Crowt		
Good	Grout		
Good	Look		
Good	Obstructions	and the second second	
0000	Obstructions_	Contraction of the second seco	
Diameter of Well Casing (inches)		2	
Depth Measurements Performed (PVC/Metz	1)	PVL	
Depth to Water from Top of Casing (0.01 ft.) prior to purging	6.24	
Depth to Bottom from Top of Casing (0.01 t	î.)		
Depth of Water in the Well (gallon)			
Volume of water in the Well (gallon)	, E .		
Depth to Water from Top of Casing (0.01 ft.) after purging		
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	6,20	
		Sam	ple
Number of minutes nurred	2	0 12 Kead	ing
Tamper of minutes purged.		9 12	
	L 2011 2011	20.1 2011 201	
pri Gustanta (mba/m)	E 6, V7 6.88	6188 6185 6.8	5
Disable d Owners (mail)	106 705	105 705 70.	5
Ovidation Deduction (all)	1198 1197	1.97 1.90 1.19	8
	<u>~~~</u> <u>~~</u> <u>~~</u> <u>~~</u> <u>~~</u> <u>~~</u> <u>~~</u> <u>~~</u>	296 276 27	6
Destrine Frankright	W.II Observer		5
Purging Equipment	Well Observation		
Pladda Dama	Odor <u>Neve</u>		
Bladder Pump	COLOF Clean		
Data of Dunna /50 Willia			
Kate of Purge 750 minute	rs / minute		
Comments:			
Comments			
Peference SOP Field 014	j		
Deadings were performed on date of som	nling 10 123	12 (Tech TH	1
readings were performed on date of sam	pim <u>g 70 /05 /</u>	. (1601 - 74	1

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rw12 pzmood			Tag:	BA 94	5709	
Date of Purging: <u>10/23/12</u> Start T Date of Collection: <u>20/23/12</u> Time	ime: <u>/</u> of Col	ZISS Fin Ilection: 2	nish Time 3:10	<u>13:15</u>	Weather: _	55-60
Well Status:						
Good		Gro	out	and h	64. C	
Good		Cas	sing	All and a second		
Good		Loc				2
Good		Obs	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC/N	Aetal)			100	IVC	
Depth to Water from Top of Casing (0.0	1 ft.) pi	rior to purg	zing		8.36	
Depth to Bottom from Top of Casing (0.	01 ft.)			_		
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)			÷.	•))		
Depth to Water from Top of Casing (0.0	1 ft.) at	ter purging	g .		0.10	
Depth to water from 1 op of Casing (0.0	1 n.) at	ume of sa	mpling	-	0113	
						Sample Reading
Number of minutes purged	0	3	6	9	12	5
Temperature (°C)	19.9	2010	19.9	19.9	19.8	19,9
pH	6.10	5.77	5.48	5.47	5.47	5.47
Specific Conductance (umhos/cm)	517	1129	1431	1501	1502	1502
Dissolved Oxygen (mg/l)	2,85	2.63	2,38	2,54	2,53	2,53
Oxidation Reduction (eH)	367	360	365	365	365	365
		1				1.0
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Ođ	OT NONE	(action			
Bladder Pump	Co	lor <u>Clea</u>	L			
Rate of Purge milli	liters	/ minute				
					-	
Comments:					1	
				100		i Di Ug
Reference SOP Field-014					/m 1	
Readings were performed on date of a	sampli	ng /•	23	1_12	(1ecn - 7))

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Μ	licrobad	c Labor	atories,	Inc.		
Grou	undwat	er Mon	itoring I	Report		
				-		
Client: Severstal	-		Site:	ROD	& WIRE	
Well I.D.: <u>RW13 PZM0</u>	20		Tag:	3/10	2027	ing the second
Date of Purging: 10/25/12 Start	Time: 🖊	415 Fi	nish Time	1435	Weather:	55-60
Date of Collection: 10/25/12 Tin	ne of Col	llection:	1430			
Wall Status						
well Status:						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			
Good		Ob	structions			
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing	0.01 ft.) pr (0.01 ft.)	rior to purg	ging	10 - ¹ -	9.61	
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (0.01 ft.) pr (0.01 ft.) 0.01 ft.) af 0.01 ft.) at	rior to purg fter purging time of sa	ging g mpling		9.61 	
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (0.01 ft.) pr (0.01 ft.) 0.01 ft.) af 0.01 ft.) at	rior to purg fter purging time of sa	ging g mpling		9.61 	 Sample
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (0.01 ft.) pr (0.01 ft.) 0.01 ft.) af 0.01 ft.) at	rior to purg ter purging time of sa	g g mpling		9.61	Sample Reading
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing ((Depth to Water from Top of Casing ((0.01 ft.) pr (0.01 ft.) 0.01 ft.) af 0.01 ft.) at	tior to purg ter purging time of sa	g mpling 6	9	<i>q.fiffffffff</i>	Sample Reading
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at $() - \frac{()}{7.0}$	rior to purg fter purging time of sa 3 17.9	g mpling	9 /7.0	9.61 9.50	Sample Reading
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umbos/cm)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at 0.01 ft.) at 0.01 ft.) at 0.01 ft.) at	time of sa 3 7.2 5.73	g mpling <u>6</u> <u>17.9</u> <u>5.73</u>	9 17.0 5.73	<u></u>	Sample Reading
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af (0.01 ft.) = 0 (17.0)	tion to purg ter purging time of sa $\frac{3}{\sqrt{7.2}}$ $\frac{5.73}{\sqrt{100}}$	g mpling <u>6</u> <u>√2.0</u> <u>√30</u> √30	9 17.0 5.73 1.00	<u>9.61</u> <u>9.50</u> <u>12</u> <u><u>17.0</u> <u>5.73</u> <u><u>1030</u> <u>1.00</u></u></u>	Sample Reading /7.0 5.73 /830 /.00
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at <u>0</u> <u>17.0</u> <u>1.20</u> <u>1.20</u>	rior to purg fter purging time of sa $\frac{3}{17.0}$ $\frac{5.73}{1030}$ 1.00	g mpling <u>6</u> <u>17.0</u> <u>5.73</u> <u>1.00</u> <u>1.00</u>	9 17.0 5.73 2030 1.00 104	<u></u>	Sample Reading /7.0 5.73 /830 /.00 /04
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at 0.01 ft.) at 17.0 5.93 1030 1.20 104	3 17.0 5.73 1030 1.04	g mpling <u>6</u> <u>√7.0</u> <u>5.73</u> <u>∕030</u> <u>∕04</u>	9 17.0 5.73 7.00 1.00 1.00	<u>9.61</u> <u>9.50</u> <u>12</u> <u><u>17.0</u> <u>5.73</u> <u>1030</u> <u>1.00</u> <u>104</u></u>	Sample Reading 17.0 5.73 1830 1.00 104
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH)	0.01 ft.) pr (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at <u>()</u> <u>/7.0</u> <u>5.99</u> <u>/030</u> <u>/.20</u> <u>/04</u>	time of sa 3 17.2 5.73 7.24 7.2	g mpling <u>6</u> <u>17.0</u> <u>5.73</u> <u>7030</u> <u>1.00</u> <u>104</u>	9 /7.0 5.73 /030 /00 /04	9.61 9.50 <u>12</u> <u>17.0</u> <u>5.73</u> <u>1030</u> <u>100</u> <u>104</u>	Sample Reading /7.0 5.73 /830 /.00 /04
Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l) Oxidation Reduction (eH) Purging Equipment Peristaltic Pump	0.01 ft.) pr (0.01 ft.) af (0.01 ft.) af 0.01 ft.) af 0.01 ft.) at 0.01 ft.) at 0.02 ft. 0.02 ft.	The purging time of satisfies a second secon	g mpling <u>6</u> <u>/7.0</u> <u>5.73</u> <u>/030</u> <u>/04</u> vation	9 17.0 5.73 7030 1.00 104	<u>9.61</u> <u>9.50</u> <u>12</u> <u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	Sample Reading /7.0 5.73 /830 /.00 /04

Comments:_

Reference SOP Field-014

Readings were performed on date of sampling /o / 25 /

HQN:groundisg.doc.white

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12 . (Tech - TH

VallID: Puppa Prus 030			Site:	ROD	& WIRE	
Well I.D. ROUE FOR OLE	2		Tag:	BH 81	4134	
Date of Purging: 10/25/12 Start	Time: 10	9:/0 Fin	nish Time	10130	Weather:	55-60
Date of Collection: 10/25/12 Tin	ne of Col	lection:	10:25	-		
Vell Status:						
	×	~				
Good		Gro	out			a second
Good		Loc	sing			
Good		Ohs	structions			
iameter of Well Casing (inches)				_	2	
epth Measurements Performed (PVC	C/Metal)				PVC	/
enth to Bottom from Top of Casing (C	(0.01 ft.) pr	nor to purg	ging	-	12.9	
epth of Water in the Well (gallon)	(0.01 10.)			-		
olume of water in the Well (gallon)			. •			
epth to Water from Top of Casing (0	.01 ft.) af	ter purging	g 1	_		
pth to water from 1 op of Casing (0	.01 IL.) at	time of sa	mping	_	1615	
						Sample
				0		Reading
imber of minutes purged	()					15
(00)	11.0	17.0	16,9	16.8	16.9	16.9
emperature (°C)	1 . 4			5.20	5.00	3.20
emperature (°C) I	5.18	5.18	5,20	10 -11	10.41	10.71
emperature (°C) H ecific Conductance (umhos/cm) ssolved Oxygen (mg/l)	5.18 10.61 3.61	5.18 10.61	10.76	10.76	10.74	2.53
emperature (°C) decific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH)	5.18 10.61 3.61 1230	5.18 10.61 3.61 1230	10.76 Z.57 1230	10.76 2.53 1230	10.74 2.83 1230	2.53
emperature (°C) I ecific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH)	5.18 10.61 3.61 1230	5.18 10.61 3.61 1230	10.76 Z.57 1230	/0.76 2.53 /230	10.76 2.83 1230	2.53 1230
emperature (°C) l ecific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH)	5.18 10.61 3.61 1230	5.18 10.61 3.61 1230	10.76 2.57 1230	/0.76 2.53 /230	/0.76 2.83 /230	10.76 2.53 1230
emperature (°C) H ecific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH)	5.18 10.61 3.61 1230	<u>5.18</u> <u>10.61</u> <u>3.61</u> <u>1230</u> ell Obser	<u>16.76</u> <u>2.52</u> <u>1230</u> vation	/0.76 2.53 /230	/0.74 2.93 /230	2.53 1230
emperature (°C) d becific Conductance (umhos/cm) ssolved Oxygen (mg/l) didation Reduction (eH) brging Equipment ristaltic Pump	5.18 10.61 3.61 1230 Wa	<u>5.1P</u> <u>10.61</u> <u>3.61</u> <u>1230</u> ell Obser	$\frac{16.76}{2.52}$ $\frac{12.30}{2.52}$ vation	/0.76 2.53 /230	/0.74 2.93 /230	10.76 2.53 1230
emperature (°C) decific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH) arging Equipment ristaltic Pump	5.18 10.61 3.61 1230 Wa Od Co	<u>5.19</u> <u>10.61</u> <u>3.61</u> <u>1230</u> ell Obser or <u>Now</u> lor <u>Clea</u>	$\frac{16.76}{12.50}$ vation $\frac{2}{50}$	/0.76 2.53 /230	10.74 2.83 1230	10.76 2.53 1230
ecific Conductance (umhos/cm) ecific Conductance (umhos/cm) ssolved Oxygen (mg/l) tidation Reduction (eH) rging Equipment ristaltic Pump	5./8 10.61 3.61 1230 We Od Co	<u>5.19</u> <u>10.61</u> <u>3.61</u> <u>1230</u> ell Obser for <u>Now</u>	$\frac{3.22}{16.74}$ $\frac{16.74}{2.52}$ 1230 vation $\frac{2}{52}$	/0.76 2.53 /230	10.74 2.93 1230	10.76 2.53 1230

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rwoi Pzm oz	0		Tag:	BA	81-41.33	
Date of Purging: <u>/o/25//2</u> Start Date of Collection: <u>/o/25//2</u> Tin Well Status:	Time: <u>8</u> ne of Coll	:30 Fin lection: <u>8</u>	nish Time: 2:45	<u>8:56</u>	Weather: _	55-60
Good Good Good		Grc Cas Loc	out sing sk			
Good		Obs	structions_		1.4.	
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (C/Metal) 1.01 ft.) pri (0.01 ft.) 1.01 ft.) aft 1.01 ft.) at	ior to purg er purging time of sa	ging g mpling		2 PVC 11.90 	 S ⁻
						Sample Reading
Number of minutes purged	0	3	6	9	12	E
Temperature (°C)	17.4	17.4	17.4	17.4	17.4	17.4
pH	5.59	5.60	5.60	5.61	5.61	5.61
Specific Conductance (umhos/cm)	1616	1616	1615	1615	1615	1615
Dissolved Oxygen (mg/l)	4.42	4.42	4.40	4.40	9.41	4.41
Oxidation Reduction (eH)	930	931	931	750	751	737
		· · · ·				
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge 15 0 mi	We Odd Col	Il Obser	vation 			
Comments:						
Pafaranaa SOD Field 014		ing a statement		a sa a sa	n pade	
Readings were performed on data a	formulie	10 10	130	/ / 2	(Tech -	···)
Readings were performed on date o	1 sampin	ig_ /0		10	(1601 - 7	~)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Chent: Severstal	Site: ROD & WIRE
Well I.D .: RW03 P2M003	Tag: BA 81 2292
Date of Purging: <u>10/25/12</u> Start Time: <u>9:1</u> Date of Collection: <u>10/25/12</u> Time of Collec	Finish Time: <u>9:30</u> Weather: <u>55-60</u> ion: <u>9:25</u>
Well Status:	
Good	Grout
Good	Casing
Good	Lock
Good	Obstructions
Diameter of Wall Cacing (inches)	2
Depth Measurements Performed (PVC/Metal)	2
Depth to Water from Top of Casing (0.01 ft.) prior	to purging 5.72
Depth to Bottom from Top of Casing (0.01 ft.)	
Depth of Water in the Well (gallon)	
Volume of water in the Well (gallon)	
Depth to Water from Top of Casing (0.01 ft.) after	ourging
Depth to Water from Top of Casing (0.01 ft.) at tim	e of sampling <u>5.14</u>
	Sample
Number of minutes purged 0	3 6 9 12
Temperature (°C)	8.5 18.5 18.5 18.5 18.5
nH SAY	They 5.39 5.20 5.37 5.37
Specific Conductance (umhos/cm) 1552 /	02 1602 1600 1601 1601
Dissolved Oxygen (mg/l) 3.10 7	91 2.60 2.60 2.60 2.60
Oxidation Reduction (eH) 576	78 576 575 576 576
Purging Equipment Well	Diservation
Bladder Pump Color	Clear
Rate of Purge 150 millinters / m	nute
Comments:	
Reference SOP Field-014	
Readings were performed on date of sampling	10 / 25 / 12 . (Tech - 74)

Da	-	-	44
NE	DO	11	Ħ

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: RWOZ PZM000			Tag:	BA 81	4138	
Date of Purging: <u>10/25/12</u> Start Date of Collection: <u>10/25/12</u> Tir	Time: <u>9</u> ne of Col	45 Fi llection:	nish Time 10:00	: 10:05	Weather:	60-55
Well Status:						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck	i.		
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	C/Metal)				PVC	
Depth to Water from Top of Casing (I).01 ft.) pi	rior to pur	ging		6.70	>
Depth to Bottom from Top of Casing	(0.01 ft.)			1.		
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing ((0.01 ft.) af	ter purgin	g			
Depth to Water from Top of Casing (.01 ft.) at	time of sa	mpling		6.48	3
						Sample
Number of minutes purged	0	3	6	9	12	Reading
Temperature (°C)	18.6	18.1.	18.1	18.6	18.6	12 18 6
pH	6.10	6.11	6.12	1.13	6.13	6,13
Specific Conductance (umhos/cm)	866	867	867	867	867	867
Dissolved Oxygen (mg/l)	4.18	410	4.06	4.06	4.06	4.06
Oxidation Reduction (eH)	631	630	631	631	631	631
Burging Fouinment	XX7.	U Ohaan	mation			
Peristaltic Pump	Od	or day	vation z			
Bladder Pump	Co	lor Man	0			
	00	IOI CIER	<u></u>			
Rate of Purge m	lliliters	minute				
Comments:						
Reference SOP Field-014						
Readings were performed on date of	f samplin	ng 10	125	1 12	(Tech - 7	ГН)

					Report #_	
Mic	roboo	Labor	ntorias	Inc		
Groun	dwate	Pr Mon	itoring I	liic.		
Gioui	uwan		noring i	cepon		
Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: RW 07 PZW 004			Tag:	BAS	4-5711	
Date of Purging: 10/25/14 Start T	ime: 10	do Fin	nish Time	11100	Weather:	55-60
Date of Collection: 10/25/12 Time	of Col	lection: 1	055		_	2 101
W-11 Oct						
well Status:						
Good		Gro	out			
Good		Cas	ing			
Good		Loc	:k			
Good		Obs	structions			
Diameter of Well Casing (inches)					R	
Depth Measurements Performed (PVC/	Metal)			<u> </u>	PVC	
Depth to Water from Top of Casing (0.0	1 ft.) pr	ior to purg	ging	-	8,36	
Depth to Bottom from rop of Casing (0 Depth of Water in the Well (gallon)	.01 II.)			-		
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing (0.0	1 ft.) af	ter purging	3		7 2 4	
Depth to water from 1 op of Casing (0.0	1 II.) al	ume of sa	mpung		(198	
						Sample
	0			0	10	Reading
Number of minutes purged	()	3	6	9	12	15
nH	7.89	7.19	7,89	7,89	7,89	7,84
Specific Conductance (umhos/cm)	937	948	954	954	954	954
Dissolved Oxygen (mg/l)	2.50	2.41	2,39	2.39	2.35	2.39
Oxidation Reduction (eH)	071	1070	1670	1070	1010	1070
Purging Equipment	We	ell Obser	vation			
Peristaltic Pump	Od	or				
Bladder Pump	Col	lor				
Rate of Purge 150 mill	iliters /	minute				
				4		
Comments:					-	
Reference SOP Field-014			,		(TD 1	
Readings were performed on date of	samplii	ng /0	25	12.	(Tech – 🗡)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: RW08 PZM003			Tag:	BA 81	2488	
Date of Purging: 10/25/12 Start	Time: 12	150 Fi	nish Time:	13:10	Weather: _	55-60
Date of Collection: 10/25/12 Tim	e of Col	lection: _	3:05	1.22		
Well Status:						
Good		Gro	out			
Good		Cas	ing			
Good		Loc	.k			
Good		Obs	structions			
					2	
Diameter of Well Casing (inches)	() (at a 1)			-	2	
Depth Measurements Performed (PVC	(1) (1)	ion to mun	ina	-	FVC	· · · · · ·
Depth to Water from Top of Casing (0	0.01 + 0.01 +	ior to purg	ing		6.17	
Depth of Water in the Well (gallon)	0.01 11.)					
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing (0.	.01 ft.) af	ter purging	Y	-		
Depth to Water from Top of Casing (0.	.01 ft.) at	time of sa	mpling	0.	6.02	
						Sample
						Reading
Number of minutes purged	()	3	6	9	12	
Temperature (°C)	20.3	20.2	2012	20.2	20.2	20,2
pH	4.96	4.96	4.95	4.95	4.95	4.95
Specific Conductance (umhos/cm)	1660	1663	1663	1663	1663	1663
Dissolved Oxygen (mg/l)	2.80	2,37	2,37	2,37	2.37	2.37
Oxidation Reduction (eH)	488	488	487	487	487	487
Purging Equipment	We	ell Obser	vation			
Peristaltic Pump	Od	or Newe				
Bladder Pump	Col	lor Clean	د			
Rate of Purge 150 mi	lliliters /	minute				
	12.					
Comments:		2			<u>.</u>	
	<u></u>					
Reference SOP Field-014	<u> </u>			,	(75) 1	
Readings were performed on date of	t samplin	ng 10		12.	(lech - 7	

D		.11	
R	enort	II	
17	CDOIL	TT	

Well 1.D: <u>262 06 72× 001</u> Tag: <u>BA 81 7535</u> Date of Purging: <u>10/25/12</u> Start Time: <u>1312 0</u> Finish Time: <u>1350</u> Weather:	Client: Severstal			Site:	ROD	& WIRE	
Date of Purging: <u>col25/2</u> . Start Time: <u>13:20</u> Finish Time: <u>13:40</u> Weather: Date of Collection: <u>col25(c.</u> Time of Collection: <u>13:35</u> Well Status: Good	Well I.D.: <u>Lur 06 PZM 001</u>			Tag:	BA 81	7935	
Well Status: Good	Date of Purging: <i>Lolosha</i> Start Time Date of Collection: <i>Jolosha</i> Time of	ne: <u>/3</u> of Col	3:20 Fin lection:	nish Time 13:35	1340	Weather: _	
Good Grout Good Casing Good Lock Good Obstructions Diameter of Well Casing (inches) ? Depth Measurements Performed (PVC/Metal) ?VC Depth to Water from Top of Casing (0.01 ft.) prior to purging 7.73 Depth to Water in the Well (gallon)	Well Status:						
Good	Good		Gro	out			
Good	Good		Cas	ing	a ta daga da ang sa		
Good Obstructions Diameter of Well Casing (inches) ?VC Depth Measurements Performed (PVC/Metal) ?VC Depth to Water from Top of Casing (0.01 ft.) prior to purging ?r.73 Depth of Water in the Well (gallon)	Good		Loc				
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to purging Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) at time of sampling T.64/ Sample Number of minutes purged 0 3 6 9 12 15 Temperature (°C) 20.7 20.0	Good		Obs	structions			
Dianteer of wen Casing (incres)	Diamater of Wall Casing (inches)						
Depth to Water from Top of Casing (0.01 ft.) prior to purging 7.73 Depth to Bottom from Top of Casing (0.01 ft.)	Depth Measurements Performed (PVC/M	etal)				a	
Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Depth to Water from Top of Casing (0.01 ft.) after purging Number ôf minutes purged 0 Sample Sample Reading 20.7 Z0.0 Z0.0 Z0.7 Z0.0 Z0.7 Z0.0 Z0.7 Z0.0 Z0.7 Z0.0 Z0.7 Z0.0 Z0.7 Z0.0	Depth to Water from Top of Casing (0.01	ft) pr	ior to pure	rinα	-	7.73	
Depth of Water in the Well (gallon)	Depth to Bottom from Top of Casing (0.0	1 ft.)	ion to purg		-		
Volume of water in the Well (gallon)	Depth of Water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	Volume of water in the Well (gallon)						
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 7.64 Sample Reading 0 3 6 9 12 15 Reading 20.7 20.0	Depth to Water from Top of Casing (0.01	ft.) afi	ter purging	1			
Number of minutes purged 0 3 6 9 12 15 Temperature (°C) 20.7 20.0 <td< td=""><td>Depth to Water from Top of Casing (0.01</td><td>ft.) at</td><td>time of sa</td><td>mpling</td><td>11.12-</td><td>7.64</td><td></td></td<>	Depth to Water from Top of Casing (0.01	ft.) at	time of sa	mpling	11.12-	7.64	
Temperature (°C) ZO.Z ZO.O Zo.	Number of minutes nurged	0	3	6	0	12	Sample Reading
PH 5.81 5.74 5.71 <	Temperature (°C)	07	700			12	74
print print <td< td=""><td>nH</td><td>81</td><td>5711</td><td>571</td><td>20.0</td><td>571</td><td>20.0</td></td<>	nH	81	5711	571	20.0	571	20.0
Dissolved Oxygen (mg/l) 3.80 3.22 3.20 3.20 3.20 3.20 Oxidation Reduction (eH) 2550 1550 1550 1550 1550 1550 1550 Purging Equipment Peristaltic Pump Odor Bladder Pump Color Rate of Purge milliliters / minute Comments: Reference SOP Field-014	Specific Conductance (umbos/cm) 9	14	913	913	3.11	412	9/2
Dissolved Oxygen (hg/l) Oxidation Reduction (eH) Image: State St	Dissolved Oxygen (mg/l)	80	2 77	770	7/3	112	3 70
Purging Equipment Well Observation Peristaltic Pump Odor Bladder Pump Color Rate of Purge	Oxidation Reduction (eH)	50	1550	1550	1550	1550	1550
Purging Equipment Well Observation Peristaltic Pump Odor Bladder Pump Color Rate of Purge			1030	1000	1330	/000	
Bladder Pump Bladder Pump Color Rate of Purge milliliters / minute Comments: Reference SOP Field-014	Purging Equipment	We	ell Obser	vation			
Rate of Purge	Bladder Pump	Cal	01				
Rate of Purge		CO					
Comments:	Rate of Purge millili	iters /	minute				
Reference SOP Field-014	2		-				
Reference SOP Field-014	Comments:						
Reference SUP Field-014	Reference SOR Field 014		<u>.</u>				
	Keierence SOP Field-014			1		·····	

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: Rw07 PZM 017	1 200		Tag:	BA 81	4132	
Date of Purging: <u>20/25/17</u> Start Date of Collection: <u>20/25/12</u> Tim	Time: <u>/</u> ne of Col	/:/> Fir lection: _	nish Time 11: 15 25	30 	Weather:	55-60
Well Status:						
Good		Gro	ut			
Good		Cas	ing			
Good		Loc	k			
Good		Obs	tructions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (0 Depth to Bottom from Top of Casing (Depth of Water in the Well (gallon) Volume of water in the Well (gallon)	C/Metal) 0.01 ft.) pr (0.01 ft.)	ior to purg	ing		2 PVC J2, ·	46
Depth to Water from Top of Casing (0	.01 ft.) af	ter purging	5			
Depth to Water from Top of Casing (0	.01 ft.) at	time of sa	mpling	-	12,	3/
Number of minutes purged Temperature (°C) pH Specific Conductance (umhos/cm) Dissolved Oxygen (mg/l)	() 17.7 3.83 3.24 2.78	3 17,6 4.03 3.23 2.65	6 17.6 4.20 3.23 2.60	9 1716 4120 3.23 2.60	12 /7.6 4.20 3.23 2.60	Sample Reading /7.6 4/20 3.2.3 2.60
Oxidation Reduction (eH)	927	925	926	926	926	926
Purging Equipment Peristaltic Pump Bladder Pump Rate of Purge	We Od Co	ell Obser or <u>Nowé</u> lor <u>Clear</u>	vation			
Comments:						
Reference SOP Field-014 Readings were performed on date of	of samplin	ng /0	1 25	1_12	(Tech -	TH)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	Site: ROD & WIRE
Well I.D .: Rw10 Prn 020	Tag: sbes 27
Date of Purging: <u>10/25/12</u> Start Time: <u>1350</u> Date of Collection: <u>10/25/12</u> Time of Collection	_ Finish Time: <u>1410</u> Weather: <u>5-60</u> on: <u>1405</u>
Well Status:	
Good	Grout
Good	Casing
Good	Lock
Good	Obstructions
Diameter of Well Casing (inches) Depth Measurements Performed (PVC/Metal) Depth to Water from Top of Casing (0.01 ft.) prior to Depth to Bottom from Top of Casing (0.01 ft.) Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (0.01 ft.) after p Depth to Water from Top of Casing (0.01 ft.) at time	e of sampling 7.55 Sample
Number of minutes purged	Reading 3 6 9 12
Temperature (°C) 18.4	9.4 18.0 18.0 18.0 18.0
$\begin{array}{c} \text{pH} \\ \underline{5.34} \\ \underline{5.34} \\ 3.37 \\ 3.$	34 5.35 5.35 6.33 5.35
Dissolved Ovugen (mg/l)	$\frac{11}{3,95}$ $\frac{3,95}{270}$ $\frac{3,75}{3,75}$ $\frac{3,75}{3,75}$
Oxidation Reduction (eH) 408 4	22 5.20 5.20 5.20 5.20 5. 408 408 408 408
	100 100 100
Purging Equipment Well O Peristaltic Pump Odor _ Bladder Pump Color _	Ubservation Nove Clear
Rate of Purge milliliters / mil	<u>aute</u>
Comments:	
Reference SOP Field-014	
Readings were performed on date of sampling	<u>10 / 25 / 12</u> . (Tech - 74)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	S	ite: ROD &	WIRE
Well I.D .: TSout PZM 023	Т	ag: NO TAS	on street level
Date of Purging: 11/2/12 Start Time	\$130 Finish T	me KCO We	ather 55-50 man
Date of Collection: <u><i>ulzliz</i></u> Time of (Collection: 845		denor. 00 00 corve
Well Status:			
wen status.			
Good	Grout		
Good	Casing_		
Good	Lock		
Good	Obstructi	ons	
Diameter of Well Casing (inches)			2
Depth Measurements Performed (PVC/Meta)		PVC
Depth to Water from Top of Casing (0.01 ft.	prior to purging		10.53
Depth to Bottom from Top of Casing (0.01 f	.)		
Depth of Water in the Well (gallon)			
Depth to Water from Top of Casing (0.01 ft)	after purging		
Depth to Water from Top of Casing (0.01 ft.	at time of sampling		9.61
			Sample
Number of minutes purged 0	2 6	0	Reading
Tomper of minutes purged	<u> </u>		12 176
	U 1.40 1.3	8 1.38	20 1.38
Specific Conductance (umbos/cm) 7/1	1 7161 716	2 711.2 2	21/3 211.3
Dissolved Oxygen (mg/l)	4.01 3.9	3.96	5.96 3.96
Oxidation Reduction (eH) 140	140 140	140	140 140
-			
	Number -		
Purging Equipment	Well Observation		
Peristaltic Pump	Idor Nove		
Bladder Pump	Color <u>NARK</u>		
Rate of Purge /50 millilite	rs / minute		
		- 14	
Comments:			
continents		A start	
Reference SOP Field-014			
Readings were performed on date of sam	oling // / :	1/12 . (T	ech - 74)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		Site:	ROD	& WIRE	
Well I.D .: TSout Pzur 023		Tag:	NO TA	g on s	freet level
Date of Purging: 11/2/12 Start Time:	8130 Fin	ish Time	\$50	Weather:	55-50 mail
Date of Collection: <u><i>ulzliz</i></u> Time of Co	ollection: 8	45	0.30	i oution _	23 30 00/4
Well Status					
wen status.					
Good	Grou	ut	4		
Good	Casi	ng			
Good	Lock	s >			
Good	Obst	tructions			
Diameter of Well Casing (inches)				2	
Depth Measurements Performed (PVC/Metal)				PVC	
Depth to Water from Top of Casing (0.01 ft.)	prior to purgi	ing		10.53	5
Depth to Bottom from Top of Casing (0.01 ft.)			-		
Volume of water in the Well (gallon)			-		
Depth to Water from Top of Casing (0.01 ft.)	after purging		Sec. 1		
Depth to Water from Top of Casing (0.01 ft.) a	at time of san	npling		9.61	Sec. 2. all
Number of minutes purged	3	_6	9	12	Sample Reading
Temperature (°C)	18.3	18.3	18.0	17.9	17.9
рН <u>6.44</u>	6.40	6.38	6.38	6.38	6.38
Specific Conductance (umhos/cm) ZIGG	2166	2163	2163	2163	2163
Dissolved Oxygen (mg/l) <u>4.61</u>	4.01	3.96	3,96	3.96	3,96
Oxidation Reduction (eff) <u>770</u>	140	140	140	140	_140
5	Warten .				
Purging Equipment V	Vell Observ	ation			
Peristaltic Pump O	dor Nove	_			
Bladder Pump C	olor <u>NARE</u>	_			
Rate of Purge milliliters	<u>/ minute</u>				
		1	-		
Comments:	-		- 1		<u> </u>
Reference SOP Field-014		100	5	1.3	
			1	(77) 1	

Re	port	#	
	P		

			1 40	<u>nue</u>	27 00	7/20000
Date of Purging: <u>11/2/12</u> Star	t Time: _	115 F	inish Time	: 1135	Weather:	50-55
Date of Collection: <u>11/2/12</u> Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					-)
Depth Measurements Performed (PV	C/Metal)				P	UC
Depth to Water from Top of Casing (0.01 ft.) p	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)					
Depth of Water in the Well (gallon)				-		
Volume of water in the Well (gallon)						
Depth to Water from Top of Casing (0.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	impling	-	4,24	
						Sample Reading
lumber of minutes purged			6	9	_12_	
emperature (°C)	18.7	18,7	18.5	1815	18.5	18,5
Н	8.90	8.90	7.01	6.34	6.34	6.30
pecific Conductance (umhos/cm)	844	840	977	978	978	978
Dissolved Oxygen (mg/l)	2.26	2.20	1.41	1.40	1.40	1.40
ixidation Reduction (eH)	300	301	297	257	287	297
urging Equipment	W	ell Obser	vation			
eristaltic Pump	Od	or Nove	5			
	Co	lor clea	R			
ladder Pump	0					
ladder Pump	CO					
ate of Purge m	illiliters /	minute				
ate of Purge m	illiliters /	<u>minute</u>				
ate of Purge m	illiliters /	<u>minute</u>				
ate of Purge mments:	illiliters /	<u>minute</u>				

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	Site:	ROD & WIRE	<u> </u>
Well I.D .: TSOU PZM 023	Tag:	NO TAS ON S	freet level
Date of Purging: 11/2/17 Start Time	8:30 Finish Time	: \$50 Weather:	55-50 wash
Date of Collection: <u><i>ulaliz</i></u> Time of (Collection: 845		
Well Status:			
Good	Grout		
Good	Casing		
Good	Lock		
Good	Obstructions		
Diameter of Well Casing (inches)		2	
Depth Measurements Performed (PVC/Meta	1)	PVC	
Depth to Water from Top of Casing (0.01 ft.	prior to purging	10.53	5
Depth to Bottom from Top of Casing (0.01 f)		
Depth of Water in the Well (gallon)			
Volume of water in the Well (gallon)			
Depth to Water from Top of Casing (0.01 ft.	after purging	9/1	
Depth to water from rop of Casing (0.01 ft.	at time of sampling		and the second second
			Sample Reading
Number of minutes purged	6	9 12	
Temperature (°C)	5 18.3 18.3	18.0 17.9	17.9
pH <u>6.4</u>	4 6.40 6.38	6.38 6.38	6.38
Specific Conductance (umhos/cm) ZIG	6 2166 2163	2163 2163	2163
Dissolved Oxygen (mg/l)	4.01 3.96	3.96 5.96	3,96
Oxidation Reduction (eH) <u>140</u>	140 140	140 140	140
Purging Equipment	Well Observation		
Peristaltic Pump	Odor None		
Bladder Pump	Color NARK		
Rate of Purge 150 millilite	rs / minute		
Commentai			
Comments:		- Value	
Reference SOP Field-014		S. States	
and and and the back of a start of the start			

Re	port	#	
	P		

Date of Purging: 11/2/12 Star	t Time: 1	115 F	inish Time	: 1135	Weather:	50-55
Date of Collection: 1/2/12 Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions	<u>.</u>		
Diameter of Well Casing (inches)					-	,
Depth Measurements Performed (PV	C/Metal)				P	uc
Depth to Water from Top of Casing ((0.01 ft.) p	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)	1				
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	mpling	-	4,24	
Number of minutes nurged	0	2	6	0	12	Sample Reading
Comparature (°C)	18.7	18-1	185	180	14	105
	1011	10,1	10.5	1015	10.0	1813
n nasifia Conductorus (umbas/am)	8.70	\$ 190	1.01	6.54	6139	6.30
Seedler L Orductance (uninos/cm)	344	840	417	978	718	118
historice Daygen (mg/l)	2.06	shido_	1.91	1.40	1140	1.90
xidation Reduction (eH)	200	301	297	297	287	297
urging Equipment	We	ell Obser	vation			
eristaltic Pump	Od	OF North	5			
ladder Pump	Co	lor clea	x			
	illiliters /	minute				
ate of Purge <u>150 m</u>						
ate of Purge <u>150 m</u>						

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	2		Site:	ROD	& WIRE	
Well I.D .: RLO 18 PZM 04-	7		Tag:	BA 81	4995	
11						
Date of Purging: 11/2/12 Start	Time: 1	045 Fi	nish Time	11:05	Weather:	55-50
Date of Collection: <u>11/2/12</u> Tir	ne of Co	llection:	11:00	-		
Well Status:						
Wen Status.						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions		-	
					2	
Depth Measurements Performed (PV(Metal)			-	PVI	
Depth to Water from Top of Casing (0.01 ft	rior to pur	nna	-	10.4	4
Depth to Bottom from Top of Casing	(0.01 ft.)	nor to pur	Pare B	1		
Depth of Water in the Well (gallon)				-		
Jolume of water in the Well (gallon)						
Depth to Water from Top of Casing ((0.01 ft.) at	fter purgin	g			
Depth to Water from Top of Casing ((0.01 ft.) at	time of sa	mpling	_	8.40	4
Number of minutes purged	0	3	6	9	12	Sample Reading
uperature (C)	10.1	1.118	1. 22	1.20	130	1 20
n	6.50	6170	Chil	6.30	500	505
Discolved Ovygen (mg/l)	301	200	7.00	3.88	2.33	3.85
)xidation Reduction (eH)	320	219	319	317	317	317
		J				
urging Fauinment	W.	all Obser	vetion			
eristaltic Pump	Od	or day	valion			
laddar Dump	Co	lor 11	<u>c</u>			
	cu	IOI LICA	10			
ate of Purge mi	lliliters	minute				
omments: No Car						
Canada and a second second						
eference SOP Field-014	1					
eadings were performed on date o	f sampli	ng //	1 2	1 12 .	(Tech - 7	· 🕰)

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	Site:	ROD & WIRE	<u> </u>
Well I.D .: TSOU PZM 023	Tag:	NO TAS ON S	freet level
Date of Purging: 11/2/17 Start Time	8:30 Finish Time	: \$50 Weather:	55-50 wash
Date of Collection: <u><i>ulaliz</i></u> Time of (Collection: 845		
Well Status:			
Good	Grout		
Good	Casing		
Good	Lock		
Good	Obstructions		
Diameter of Well Casing (inches)		2	
Depth Measurements Performed (PVC/Meta	1)	PVC	
Depth to Water from Top of Casing (0.01 ft.	prior to purging	10.53	5
Depth to Bottom from Top of Casing (0.01 f)		
Depth of Water in the Well (gallon)			
Volume of water in the Well (gallon)			
Depth to Water from Top of Casing (0.01 ft.	after purging	9/1	
Depth to water from rop of Casing (0.01 ft.	at time of sampling		and the second second
			Sample Reading
Number of minutes purged	6	9 12	
Temperature (°C)	5 18.3 18.3	18.0 17.9	17.9
pH <u>6.4</u>	4 6.40 6.38	6.38 6.38	6.38
Specific Conductance (umhos/cm) ZIG	6 2166 2163	2163 2163	2163
Dissolved Oxygen (mg/l)	4.01 3.96	3.96 5.96	3,96
Oxidation Reduction (eH) <u>140</u>	140 140	140 140	140
Purging Equipment	Well Observation		
Peristaltic Pump	Odor None		
Bladder Pump	Color NARK		
Rate of Purge 150 millilite	rs / minute		
Commentai			
Comments:		- Value	
Reference SOP Field-014		S. States	
and and and the back of a start of the start			

Re	port	#	
	P		

Date of Purging: 11/2/12 Stat	t Time: 1	115 F	inish Time	: 1135	Weather:	50-55
Date of Collection: 1/2/12 Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions	<u>.</u>		
Diameter of Well Casing (inches)					-	,
Depth Measurements Performed (PV	C/Metal)				P	uc
Depth to Water from Top of Casing ((0.01 ft.) p	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)	1				
Depth of Water in the Well (gallon)				1		
Volume of water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	mpling	-	4,24	
Number of minutes nurged	0	2	6	0	12	Sample Reading
Comparature (°C)	18.7	18-1	185	180	14	105
	1011	10,1	10.5	1015	10.0	1813
n nasifia Conductorus (umbas/am)	8.70	\$ 190	1.01	6.54	6139	6.30
Seedler L Orductance (uninos/cm)	344	840	417	978	718	118
historice Daygen (mg/l)	2.06	shido_	1.91	1.40	1140	1.90
xidation Reduction (eH)	200	301	297	297	287	297
urging Equipment	We	ell Obser	vation			
eristaltic Pump	Od	OF North	5			
ladder Pump	Co	lor clea	x			
	illiliters /	minute				
ate of Purge <u>150 m</u>						
ate of Purge <u>150 m</u>						

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	2		Site:	ROD	& WIRE	
Well I.D .: RLO 18 PZM 04-	7		Tag:	BA 81	4995	
11						
Date of Purging: 11/2/12 Start	Time: 1	045 Fi	nish Time	11:05	Weather:	55-50
Date of Collection: <u>11/2/12</u> Tir	ne of Co	llection:	11:00	-		
Well Status:						
Wen Status.						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions		-	
					2	
Depth Measurements Performed (PV(Metal)			-	PVI	
Depth to Water from Top of Casing (0.01 ft	rior to pur	nna	-	10.4	4
Depth to Bottom from Top of Casing	(0.01 ft.)	nor to pur	Pare B	1		
Depth of Water in the Well (gallon)				-		
Jolume of water in the Well (gallon)						
Depth to Water from Top of Casing ((0.01 ft.) at	fter purgin	g			
Depth to Water from Top of Casing ((0.01 ft.) at	time of sa	mpling	_	8.40	4
Number of minutes purged	0	3	6	9	12	Sample Reading
uperature (C)	10.1	1.118	1. 22	1.20	130	1 20
n	6.50	6170	Chil	6.30	500	505
Discolved Ovygen (mg/l)	301	200	7.00	3.88	2.33	3.85
)xidation Reduction (eH)	320	219	319	317	317	317
		J				
urging Fauinment	W.	all Obser	vetion			
eristaltic Pump	Od	or day	valion			
laddar Dump	Co	lor 11	<u>c</u>			
	cu	IOI LICA	10			
ate of Purge mi	lliliters	minute				
omments: No Car						
Canada and a second second						
eference SOP Field-014	1					
eadings were performed on date o	f sampli	ng //	1 2	1 12 .	(Tech - 7	· 🕰)

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal Well I.D.: Rw 19 PZM OC	00		Site Tag	ROD BA S	& WIRE	,
Date of Purging: <u>///2//2</u> Start Date of Collection: <u>///2//2</u> Tir	Time: 1 ne of Co	ois Fi	nish Time 103 0	: 10:35	Weather:	55-60
Well Status:						
Good		- Gr	out			
Good	*	Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	C/Metal)				PU	C
Depth to Water from Top of Casing (().01 ft.) p	rior to pur	ging	-	8.6	6
Depth to Bottom from Top of Casing	(0.01 ft.)			e		
Volume of water in the Well (gallon)				-		
Depth to Water from Top of Casing ((.01 ft.) at	fter purgin	g			
Depth to Water from Top of Casing ((.01 ft.) at	time of sa	mpling	-	8.4	1
						Sample Reading
Number of minutes purged				9	12	15
Temperature (°C)	1810	18.0	18.0	11.8	17.8	11.8
oH	1.05	1.05	1.07	1.10	1.10	840
Dissolved ()vygen (mg/l)	2.91	200	2 60	2.80	2,88	2.85
Oxidation Reduction (eH)		2:90	2,10	2103	2700	
urging Equipment	W	ell Obser	vation			
eristaltic Pump	Od	or Nauce	Ŧ			
Bladder Pump	Co	lor <u>Cler</u>	n			
Rate of Purge <u>150 mi</u>	lliliters	minute				
comments:						
eference SOP Field-014	-					
eadings were performed on date o	f samplin	ng //	12	112	(Tech	()

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	<u></u>
Well I.D .: 1504 PZM 023			Tag:	NO TA	5 ON S	freet level
Date of Purging: 11/2/12 Start	Time: 🛠	130 Fit	nish Time	. ***	Weather:	55-50 math
Date of Collection: <u><i>ulaliz</i></u> Tir	ne of Col	lection:	845		in outlion _	
Well Status:						
Good		Gro	out	12		
Good		Cas	sing			
Good		Loc	ck			
Good		Obs	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PV)	C/Metal)			1	PVC	
Depth to Water from Top of Casing (0.01 ft.) pr	ior to purg	ging		10.53	5
Depth to Bottom from Top of Casing	(0.01 ft.)			-		
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)	0.01.6.)			100		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	malina	195	911	
Depth to water nom rop or easing (0.01 n.) at	unic of sa	mpning	-	1.61	CALCE NO. AND
	and the second					Sample
						Reading
Number of minutes purged			6	9		
Temperature (°C)	18.5	18.3	18.3	18.0	17.9	17.9
pH	6.44	6.40	6.38	6.38	6.38	6.38
Specific Conductance (umhos/cm)	2166	2166	2163	2163	2163	2163
Dissolved Oxygen (mg/l)	4.01	4.01	5.96	3,96	5.96	3,96
Oxidation Reduction (eH)	140	140	140	140	140	140
and the second						
Purging Equipment	W	ell Obser	vation			- 25
Peristaltic Pump	Od	or Nous	2			
Bladder Pump	Co	lor AARK	2			
100						
Rate of Purge 150 m	illiliters	minute				
	-	1	1000			
Comments:				1		
Peterenes SOP Field 014	-		-05			
Reference SUP Field-014	of complia	na 11	12	1	(Tech -	
Readings were performed on date (or sampli	ng		16.	(1001-7	-

Re	port	#	
	P		

Date of Purging: 11/2/12 Stat	t Time: 1	115 F	inish Time	: 1135	Weather:	50-55
Date of Collection: 1/2/12 Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions	<u>.</u>		
Diameter of Well Casing (inches)					-	,
Depth Measurements Performed (PV	C/Metal)				P	uc
Depth to Water from Top of Casing ((0.01 ft.) p	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)	1				
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	mpling	-	4,24	
Number of minutes nurged	0	2	6	0	12	Sample Reading
Comparature (°C)	18.7	18-1	185	180	14	105
	1011	10,1	10.5	1015	10.0	1813
n nasifia Conductorus (umbas/am)	8.70	\$ 190	1.01	6.54	6139	6.30
Seedler L Orductance (uninos/cm)	344	840	417	978	718	118
nssolved Oxygen (mg/l)	2.06	did0	1.91	1.40	1140	1.90
xidation Reduction (eH)	200	301	297	297	287	297
urging Equipment	We	ell Obser	vation			
eristaltic Pump	Od	OF North	5			
ladder Pump	Co	lor clea	x			
	illiliters /	minute				
ate of Purge <u>150 m</u>						
ate of Purge <u>150 m</u>						

Microbac Laboratories, Inc. Groundwater Monitoring Report

Chent. Seversiai			Site:	ROD	& WIRE	
Well I.D .: RLO 18 PZM 047	7		Tag:	BA 81	4995	
11						
Date of Purging: 11/2/12 Start	Time: 1	045 Fi	nish Time	11:05	Weather:	55-50
Date of Collection: <u>11/2 112</u> Tir	ne of Co	llection: _	11:00	-		
Well Status						
wen Status.						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			
Good		Ob	structions		-	
					-	
Diameter of Well Casing (inches)	Metal			1	011	
Depth to Water from Top of Casing ((01 ft)	rior to pur	ning	-	10.4	4
Depth to Water from Top of Casing ((0.01 ft)	nor ur pur	Sing	-	7011	
Depth of Water in the Well (gallon)	(0.01 10.)			-		
Jolume of water in the Well (gallon)						
Depth to Water from Top of Casing (01 ft) at	fer nurgin	a			
Depth to Water from Top of Casing ((01 ft) at	time of ea	molina		8.40	+
septi to water nom rop to cating to		citite of the	and and			
						Sample
	~					Reading
Number of minutes purged		3	6	9	12	1- 1
emperature (°C)	18.1	17.4	17.8	11.8	11.8	17.8
H	6.50	6.48	6.33	6.30	6.30	6.30
pecific Conductance (umhos/cm)	501	300	504	505	305	305
Dissolved Oxygen (mg/l)	3.91	3.90	3.90	3.88	3:88	5.85
idation Reduction (eH)	320	319	319	317	3/7	317
urging Equipment	W	ell Obser	vation			
eristaltic Pump	Od	or Non	E			
ladder Pump	Co	lor llen	n			
ate of Purge mi	lliliters	minute				
omments No Car						
oninents. No crip						
the second s						
eference SOP Field-014						

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal Well I.D.: Rw 19 PZM OC	00		Site Tag	ROD BA S	& WIRE	,
Date of Purging: <u>///2//2</u> Start Date of Collection: <u>///2//2</u> Tir	Time: 1 ne of Co	ois Fi	nish Time 103 0	: 10:35	Weather:	55-60
Well Status:						
Good		- Gr	out			
Good	*	Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	C/Metal)				PU	C
Depth to Water from Top of Casing (().01 ft.) p	rior to pur	ging	-	8.6	6
Depth to Bottom from Top of Casing	(0.01 ft.)			e		
Volume of water in the Well (gallon)				-		
Depth to Water from Top of Casing ((.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing ((.01 ft.) at	time of sa	impling	-	8.4	1
						Sample Reading
Number of minutes purged			6	9		15
Temperature (°C)	1810	18.0	18.0	11.8	17.8	11.8
oH	7.05	1.05	7.09	1.10	1.10	840
Specific Conductance (umnos/cm)	2 01	396	2 60	2.00	2.80	7.88
Oxidation Reduction (eH)	6191	2:40	2,70	2188	2100	2705
urging Equipment	W	ell Obser	vation			
'eristaltic Pump	Od	or Nauce	5			
lladder Pump	Co	lor <u>Clea</u>	n			
Rate of Purge <u>150 mi</u>	lliliters	minute				
comments:	1					
eference SOP Field-014	-					
eadings were performed on date o	f sampli	ng //	12	1/2	(Tech	(*)

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		_	Site:	ROD	& WIRE	
Well I.D.: 1210 15 PZM 056			Tag:	BA 8	4978	1
Data of Puncing islate Star	T:	ICO T	· 1 m		XX 7 41	
Date of Collection: 1/2/12 Start	1 ime: 7	logion:	nish lime	10:10	weather:	55-50
Date of Conection. <u>metre</u> 11			10:05			
Well Status:						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	(Metal)				PVC	
Depth to Water from Top of Casing (().01 ft.) pr	rior to pur	ging	1	14.	47
Depth to Bottom from Top of Casing	(0.01 ft.)					
Depth of Water in the Well (gallon)				-		
Volume of water in the Well (gallon)	01 ft) of	for purgin	a	-		
Depth to Water from Top of Casing (C	0.01 ft. at	time of sa	g Impling		14.	00
	Carl and an		1 6	-		
Stra Walt						Sample
Number of minutes purged	0	3	6	9	12	Reading
Temperature (°C)	17.9	17.8	17.9	17.5	17.9	17.9
oH	5.55	5.55	5.53	5,52	5.52	5.52
Specific Conductance (umhos/cm)	9.46	9,40	9.40	9,41	9.41	9.41
Dissolved Oxygen (mg/l)	3.14	3.14	3:12	3:12	3,12	3.12
Dxidation Reduction (eH)	740	740	741	741	741	741
			-			
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	or Nout	E			
Bladder Pump	Co	lor <u>Clea</u>	in			
Rate of Purge m	illiliters	/ minute				
comments:	6			- 		
	-					
eference SOP Field-014	0	Der Masse			(TT) 1	
eadings were performed on date of	a sampli	ng 11	2	12.	$(1 \operatorname{ech} - \tau)$	14)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		Site:	ROD	& WIRE	<u></u>
Well I.D .: TSout PZM 023		Tag:	NO TA	5 ON S	treet level
Date of Purging: <i>ulaliz</i> Start Time:	8130 Finish	Time	\$50	Weather:	55-50 mal
Date of Collection: <u><i>ulzliz</i></u> Time of Co	ollection: 84	5	0.30	i outifor.	45 5 Cory
Well Status:					
wen status.					
Good	Grout				
Good	Casing				
Good	Lock _		-		
Good	Obstru	ctions.			
Diameter of Well Casing (inches)				2	
Depth Measurements Performed (PVC/Metal)				PVC	
Depth to Water from Top of Casing (0.01 ft.)	prior to purging			10.53	5
Depth to Bottom from Top of Casing (0.01 ft.)			-		
Volume of water in the Well (gallon)			-		
Depth to Water from Top of Casing (0.01 ft.)	after purging		Sec. 1		
Depth to Water from Top of Casing (0.01 ft.) :	at time of sampl	ling		9.61	1
Number of minutes purged	3	6	9	12	Sample Reading
Temperature (°C)	18.3 1	8.3	18.0	17.9	17.9
рН <u>6.44</u>	6.40 6	. 38	6.38	6.38	6.38
Specific Conductance (umhos/cm) 2/66	2166 2	163	2163	2165	2163
Dissolved Oxygen (mg/l) <u>7.61</u>	4.01 5	140	3196	3.46	3,96
Oxidation Reduction (err) <u>770</u>	140 1	40	140	140	140
	Sur the				
Purging Equipment V	Vell Observat	ion			
Peristaltic Pump O	dor Nove				
Bladder Pump C	olor <u>NAKE</u>				
Rate of Purge 150 milliliter	<u>/ minute</u>				
	-	13			
Comments:			1		A
Reference SOP Field-014		5	5	-	
Pandings wars performed on date of comp	ling 11	17	1	(Tech -	4

Re	port	#	
	P		

Date of Purging: 11/2/12 Stat	t Time: 1	115 F	inish Time	: 1135	Weather:	50-55
Date of Collection: 1/2/12 Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions	<u>.</u>		
Diameter of Well Casing (inches)					-	,
Depth Measurements Performed (PV	C/Metal)				P	uc
Depth to Water from Top of Casing ((0.01 ft.) p	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)	1				
Depth of Water in the Well (gallon)						
Volume of water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	mpling	-	4,24	
Number of minutes nurged	0	2	6	0	12	Sample Reading
Comparature (°C)	18.7	18-1	185	180	14	105
	1011	10,1	10.5	1015	10.0	1813
n nasifia Conductorus (umbas/am)	8.70	\$ 190	1.01	6.54	6139	6.30
Seedler L Orductance (uninos/cm)	344	840	417	978	718	118
nssolved Oxygen (mg/l)	2.06	did0	1.91	1.40	1140	1.90
xidation Reduction (eH)	200	301	297	297	287	297
urging Equipment	We	ell Obser	vation			
eristaltic Pump	Od	OF North	5			
ladder Pump	Co	lor clea	x			
	illiliters /	minute				
ate of Purge <u>150 m</u>						
ate of Purge <u>150 m</u>						
Report #____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D.: RLO 18 P2m 04	7		Tag:	BA 81	4995	
	-					
Date of Purging: <u>11/2/12</u> Start	lime: 1	045 FI	nish lime	11:05	Weather:	55-50
Date of Collection: <u>Mapa</u> In	ne of Co	llection:	11:00	÷		
Well Status						
Wen Status.						
Good		Gro	out			
Good		Cas	sing			
Good		Lo	ck			
Good		Ob	structions		-	
Diameter of Well Casing (inches)	TA (atal)			-	2	
Depth Measurements Performed (PVC	01 f	rior to pur	ing	-	in e	4
Depth to Water Hom Top of Casing ((0.01 ft.) p	nor to purg	ging		1014	7
Depth of Water in the Well (vallon)	(0.01 11.)			7		
Volume of water in the Well (gallon)				-		
Depth to Water from Top of Casing ((01 ft) at	fter nurgin	tr.			
Depth to Water from Top of Casing (01 ft) at	time of sa	moling	-	8.41	4
septin to mater a car and a caracter			contraction			
						Sample
						Reading
Number of minutes purged	0	3	6	9	12	
emperature (°C)	18.1	17.9	17.8	17.8	17.8	17.8
н	6.50	6,48	1.22	6.30	6.30	6.30
pecific Conductance (umbos/em)	COL	500	SOL	505	505	505
Discolved Oxygen (mg/l)	201	200	7.00	3.88	2.33	3.88
vidation Reduction (eH)	320	219	3/9	317	3/7	317
Ardation Reduction (CII)	200	511	SIL			
Sugar Stanon a						
urging Equipment	W	ell Obser	vation			
eristaltic Pump	Od	lor Non	E			
ladder Pump	Co	lor llen	n			
ate of Burge mi	lilitore	minuto				
ale of furgein	millers	minute				
omments: No CAD						
eference SOP Field-014						

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal Well I.D.: Rw 19 PZM OC	00		Site Tag	ROD BA S	& WIRE	,
Date of Purging: <u>///2//2</u> Start Date of Collection: <u>///2//2</u> Tir	Time: 1 ne of Co	ois Fi	nish Time 103 0	: 10:35	Weather:	55-60
Well Status:						
Good		- Gr	out			
Good	*	Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	C/Metal)				PU	C
Depth to Water from Top of Casing (().01 ft.) p	rior to pur	ging	-	8.6	6
Depth to Bottom from Top of Casing	(0.01 ft.)			e		
Volume of water in the Well (gallon)				-		
Depth to Water from Top of Casing ((.01 ft.) at	fter purgin	g	-		
Depth to Water from Top of Casing ((.01 ft.) at	time of sa	impling	-	8.4	1
						Sample Reading
Number of minutes purged			6	9		15
Temperature (°C)	1810	18.0	18.0	11.8	17.8	11.8
oH	7.05	1.05	7.09	1.10	1.10	840
Specific Conductance (umnos/cm)	2 01	396	2 60	2.00	2.80	7.88
Oxidation Reduction (eH)	6191	2:40	2,70	2188	2100	2705
urging Equipment	W	ell Obser	vation			
'eristaltic Pump	Od	or Nauce	5			
lladder Pump	Co	lor <u>Clea</u>	n			
Rate of Purge <u>150 mi</u>	lliliters	minute				
comments:	1					
eference SOP Field-014	-					
eadings were performed on date o	f sampli	ng //	12	1/2	(Tech	(*)

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		_	Site:	ROD	& WIRE	
Well I.D.: 12W 15 PZM 050			Tag:	BA 8	4978	1
Data of Puncing islate Star	T:	ICO T	· 1 m		XX 7 41	
Date of Collection: 1/2/12 Start	1 ime: 7	logion:	nish lime	10:10	weather:	55-50
Date of Conection. <u>metre</u> 11			10:05			
Well Status:						
Good		Gro	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	(Metal)				PVC	
Depth to Water from Top of Casing (().01 ft.) pr	rior to pur	ging		14.	47
Depth to Bottom from Top of Casing	(0.01 ft.)					
Depth of Water in the Well (gallon)				-		
Volume of water in the Well (gallon)	01 ft) of	for purgin	a	-		
Depth to Water from Top of Casing (C	0.01 ft. at	time of sa	g Impling		14.	00
	Carl and an		1 6	-		
Stra West						Sample
Number of minutes purged	0	3	6	9	12	Reading
Temperature (°C)	17.9	17.8	17.9	17.5	17.9	17.9
oH	5.55	5.55	5.53	5,52	5.52	5.52
Specific Conductance (umhos/cm)	9.46	9,40	9.40	9,41	9.41	9.41
Dissolved Oxygen (mg/l)	3.14	3.14	3:12	3:12	3.12	3.12
Dxidation Reduction (eH)	740	740	741	741	741	741
			-			
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	or Nout	E			
Bladder Pump	Co	lor <u>Clea</u>	in			
Rate of Purge m	illiliters	/ minute				
comments:	6			- 		
	-					
eference SOP Field-014	0	Des Marson			(TT) 1	
eadings were performed on date of	a sampli	ng 11	2	12.	$(1 \operatorname{ech} - \tau)$	14)

Report #___

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal			Site:	ROD	& WIRE	
Well I.D .: 2W 18 PZM OZC)		Tag:	BA SL	4979	
Date of Purging: <u><i>µ</i>/2/2</u> Start Date of Collection: <u><i>µ</i>/2/2</u> Tim	Time: <u>¶</u> ne of Coll	<u>15</u> Finection:	nish Time: 9: 30	9:35	Weather:	55-50
Well Status:						
Good		Gro	out	4		
Good		Cas	ing			
Good		Loc	.k			
Good		Obs	structions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (Depth to Bottom from Top of Casing	C/Metal)).01 ft.) pri	or to purg	ging	-	2 13.0	81
Depth to Bottom from 1 op of Casing	(0.01 n.)			17		
Volume of water in the Well (gallon)				-		
Depth to Water from Top of Casing (0	.01 ft.) aft	er purging	g			
Depth to Water from Top of Casing (C	.01 ft.) at	time of sa	mpling	14 L	13,40	0
			in ser			Sample Reading
Number of minutes purged			6	9		
Гетрегаture (°С)	18.0	18.0	18.0	18.0	18.0	18.0
bH	6.30	6.35	6.30	6.30	6.30	6.30
Specific Conductance (umhos/cm)	1826	1920	1923	1921	1921	1921
Dissolved Oxygen (mg/l)	4.66	4.68	4.61	4,61	4.61	- 4161
Dxidation Reduction (eH)	133	130	132	132	_152	136
and Succession					*	
Purging Equipment	We	ll Obser	vation			
Peristaltic Pump	Odd	Dr Non	E			
Bladder Pump	Col	or the	an			
Rate of Purge 150 _ m	illiliters /	minute				
Comments:						
Reference SOP Field-014		- E.	2			
· · · · · · · · · · · · · · · · · · ·	£	~ 11	1 -	1 12	(Tech T	30 1

Report #____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal		Site:	ROD	& WIRE	<u></u>
Well I.D .: TSOU PZU 023		Tag:	NO TA	is on s	treet level
Date of Purging: 11/2/17 Start Time	: \$130 Fi	nish Time	: \$50	Weather:	55-50 wash
Date of Collection: <i>11/2/12</i> Time of	Collection:	845	_		
Well Status:					
Good	Gro	out			
Good	Cas	sing			
Good	Loc	ck	2		
Good	Ob	structions			
Diameter of Well Casing (inches)				2	
Depth Measurements Performed (PVC/Met	al)			PVC	
Depth to Water from Top of Casing (0.01 ft	.) prior to pur	ging		10.5:	3
Depth to Bottom from Top of Casing (0.01	ft.)				
Depth of Water in the Well (gallon)			-		
Volume of water in the Well (gallon)			100		
Depth to Water from Top of Casing (0.01 ft	.) after purgin	g	125 2 -	9/1	
Depth to water from rop of casing (0.01 it	.) at time of sa	unpung		1.61	and the second second
					Sample Reading
Number of minutes purged		6	9		
Temperature (°C)	5 18.3	18.3	18.0	17.9	17.9
pH <u>6.4</u>	14 6.40	6.38	6.38	6.38	6.38
Specific Conductance (umhos/cm) ZIC	06 2166	2163	2163	2163	2163
Dissolved Oxygen (mg/l)	1 4.01	3.96	3.96	3.96	3,96
Oxidation Reduction (eH) <u>240</u>	0 140	140	140	140	140
Purging Equipment	Well Obser	vation			
Peristaltic Pump	Odor Nove	8			
Bladder Pump	Color NAKA	<u>e</u>			
Rate of Purge millilit	ers / minute				
Commentar		No. 1			
Comments:			1	1.1. ·····	
Reference SOP Field-014		120		100	
and the second					

Re	port	#	
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Microbac Laboratories, Inc. Groundwater Monitoring Report

			1 40	nie /	27 0.0	7/20000
Date of Purging: <u>11/2/12</u> Star	t Time: 1	1115 F	nish Time	: 1135	Weather:	50-55
Date of Collection: <u>11/2/12</u> Ti	me of Co	llection:	1130	_		
Well Status:						
Good		Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					5	,
Depth Measurements Performed (PV	C/Metal)			-	P	uc
Depth to Water from Top of Casing (0.01 ft.) pr	rior to pur	ging		4.3	36
Depth to Bottom from Top of Casing	(0.01 ft.)					
Depth of Water in the Well (gallon)				-		
Volume of water in the Well (gallon)				_		
Depth to Water from Top of Casing (0.01 fi.) af	ter purgin	g			
Depth to Water from Top of Casing (0.01 ft.) at	time of sa	Impling	-	4,24	
						Sample Reading
sumber of minutes purged		3	6		12	
emperature (°C)	18.7	18,7	18.5	1815	18.5	1815
H	8.90	8.90	7.01	6.34	6.34	6.30
pecific Conductance (umhos/cm)	844	840	977	978	978	978
Dissolved Oxygen (mg/l)	2.26	2.20	1.41	1.40	1.40	1.40
xidation Reduction (eH)	300	301	297	297	287	297
urging Equipment	We	ell Obser	vation			
eristaltic Pump	Od	or Nove	5			
	~	or clea	x			
ladder Pump	Co.					
ladder Pump	Co.					
ate of Purge m	illiliters /	minute				
ate of Purge m	illiliters /	minute				
ate of Purge m	Lo.	<u>minute</u>				
ate of Purge m	illiliters /	minute				

Report #____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Chent. Seversiai			Site:	ROD	& WIRE	
Well I.D .: RLO 18 PZM 047	7		Tag:	BA 81	4995	
11						
Date of Purging: 11/2/12 Start	Time: 1	045 Fi	nish Time	11:05	Weather:	55-50
Date of Collection: <u>11/2 112</u> Tir	ne of Co	llection: _	11:00	-		
Well Status						
wen Status.						
Good		Gro	out			
Good		Cas	sing			
Good		Loc	ck			
Good		Ob	structions		-	
					-	
Diameter of Well Casing (inches)	Metal			1	011	
Depth to Water from Top of Casing ((01 ft)	rior to pur	ning	-	10.4	4
Depth to Water from Top of Casing ((0.01 ft)	nor ur pur	Sing	-	7011	
Depth of Water in the Well (gallon)	(0.01 10.)			-		
Jolume of water in the Well (gallon)						
Depth to Water from Top of Casing (01 ft) at	fer nurgin	a			
Depth to Water from Top of Casing ((01 ft) at	time of ea	moling		8.40	+
septi to water nom rop to cating to		citite of the	and and			
						Sample
	~					Reading
Number of minutes purged		3	6	9	12	1- 0
emperature (°C)	18.1	17.4	17.8	11.8	11.8	17.8
H	6.50	6.48	6.33	6.30	6.30	6.30
pecific Conductance (umhos/cm)	501	300	504	505	305	305
Dissolved Oxygen (mg/l)	3.91	3.90	3.90	3.88	3:88	5.85
idation Reduction (eH)	320	319	319	317	3/7	317
urging Equipment	W	ell Obser	vation			
eristaltic Pump	Od	or Non	E			
ladder Pump	Co	lor llen	n			
ate of Purge mi	lliliters	minute				
omments No Car						
oninents. No crip						
the second s						
eference SOP Field-014						

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	Severstal Site: ROD					
Well I.D.: KW 19 PEWICE	00		1 ag:	BA S	4980	,
Date of Purging: ///2/12_Start	Time:]	015 Fi	nish Time	: 10:35	Weather:	55-60
Date of Collection: 11/2/12 Tin	ne of Co	llection:	1030			
W. D. C.						
well Status:						
Good		- Gr	out			
Good		Ca	sing			
Good		Lo	ck			
Good		Ob	structions			
Diameter of Well Casing (inches)					2	
Depth Measurements Performed (PVC	(Metal)			1	PU	C
Depth to Water from Top of Casing (0	0.01 ft.) pr	rior to pur	ging	13	8.6	6
Depth to Bottom from Top of Casing	(0.01 ft.)			÷		
Depth of Water in the Well (gallon)				-		
Depth to Water from Top of Casing (0	.01 ft.) af	ter purgin	<u>u</u>	-		
Depth to Water from Top of Casing (0	.01 ft.) at	time of sa	mpling	-	8.4	1
						Sample Reading
lumber of minutes purged			6	9	_12_	15
Cemperature (°C)	1810	18.0	18.0	17.8	17.8	17.8
H	7.05	1.05	7.09	1.10	1.10	840
Discolved Oxygen (mg/l)	2.91	2.90	2.50	2,88	2,88	2,85
ixidation Reduction (eH)	<u>enn</u>	2110	2110	2103	2100	
urging Equipment	W	ell Obser	vation of			
ladder Pump	Pump Odor Nave					
	0	ich <u>erer</u>				
ate of Purge 150 mi	lliliters	minute				
	12.	-				
omments:						-1
ference SOP Field-014						

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Microbac Laboratories, Inc. Groundwater Monitoring Report

Well I.D.: Red 15 Prim 05h			Tag: GA 81 4978				
	A SPEC		Tag.	Jon of			
Date of Purging: 11/2/12 Start	Time: 9	150 Fi	nish Time	10:10	Weather:	55-50	
Date of Collection: <u>1/2/12</u> Tin	ne of Col	lection:	10:05				
Wall Statuat							
wen Status.							
Good		Gro	out				
Good		Cas	sing				
Good		Lo	ck				
Good		Ob	structions				
Diameter of Well Casing (inches)					2		
Depth Measurements Performed (PVC	(Metal)				PVC		
Depth to Water from Top of Casing (0).01 ft.) pr	rior to pur	ging		14.	47	
Depth to Bottom from Top of Casing	(0.01 ft.)						
Depth of Water in the Well (gallon)				-			
Denth to Water from Top of Casing (0	01 ft) af	ter nurgin	σ	-			
Depth to Water from Top of Casing (0	.01 ft.) at	time of sa	mpling	1	14.	00	
		2		0		Sample Reading	
Number of minutes purged	170	- 3	0	9	12	17 0	
H	5.55	5.55	11.9	507	557	5.57	
Specific Conductance (umhos/cm)	9.46	9.40	9.40	9,41	9.41	9.41	
Dissolved Oxygen (mg/l)	3.14	3.14	3.12	3:12	3,12	3.12	
Oxidation Reduction (eH)	740	740	741	741	741	741	
Purging Fouinment	W	ell Obser	vation				
Peristaltic Pump Odor Aloue							
Bladder Pump	Co	lor Cler	n				
Rate of Purge mi	<u>lliliters</u> /	<u>minute</u>					
Comments:	6			- a.			
	and the second s	he come					
elerence SOP Field-014		Contractory of					

Report #___

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: Severstal	S. S.		Site:	ROD	& WIRE	
Well I.D.: 2W 19 PZM OZC	>		Tag:	BA SL	4979	
Date of Purging: <u><i>µ</i>/2/2</u> Start Date of Collection: <u><i>µ</i>/2/2</u> Tin	Time: <u>1</u> ne of Col	<u>:15</u> Fin lection: _	nish Time: 9:30	9:35	Weather:	55-50
Well Status:						
Good		Gro	out	*		
Good		Cas	sing			
Good		Loc	ck			
Good		Ob	structions			
Diameter of Well Casing (inches) Depth Measurements Performed (PVC Depth to Water from Top of Casing (Depth to Bottom from Top of Casing Depth of Water in the Well (gallon) Volume of water in the Well (gallon) Depth to Water from Top of Casing (Depth to Water from Top of Casing (C/Metal) 0.01 ft.) pi (0.01 ft.) 0.01 ft.) af	ior to purg ter purging time of sa	ging g mpling		2 PVC 13.9	2
in the state						Sample
Number of minutes purged	0	3	6	9	12	Reading
Temperature ($^{\circ}C$)	18.0	18.0	18.0	18.0	18.0	18.0
oH	6.30	6.35	6.30	6.30	6.30	6.30
Specific Conductance (umhos/cm)	1826	1920	1923	1921	1921	1521
Dissolved Oxygen (mg/l)	4.66	4.68	4.61	4.61	4.61	4,61
Dxidation Reduction (eH)	133	130	132	132	132	132
					x	
Purging Equipment	W	ell Obser	vation			
Peristaltic Pump	Od	or Non	E			
Bladder Pump	Со	lor le	nn			
Rate of Purge <u>150 m</u>	illiliters	minute				
Comments:	17-1					
eference SOP Field 014	-					
the second se						