#### **AMENDED SOIL MANAGEMENT PLAN**

#### **ROCK RIVER SEDIMENT REMOVAL PROJECT**

#### JANESVILLE, WISCONSIN

#### **BRRTS Activity # 02-54-577951**

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August 2019

#### **BACKGROUND**

The Former General Motors (GM) Assembly Plant (the Site) located in Janesville (Rock County), Wisconsin has been assigned WDNR Bureau for Remediation and Redevelopment Tracking System (BRRTS) Number (#) 02-54-577951. The property is currently zoned as M2 – General Industrial. The Site contains sediments impacted by contaminants of potential ecological concern (COPECs), including polycyclic aromatic hydrocarbons (PAHs), lead, mercury, and polychlorinated biphenyls (PCBs), that were identified near the Adjacent Outfall where storm water from the former GM plant discharged to the Rock River north of the substation along Delavan Drive in Janesville. Information regarding the sedimentation in this reach of the Rock River was initially reported in studies completed for the City as part of the Monterey Dam demolition planning (Inter-Fluve, Inc., 2015). Multiple site investigations and evaluations were subsequently conducted by GM as documented in the *Sediment Investigation Report* (GHD Report No. 21, May 2016), the *Rock River Site Investigation Report* (GHD Report No. 30, May 2017), and the *Remedial Action Options Report* (GHD Report No. 32, May 2017). Multiple lines of evidence from comprehensive studies of sediment quality impacts on local biological receptors were evaluated utilizing statistical methods and consensus-based guidance to assess potential ecological and human health exposure risks.

Sediments near the Adjacent Outfall are impacted by contaminants of potential ecological concern (COPECs), including PAHs, lead, mercury, and PCBs. Storm water from the former GM plant discharged to the Rock River via this outfall north of the substation along Delavan Drive. The RADR mitigates impacts near the outfall based upon the evaluation of potential risks to sediment-dwelling benthic invertebrates. It should be noted that GM reported no records of releases to stormwater and the contaminants identified near the outfall may have originated from other sources and not solely from historical GM operations. This document outlines the Soil Management Plan for the sediments that are to be removed during the dredging activities.

The RADR presented the project approach and objectives for removal of approximately 10,000 cubic yards of impacted sediment from a designated remedial action area (RAA) covering approximately two acres within the Rock River in the pool upstream from the Monterey Dam. Impacted sediment within the remedial action area shall be removed to refusal or one foot below the design surface, and a certified clean fill sand restorative layer placed over the RAA upon completion of the project.

The project includes hydraulically and/or mechanically dredging the impacted sediment and hydraulic conveyance of the sediment / river water slurry to the former GM plant for dewatering and treatment. The sediment slurry will be conveyed through a floating hose to temporary piping installed through the box culvert at the outfall and leading back to the diversion chamber located south of Delevan Drive at the former GM Site. The granular solids within the slurry will be removed by settling and discharged across a drying bed. The fluids containing fine-grained particles (concentrator supernatant) will be pumped into the large steel tank (#1) for additional solids removal by settling that may include polymerization. The water fraction will be pumped into the return water tank (#2). A fraction of the settled solids containing fine particles and organic matter will be filtered through geotextile tubes, with the ellutriant captured and recirculated to the settling tank.

Once removed from the drying bed, solids will be placed into segregated stockpiles located on concrete or asphalt and monitored using the paint-filter liquids test (PFLT) by ASTM 9095B, slump test, and/or field moisture content by the microwave method using paper cups. Once sufficiently dewatered for handling, dried sediments (i.e., soil) will be characterized for beneficial re-use onsite or final disposal offsite, in accordance with the Sampling and Analyses Plan and the Soil Management Plan described below. Five-point composite samples will be collected from each 500-cubic yard stockpile. Samples will be submitted to the laboratory and analyzed for the total concentrations of PAHs, PCBs, and metals. In addition, the water leach extraction procedure (ASTM Method 3987) will be followed and leachate analyzed for PAHs, PCBs, and metals. Initially, analytical results were requested on a rush turnaround time, typically 3-5 days (versus normal TAT of 10 days). The results are compared to the industrial RCLs and transmitted to DNR upon receipt along with EAG's management path for the material.

TCLP data that was provided in the General Motors Site Investigation that provides screening for the non-hazardous categorization of the sediment. Analytical results of the sediment samples obtained during the General Motors Site Investigation that were previously submitted to the WDNR are also attached.

The dredging activities are anticipated to be complete and dried sediments ready to move by the end of July, 2019 or sooner.

### MANAGEMENT OF CONTAMINATED SOIL OR SOLID WASTES RECOVERED DURING REMEDIAL (RESPONSE) ACTIONS

It is requested that an exemption be granted in order to store and manage the dry sediment generated from this remedial action at the site which is not an operating licensed landfill (NR718.15). The Wisconsin DNR recommended format for exemption request is attached to this document. The information requested in Sections 3, 4, 5, 6, 8, 9, and 10 are included in this Soil Waste Management Plan.

#### STORAGE OF EXCAVATED CONTAMINATED SOIL

The dried sediment will be removed from the drying bed and stored within the sand stockpile dividers and characterized. Results of laboratory analyses will determine disposition for:

- 1. segregation, solidification and temporary storage before transportation and disposal offsite permitted landfill
- 2. transportation to the identified fill area to be capped, possibly with an impervious surface, and
- 3. transportation to the identified fill area to be capped with uncontaminated soil and revegetated .

The final reuse locations are detailed on the attached Figures. A decision diagram is included. Efforts were made to characterize material as it was generated per the decision diagram.

In accordance with NR 718.05 (2), none of the stockpile or final reuse locations are within a flood plain. These locations are more than 100-feet from a wetland, 300-feet from a navigable river, stream, lake, pond, or flowage, and more than 300-feet from any water supply well. All stockpile and final reuse locations are more than 400-feet from the Rock River. Signs will be posted in the areas around the

drying beds that will include the name, address, and phone number of the owner or operation, the types of hazardous substances on the property, the WDNR issued site ID number, and the anticipated removal date.

The dried sediment will be placed in the sand stockpile dividers on an impervious base (concrete pavement). The slope of the pavement beneath the sand stockpile dividers drains to an existing stormwater inlet manhole that will be plugged to serve as a sump and pumped back into treatment Tank #1 to control surface water runoff. These soil piles will be covered at the end of each day.

Samples of the dried sediment within the sand stockpile dividers (approximately 500 cubic yard piles) will be collected and analyzed per the Sampling and Analyses Plan. Samples were collected from the first 100, 300 and 500 cys, and then every 500 cys thereafter. Samples are analyzed for the COPEC identified during the Rock River sediment investigation and compared to the industrial land use RCLs and groundwater Enforcement Standards in accordance with Wis. Stats. § 160 and Wis. Admin. Code § NR 140. The final reuse location for each stockpile will be determined based on the reported total concentrations and the concentrations in the water leach test procedure. A decision diagram is included with this Soil Management Plan.

Sampling will verify that no vapor intrusion would result from the placement of the contaminated soil and that all other pathways of concern at the site or facility (e.g., surface water and sediment) are protective of public health, safety, welfare and the environment. Soil with concentrations of COPCs that are not protective of industrial land use vapor intrusion criteria will be placed on plastic sheeting in the waste piles, solidified, permitted as non-hazardous waste, and offsite transportation to an appropriate disposal facility arranged. Manifests for the transportation and disposal of this material will be maintained by EAG and copies submitted to the WDNR with each weekly report.

Soil with concentrations that pass for industrial vapor intrusion criteria, but exceed direct contact levels and/or enforcement levels from the leach testing will be designated as beneficial reuse and taken to the adjacent JATCO (former GM Haul Away Yard) site where it will be placed in an excavated area that is approximately 200-wide and 300-feet long. The location of the area where the solid waste will be manages is presented on the attached map.

An impervious cap may be placed over beneficial reuse soils that are in exceedance of groundwater enforcement standards. This can act as an engineered barrier to prevent any groundwater contamination from mobilizing off-site if deemed essential. Clean native soils at the receiving Jatco location will be used to cover the remaining material that passes enforcement standards for groundwater criteria. The native soils cover will consist of approximately 2-feet of fill material consisting of clayey-silt and silty sand. Groundwater occurs deeper than 10 feet bgs. Groundwater flow is generally to the north-northwest toward the Rock River, which follows the general Site topography. A stormwater prevention plan will be attached to show how soil erosion runoff will be managed in accordance to the WPDES permit.

Any continuing obligations for maintenance beyond industrial land use and groundwater use restrictions will be identified in the remedial action completion report. A copy of the property deed with legal descriptions of the parcel(s) is attached to this document.

#### REPORTING

A report will be submitted to the WDNR detailing the volume of material characterized, the laboratory results for the samples, a comparison of results to the industrial soil residual concentration levels including vapor intrusion, dermal contact, soil-to-groundwater, and the groundwater Enforcement Standard (water leach test procedure) per Wisconsin Admin Code NR720 and Wis. Admin. Code § NR 140. This report will also detail the final reuse location for each stockpile based on the analytical results, comparisons to industrial standards, and the decision diagram included in this Soil Management Plan.

The weekly report will contain the following items for review and concurrence:

- Laboratory Reports
- Summary of Results
- Comparisons of Results to Industrial RCLs
- Final placement of soil

#### **CONTINUING OBLIGATIONS**

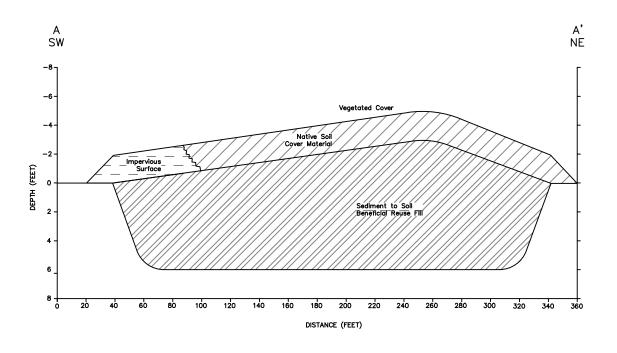
The cover overlying the contaminated soil will be inspected periodically and a minimum of once a year. The inspection will normally occur in the spring after all snow and ice is gone, for deterioration, erosion, settlement, and other potential problems that can cause exposure to underlying soils. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to become exposed will be documented.





FIGURE 1
SITE LOCATION MAP
JAINES, LLC
ROCK RIVER SEDIMENT REMOVAL REPOSITORY
JANESVILLE, WI





LEGEND:

Native Soil Material

Sediment to Soil Beneficial Reuse Fill

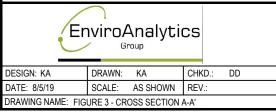


FIGURE 3
CROSS SECTION A-A'
JAINES, LLC
ROCK RIVER SEDIMENT REMOVAL REPOSITORY
JANESVILLE, WI

#### **Summary of Analytical Results - Dried Sediment-Soils**

NR 718 Beneficial re-use exemption

Rock River Dredging project - former GM Assembley plant Janesville, WI

					Pilot Test Sample	Solid Sample #1	Solid Sample #2	Solid Sample #3		Jatco Cover Soil	NE Geo-Bag Sample #2	South Geo-Bag Sample #1	South Geo-Bag Sample #2	Solid Sample #4	Solid Sample #5	Solid Sample #6	NE Geo-Bag Sample #3		QC #1	QC #2	Solid Sample #1- 300 yds	Solid Sample #7
Chemical	Background Concentrations	Vapor Intrusion Action Levels	Dermal Contact Action Levels	Soil-To- Groundwater Action Levels	100 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume		500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume			300 yds volume	500 yds volume
					500-150867-4	500-165506-1	500-165506-2	500-166406-2	500-165974-5	500-165506-3	500-166667-3	500-166667-4	500-166667-5	500-166745	500-166745	500-166966-2	500-166966-1	500-166966-3	500-167373-1	500-167373-2	500-167373-3	500-167373-5
					8/31/2018	6/20/2019	6/20/2019	7/9/2019	6/28/2019	6/20/2019	7/11/2019	7/11/2019	7/11/2019	7/15/2019	7/15/2019	7/18/2019	7/18/2019	7/18/2019	7/24/2019	7/24/2019	7/25/2019	7/25/2019
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Acenaphthene			45200		0.017	<0.0074	0.5	0.12	0.14	<0.0061	0.055	0.018	0.29	0.039	0.13	0.080	<0.014	0.13	0.0095	0.012	0.031	0.016
Acenaphthylene					0.024	<0.0055	0.093	0.031	<0.05	<0.0045	0.043	0.025	<0.11	0.018	0.075	0.048	<0.010	<0.036	0.0058	0.0084	0.014	0.012
Anthracene			100000	196	0.061	<0.0069	1.2	0.51	0.31	<0.0057	0.17	0.073	0.62	0.12	0.28	0.26	0.10	0.32	0.031	0.043	0.11	0.044
Benzo[a]anthracene		900	20.8		0.21	0.026	3.5	0.78	0.65	<0.0046	0.45	0.21	1.5	0.28	0.84	0.61	0.35	0.71	0.19	0.18	0.44	0.11
Benzo[a]pyrene		12000	2.11	0.47	0.23	0.028	3.3	0.75	0.67	<0.0066	0.46	0.22	1.1	0.29	0.84	0.57	0.35	0.66	0.24	0.22	0.46	0.17
Benzo[b]fluoranthene		28000	21.1	0.478	0.32	0.033	5.6	0.81	0.77	<0.0074	0.57	0.28	1.7	0.41	1.1	0.82	0.43	0.92	0.31	0.27	0.63	0.20
Benzo[g,h,i]perylene					0.087	0.015	0.86	0.31	0.14	<0.011	0.26	0.15	0.81	0.12	0.38	0.19	0.12	0.19	0.12	0.10	0.16	0.058
Benzo[k]fluoranthene		2800000	211		0.13	0.022	1.9	0.69	0.63	<0.01	0.22	0.10	0.56	0.18	0.41	0.31	0.18	0.60	0.14	0.12	0.32	0.12
Chrysene		28000000	2110	0.144	0.24	0.034	3.7	0.72	0.89	<0.0093	0.52	0.25	2.3	0.44	0.97	0.63	0.37	0.98	0.23	0.21	0.48	0.17
Dibenz(a,h)anthracene		28000	2.11		0.02	<0.008	0.3	0.09	< 0.073	<0.0066	0.077	0.048	<0.16	0.028	0.11	0.068	0.038	< 0.053	0.033	0.028	0.051	0.019
Fluoranthene			30100	88.87	0.5	0.044	5.8	2.4	1.9	<0.0063	0.89	0.45	3.1	0.44	1.9	1.5	0.79	1.8	0.47	0.37	0.99	0.29
Fluorene			30100	14.82	0.02	<0.0058	0.63	0.14	0.16	<0.0048	0.066	0.023	0.39	0.056	0.17	0.12	0.047	0.088	0.012	0.015	0.035	0.023
Indeno[1,2,3-cd]pyrene		280000	21.1		0.085	0.016	0.91	0.3	0.29	<0.0088	0.22	0.12	0.73	0.13	0.40	0.21	0.13	0.24	0.12	0.10	0.17	0.068
Naphthalene		17	24.1	0.658	0.02	<0.0064	0.74	0.1	0.19	<0.0053	0.051	0.018	0.42	0.19	0.12	0.13	<0.012	<0.042	0.0076	0.013	0.020	0.056
Phenanthrene					0.26	0.021	5	1.3	1.2	<0.0048	0.65	0.26	3.1	0.42	1.2	0.80	0.42	1.1	0.21	0.18	0.46	0.20
Pyrene			22600	54.54	0.42	0.057	6.9	1.5	1.5	<0.0068	0.84	0.49	3.7	0.54	1.5	1.1	0.66	1.5	0.39	0.33	0.82	0.28
1-Methylnaphthalene					0.017	<0.01	0.69	0.078	0.29	<0.0083	0.067	0.025	0.67	0.18	0.099	0.16	<0.019	<0.066	<0.010	0.016	0.019	0.044
2-Methylnaphthalene			3010		0.028	<0.0076	1.2	0.14	0.34	<0.0063	0.098	<0.018	0.85	0.33	0.17	0.22	<0.015	<0.050	0.010	0.032	0.031	0.081
PCBs									•												•	
PCB-1016		440000	28000		<0.041	<0.074	<0.078	<0.078	< 0.074	<0.0059	<0.016	<0.018	<0.015	<0.059	<0.083	<0.0091	<0.014	< 0.0094	<0.0071	<0.072	<0.067	<0.074
PCB-1221		4400	883		<0.051	<0.092	<0.098	<0.098	< 0.092	<0.0073	<0.020	<0.022	<0.018	<0.073	<0.10	<0.011	<0.017	<0.012	<0.0088	<0.090	<0.083	<0.092
PCB-1232		2400	792		<0.051	<0.091	<0.097	<0.097	<0.091	<0.0072	<0.020	<0.022	<0.018	<0.073	<0.10	<0.011	<0.017	<0.012	<0.0087	<0.089	<0.082	<0.091
PCB-1242		13000	972		<0.038	<0.069	<0.073	<0.073	<0.069	<0.0055	<0.015	<0.017	<0.013	<0.055	<0.077	<0.0085	<0.013	<0.0088	<0.0066	<0.067	<0.062	<0.069
PCB-1248		13000	975		<0.046	<0.082	<0.087	<0.087	<0.082	<0.0065	<0.018	<0.020	<0.016	<0.066	<0.092	<0.010	<0.015	<0.011	<0.0079	<0.080	<0.075	<0.082
PCB-1254		18000	988		<0.025	<0.045	<0.048	<0.048	<0.045	<0.0036	<0.010	<0.011	<0.0089	<0.036	<0.051	<0.0056	<0.0085	<0.0058	0.060	<0.044	<0.041	<0.045
PCB-1260		28000	1000		<0.057	<0.1	<0.11	<0.11	<0.1	<0.0082	<0.023	<0.025	<0.020	<0.082	<0.12	<0.013	<0.019	<0.013	<0.0098	<0.10	< 0.093	<0.10
Metals					Ī				•													
Arsenic	8	3900	3	0.584	1.7	0.79	4.4	4.1	4.6	0.48	3.0	2.3	5.5	3.1	4.7	2.2	2.6	2.9	1.2	1.6	1.8	3.7
Mercury	0.89	46	3.13	0.208	4.6	0.28	0.37	0.32	5.5	<0.005	1.2	1.5	2.1	2.6	1.9	1.9	1.4	0.29	0.12	0.39	0.081	0.47
Barium	1070	3000000	10000	164.4	48	21	540	240	340	8.6	310	150	350	190	430	100	160	96	39	63	84	160
Cadmium	1	9300	985	0.752	0.5	0.24	1.7	1.1	1.5	0.13	1.5	0.77	1.5	2.4	1.5	0.41	0.67	0.48	0.33	0.43	0.61	0.58
Chromium				360000	9.9	7.8	74	23	46	3.0	40	28	53	25	130	17	31	15	8.8	13	18	19
Lead	37.7		800	27	71	150	760	480	300	1.4	160	47	240	600	570	96	57	190	64	150	210	630
Selenium	0.858		5840	0.52	<0.77	<0.65	0.72	0.87	2.5	<0.56	2.9	3.0	2.4	1.2	1.5	<0.83	<1.3	<0.89	0.66	0.73	0.75	<0.68
Silver			5840	0.849	<0.17	0.78	1.3	1.1	2.2	0.49	2.6	2.7	3.2	0.84	0.92	1.4	2.9	1.4	0.70	0.96	0.94	0.91
NS- Not Sampled																						

Indicates an exceedance of soil-to-grondwater standards Exceeds Dermal Contact Levels

Exceeds Vapor Intrusion Levels

Note: Final closure of BRRTS # 03-54-000405 was granted on October 26, 1999, subsequent to abandonment of the monitoring wells and implementation of a deed restriction filed with Rock County. The filing placed a groundwater use restriction on the deed for the Site (Rock County Register of Deeds, document number 1434932)."

#### **Summary of Analytical Results - Dried Sediment-Soils**

NR 718 Beneficial re-use exemption

Rock River Dredging project - former GM Assembley plant Janesville, WI

Janesville, Wi					Solid Sample #8	Solid Sample #9	Solid Sample #10	Solid Sample #11	Solid Sample #12	Solid Sample #13	Solid Sample #14	Solid Sample #15	Solid Sample #16	Solid Sample #17	Silha Clay
Chemical	Background Concentrations	Vapor Intrusion Action Levels	Dermal Contact Action Levels	Soil-To- Groundwater Action Levels	500 yds volume	500 yds volume	500 yds volume		500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume	500 yds volume	
					500-167373-6	500-167373-7	500-167373-8	500-167373-9	500-167373-10	500-167373-11	500-167373-12	500-167425-1	500-167425-2	500-167425-3	500-167425-4
					7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019
	mg/Kg	mg/Kg		mg/Kg	mg/Kg	mg/Kg		mg/Kg	mg/Kg	mg/Kg	mg/Kg		mg/Kg	mg/Kg	mg/Kg
Acenaphthene			45200		0.020	0.015	0.12	0.23	0.16	0.084	0.070	0.11	0.80	0.69	<0.0036
Acenaphthylene					0.0099	0.0096	<0.048	0.095	0.010	<0.049	0.023	0.11	<0.070	<0.095	< 0.0032
Anthracene			100000	196	0.11	0.064	0.40	0.46		0.18	0.16		<0.089	1.9	<0.0032
Benzo[a]anthracene		900	20.8		0.42	0.20	1.2	1.4		0.65	0.47		4.3	5.1	<0.00044
Benzo[a]pyrene		12000	2.11	0.47	0.44	0.25	1.4	1.5		0.76	0.55	0.48	2.8	4.0	<0.00056
Benzo[b]fluoranthene		28000	21.1	0.478	0.64	0.33	2.0	2.2		0.95	0.75	0.73	3.3	5.4	<0.00058
Benzo[g,h,i]perylene					0.14	0.073	0.37	0.40			0.15		0.83	1.2	<0.0042
Benzo[k]fluoranthene		2800000	211		0.19	0.17	0.67	0.80		0.45	0.32		2.6	2.2	<0.00074
Chrysene		28000000	2110	0.144	0.44	0.26	1.3	1.6		0.71	0.59	1.0	4.7	4.8	<0.0014
Dibenz(a,h)anthracene		28000	2.11		0.046	0.022	0.11	0.13		<0.073	<0.065	<0.12	0.30	0.36	<0.00064
Fluoranthene			30100	88.87	0.98	0.50	2.5	2.9			0.74			12	<0.0032
Fluorene			30100	14.82	0.026	0.022	0.16	0.25			0.081	0.097	1.5	0.84	<0.0038
Indeno[1,2,3-cd]pyrene		280000	21.1		0.16	0.081	0.44	0.54		0.29	0.24	0.22	0.85	1.2	<0.00084
Naphthalene		17	24.1	0.658	0.031	0.041	0.11	0.58	0.069	0.093	0.16		2.2	0.22	<0.0030
Phenanthrene					0.45	0.28	1.6	2.4			0.65		9.3	6.4	<0.0035
Pyrene			22600	54.54	0.78	0.40	2.3	2.8		1.2	0.91	1.5	7.0	9.1	<0.0048
1-Methylnaphthalene					0.029	0.040	0.12	0.51	0.033	<0.092	0.15		3.7	0.25	<0.0050
2-Methylnaphthalene			3010		0.051	0.072	0.18	0.91	0.044	0.13	0.26	0.33	4.5	0.33	<0.0013
PCBs					1		ı		1	ı	1	ı	1	1	
PCB-1016		440000	28000		<0.074	<0.060	<0.065	<0.076	<0.061	<0.067	<0.059		<0.094	<0.13	<0.067
PCB-1221		4400	883		<0.092	<0.074	<0.081	<0.095	<0.076	<0.083	<0.073	<0.13	<0.12	<0.16	<0.084
PCB-1232		2400	792		<0.091	<0.074	<0.080	<0.094	<0.075	<0.083	<0.072	<0.13	<0.12	<0.16	<0.083
PCB-1242		13000	972		<0.069	<0.056	<0.060	<0.071	<0.056	<0.062	<0.054	<0.10	<0.087	<0.12	<0.063
PCB-1248		13000	975		<0.083	<0.067	<0.072	<0.085	<0.068	<0.075	<0.065	<0.12	<0.10	<0.14	<0.075
PCB-1254		18000	988		<0.045	<0.036	<0.039	<0.046	0.16	<0.041	<0.036	<0.065	<0.057	<0.079	<0.041
PCB-1260		28000	1000		<0.10	<0.083	<0.090	<0.11	<0.084	<0.093	<0.081	<0.15	<0.13	<0.18	<0.094
Metals					1		ı		1	ı	1		ı	1	
Arsenic	8	3900	3	0.584	1.8	1.6		3.9			3.8		13		5.1
Mercury	0.89	46	3.13	0.208	0.62	0.35	0.33	3.4		0.50	1.4		5.4	0.89	0.012
Barium	1070	3000000	10000	164.4	77	76		620			460		4000	470	93
Cadmium	1	9300	985	0.752	0.42	0.31	0.89	0.88			0.81		9.9	2.4	0.21
Chromium				360000	12	14		46			34		350	100	16
Lead	37.7		800	27	320	200	720	490	17	_	710		2000	570	9.1
Selenium	0.858		5840	0.52	<0.64	<0.51	0.73	0.83	<0.56	0.84	0.70		2.6	2.5	<0.62
Silver			5840	0.849	0.72	0.71	0.95	0.96	0.87	0.99	0.83	2.3	1.6	2.2	3.2

NS- Not Sampled

Indicates an exceedance of soil-to-grondwater standards

Exceeds Dermal Contact Levels

Exceeds Vapor Intrusion Levels

Note: Final closure of BRRTS # 03-54-000405 was granted on October 26, 1999, subsequent to abandonment of the monitoring wells and implementation of a deed restriction filed with Rock County. The filing placed a groundwater use restriction on the deed for the Site (Rock County Register of Deeds, document number 1434932)."

## **ASTM Leach Analysis Results for Sediment**

Chemical	ASTM Leach Enforcement Standards	Pilot Test Leach Sample	·	Solid Sample #3 Leach	- '	South Geo-Bag Sample #1 Leach	South Geo-Bag Sample #2 Leach	·	Solid Sample #5 Leach
	Standards	500-150867-5	500-166406-1	500-166406-2	500-166667-3	500-166667-4	500-166667-5	500-166745-1	500-166745-2
		8/31/2018	7/9/2019	7/9/2019	7/11/2019	7/11/2019	7/11/2019	7/15/2019	7/15/2019
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Acenaphthene		<0.0072	<0.0036	<3.6	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036
Acenaphthylene		<0.0064	<0.0032	0.017	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Anthracene		<0.0064	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Benzo[a]anthracene		<0.0008	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044
Benzo[a]pyrene	0.0002	<0.0011	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056
Benzo[b]fluoranthene	0.0002	<0.0012	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058
Benzo[g,h,i]perylene		<0.0084	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
Benzo[k]fluoranthene		<0.0015	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074
Chrysene	0.0002	<0.0028	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
Dibenz(a,h)anthracene		<0.0013	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064
Fluoranthene		<0.0064	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Fluorene		<0.0076	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038
Indeno[1,2,3-cd]pyrene		<0.0017	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084
Naphthalene	0.1	0.022	<0.003	0.11	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Phenanthrene		<0.007	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
Pyrene	0.25	<0.0096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
1-Methylnaphthalene		<0.001	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
2-Methylnaphthalene		<0.0026	<0.0013	0.0019	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
PCBs									
PCB-1016		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1221		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1232		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1242		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1248		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1254		NS	NS	NS	NS	NS	NS	NS	NS
PCB-1260		NS	NS	NS	NS	NS	NS	NS	NS
Metals									
Arsenic	0.01	0.0031	0.0036	0.005	0.0023	<0.0020	<0.0020	0.0091	0.0049
Mercury	0.002	<0.0002	<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	2	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium	0.005	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.1	<0.05	0.0085	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead	0.015	<0.002	0.022	0.0037	0.0025	<0.0020	<0.0020	0.0040	0.0073
Selenium	0.05	<0.001	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010
Silver		<0.05	<0.05	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

# ASTM Leach Analysis Results for Sediment

Chemical	ASTM Leach Enforcement Standards	Solid Sample #6 Leach		Drying Bed Sample Leach	QC #1 Leach		Solid Sample #1- 300 yds Leach		Leach	Solid Sample #8 Leach
		500-166966-2	500-166966-1	500-166966-3	500-167373-1	500-167373-2	500-167373-3		500-167373-5	500-167373-6
		7/18/2019	7/18/2019	7/18/2019	7/24/2019	7/24/2019	7/25/2019		7/25/2019	7/25/2019
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L
Acenaphthene		<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036		<0.0036	<0.0036
Acenaphthylene		<0.0032	<0.0032	<0.0032	0.0042	<0.0032	<0.0032		0.0035	<0.0032
Anthracene		<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032		<0.0032	<0.0032
Benzo[a]anthracene		<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044		<0.00044	<0.00044
Benzo[a]pyrene	0.0002	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	+	<0.00056	<0.00056
Benzo[b]fluoranthene	0.0002	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058		<0.00058	<0.00058
Benzo[g,h,i]perylene		<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	-	<0.0042	<0.0042
Benzo[k]fluoranthene		<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	+	<0.00074	<0.00074
Chrysene	0.0002	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014		<0.0014	<0.0014
Dibenz(a,h)anthracene		<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064		<0.00064	<0.00064
Fluoranthene		<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	+	<0.0032	<0.0032
Fluorene		<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	+	<0.0038	<0.0038
Indeno[1,2,3-cd]pyrene		<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084		<0.00084	<0.00084
Naphthalene	0.1	<0.0030	<0.0030	<0.0030	0.015	<0.0030	<0.0030		0.016	0.0096
Phenanthrene		<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	+	<0.0035	<0.0035
Pyrene	0.25	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048		<0.0048	<0.0048
1-Methylnaphthalene		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	+	<0.0050	<0.0050
2-Methylnaphthalene		<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.0014	<0.0013	<0.0013
PCBs										
PCB-1016		NS		NS	NS	NS	NS		NS	NS
PCB-1221		NS	NS	NS	NS	NS	NS		NS	NS
PCB-1232		NS	NS	NS	NS	NS	NS		NS	NS
PCB-1242		NS	NS	NS	NS	NS	NS		NS	NS
PCB-1248		NS		NS	NS	NS	NS	+	NS	NS
PCB-1254		NS		NS						
PCB-1260		NS	NS	NS	NS	NS	NS	NS NS	NS	NS
Metals										
Arsenic	0.01	0.0038		0.0036	0.0031	0.0023	0.0034		0.0044	0.0039
Mercury	0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020
Barium	2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050
Cadmium	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	+		<0.0010
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			0.0052
Lead	0.015	<0.0020		<0.0020	0.0033	0.0054	0.0054		0.011	0.012
Selenium	0.05	<0.010		<0.010	<0.010	<0.010	<0.010	+		<0.010
Silver		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

### **ASTM Leach Analysis Results for Sediment**

Chemical	ASTM Leach Enforcement Standards	Solid Sample #9 Leach	Solid Sample #10 Leach	Geo-Bag #1 Leach (Solid Sample #11 Leach in Lab Report)	Solid Sample #12 Leach	Solid Sample #13 Leach	Solid Sample #14 Leach	Solid Sample #15 Leach	Solid Sample #16 Leach	Solid Sample #17 Leach
	Stariuarus	500-167373-7	500-167373-8	500-167373-9	500-167373-10	500-167373-11	500-167373-12	500-167425-1	500-167425-2	500-167425-3
		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/26/2019	7/26/2019	7/26/2019
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L
Acenaphthene		<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036
Acenaphthylene		<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Anthracene		<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Benzo[a]anthracene		<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044
Benzo[a]pyrene	0.0002	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056
Benzo[b]fluoranthene	0.0002	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058	<0.00058
Benzo[g,h,i]perylene		<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
Benzo[k]fluoranthene		<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074
Chrysene	0.0002	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
Dibenz(a,h)anthracene		<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064	<0.00064
Fluoranthene		<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Fluorene		<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038
Indeno[1,2,3-cd]pyrene		<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084
Naphthalene	0.1	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Phenanthrene		<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
Pyrene	0.25	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
1-Methylnaphthalene		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
2-Methylnaphthalene		<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
PCBs										
PCB-1016		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1221		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1232		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1242		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1248		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1254		NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB-1260		NS	NS	NS	NS	NS	NS	NS	NS	NS
Metals										
Arsenic	0.01	0.0047	0.0048	0.0055	0.0029	0.0052	0.0074	0.0096	0.0061	0.0054
Mercury	0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.067	<0.050
Cadmium	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.1	0.0056	0.0058	0.0052	<0.0050	<0.0050	0.0078	<0.0050	<0.0050	<0.0050
Lead	0.015	0.012	0.011	0.013	0.0026	0.0055	0.021	0.013	0.011	0.0042
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silver		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

## **ASTM Leach Analysis Results for Sediment**

Acenaphthene         <0.0           Acenaphthylene         <0.0           Anthracene         <0.0           Benzo[a]anthracene         <0.00           Benzo[a]pyrene         0.0002         <0.00           Benzo[b]fluoranthene         0.0002         <0.00           Benzo[g,h,i]perylene         <0.0         <0.00	25-4 019 ng/L 036 032 032 044 056
S00-16742   7/26/2   7/26/2   mg/L   mm/L   mm/L	019 036 032 032 044 056
mg/L         m           Acenaphthene         <0.0           Acenaphthylene         <0.0           Anthracene         <0.0           Benzo[a]anthracene         <0.00           Benzo[a]pyrene         0.0002         <0.00           Benzo[b]fluoranthene         0.0002         <0.00           Benzo[g,h,i]perylene         <0.0         <0.00	036 032 032 044 056
Acenaphthene         <0.0           Acenaphthylene         <0.0           Anthracene         <0.0           Benzo[a]anthracene         <0.00           Benzo[a]pyrene         0.0002         <0.00           Benzo[b]fluoranthene         0.0002         <0.00           Benzo[g,h,i]perylene         <0.0         <0.00	036 032 032 044 056 058
Acenaphthylene         <0.0           Anthracene         <0.0           Benzo[a]anthracene         <0.00           Benzo[a]pyrene         0.0002         <0.00           Benzo[b]fluoranthene         0.0002         <0.00           Benzo[g,h,i]perylene         <0.0         <0.00	032 032 044 056 058
Anthracene         <0.0	032 044 056 058
Benzo[a]anthracene         <0.00	044 056 058
Benzo[a]pyrene         0.0002         <0.00	056 058
Benzo[b]fluoranthene 0.0002 <0.00 Benzo[g,h,i]perylene <0.0	058
Benzo[g,h,i]perylene <0.0	
	042
· · · · · · · · · · · · · · · · · · ·	
Benzo[k]fluoranthene <0.00	074
Chrysene 0.0002 <0.0	014
Dibenz(a,h)anthracene <0.00	064
Fluoranthene <0.0	032
Fluorene <0.0	038
Indeno[1,2,3-cd]pyrene <0.00	084
Naphthalene 0.1 <0.0	030
Phenanthrene <0.0	035
Pyrene 0.25 <0.0	048
1-Methylnaphthalene <0.0	050
2-Methylnaphthalene <0.0	013
PCBs	
PCB-1016	NS
PCB-1221	NS
PCB-1232	NS
PCB-1242	NS
PCB-1248	NS
PCB-1254	NS
PCB-1260	NS
Metals	
Arsenic 0.01 0.0	033
Mercury 0.002 <0.00	020
Barium 2 <0.	050
Cadmium 0.005 <0.0	010
Chromium 0.1 <0.0	050
Lead 0.015 <0.0	020
Selenium         0.05         <0.	010
Silver <0.0	050

NS- Not Sampled

Exceeds Criteria



0.0110

0.0130

0.0110

0.0042

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Conoral Statistics

Date/Time of Computation ProUCL 5.18/5/2019 9:34:19 AM

From File WorkSheet.xls
Full Precision OFF
Confidence Coefficient 95%
Number of Bootstrap Operations 2000

Lead ASTM Leach

	delieral statistics		
0.0020	Total Number of Observations	26 Number of Distinct Observations	
0.0220		Number of Missing Observations	
0.0037	Minimum	0.002 Mean	0.00
0.0025	Maximum	0.049 Median	0.0
		0.04 0.1 5	

 0.0037
 Minimum
 0.002 Mean
 0.00888

 0.0025
 Maximum
 0.049 Median
 0.0054

 0.0020
 SD
 0.01 Std. Error of Mean
 0.00196

 0.0020
 Coefficient of Variation
 1.126 Skewness
 2.845

 0.0040
 Normal GOE Test

16

 0.0073
 Normal GOF Test

 0.0020
 Shapiro Wilk Test Statistic
 0.675 Shapiro Wilk GOF Test

 0.0020
 5% Shapiro Wilk Critical Value
 0.92
 Data Not Normal at 5% Significance Level

 0.0020
 Lilliefors Test Statistic
 0.246
 Lilliefors GOF Test

 0.0033
 5% Lilliefors Critical Value
 0.17
 Data Not Normal at 5% Significance Level

0.0054 Data Not Normal at 5% Significance Level

0.0490 Assuming Normal Distribution

 0.0110
 95% Normal UCL
 95% UCLs (Adjusted for Skewness)

 0.0120
 95% Student's-t UCL
 0.0122
 95% Adjusted-CLT UCL (Chen-1995)
 0.0133

 0.0120
 95% Modified-t UCL (Johnson-1978)
 0.0124

 0.0130
 Gamma GOF Test

 0.0026
 A-D Test Statistic
 0.943 Anderson-Darling Gamma GOF Test

 0.0055
 5% A-D Critical Value
 0.766 Data Not Gamma Distributed at 5% Significance Level

 0.0210
 K-S Test Statistic
 0.159 Kolmogorov-Smirnov Gamma GOF Test

5% K-S Critical Value 0.175 Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.319 k star (bias co	orrected MLE)	1.193
Theta hat (MLE)	0.00673 Theta star (bi	ias corrected MLE)	0.00745
nu hat (MLE)	68.6 nu star (bias	corrected)	62.02
MLE Mean (bias corrected)	0.00888 MLE Sd (bias	corrected)	0.00813
	Approximate	Chi Square Value (0.05)	44.91
Adjusted Level of Significance	0.0398 Adjusted Chi	Square Value	43.94

**Assuming Gamma Distribution** 

95% Approximate Gamma UCL (use when n>=50) 0.0123 95% Adjusted Gamma UCL (use when n<50) 0.0125

Lognormal GOF Test
Shapiro Wilk Test Statistic
5% Shapiro Wilk Critical Value
10.916 Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value
10.92 Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic
10.144 Lilliefors Critical Value
10.17 Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

 Minimum of Logged Data
 -6.215 Mean of logged Data
 -5.149

 Maximum of Logged Data
 -3.016 SD of logged Data
 0.907

Assuming Lognormal Distribution

 95% H-UCL
 0.0135
 90% Chebyshev (MVUE) UCL
 0.0137

 95% Chebyshev (MVUE) UCL
 0.016
 97.5% Chebyshev (MVUE) UCL
 0.0192

 99% Chebyshev (MVUE) UCL
 0.0256

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

Nonparametric Distribution Free UCLS			
95% CLT UCL	0.0121	95% Jackknife UCL	0.0122
95% Standard Bootstrap UCL	0.0121	95% Bootstrap-t UCL	0.0147
95% Hall's Bootstrap UCL	0.026	95% Percentile Bootstrap UCL	0.0122
95% BCA Bootstrap UCL	0.0133		
90% Chebyshev(Mean, Sd) UCL	0.0148	95% Chebyshev(Mean, Sd) UCL	0.0174
97.5% Chebyshev(Mean, Sd) UCL	0.0211	99% Chebyshev(Mean, Sd) UCL	0.0284

Suggested UCL to Use

95% Adjusted Gamma UCL 0.0125

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.



August 5, 2019

Mr. Paul Grittner, Contaminated Material Management Specialist Wisconsin Department of Natural Resources Remediation and Development PO Box 7921 Madison, WI 53707-7921

Re: NR 718 Application - Soil Waste Management Plan Rock River Sediment Removal Project Janesville, Wisconsin BRRTS Activity # 02-54-577951

Dear Mr. Grittner:

Thank you for your prompt response to our letter of July 17<sup>th</sup>. EAG is proposing that the dredged sediment be reused to grade a small area within the former JATCO for positive drainage and be revegetated, reducing the paved surface area in the northern portion of that parcel. Soils will be utilized as fill material (with continuing obligations, as applicable) at the final reuse location shown on the attached aerial map.

A 2-foot thick (minimum) engineered barrier or "cap" consisting of uncontaminated "clean" soil material will be placed on top of the fill area to isolate the impacted soils. The native onsite and offsite borrow soils were sampled and analyzed to demonstrate no impacts for unrestricted use as a cover material. Vegetation (native grasses) will be established as a final surface feature. Please find herein supplemental information addressing your requests, including those in your letter of July 16, 2018. We have restructured this submittal to assist your review and approval, and attached all information for completeness.

1. Laboratory reports were not included for all lab data referenced on the table. Data missing from the lab reports include:

Solid Sample #1 – PAH and metal analysis Solid Sample #2 – PCBs, PAHs, PAH leach, and metals analysis

It is unclear whether soil samples #1-3, referenced in the lab reports, are the same as solid sample #1-3, referenced in different lab reports and on the table. It is also unclear why metals leach analysis was conducted on Soil #1 (collected 6/20) and Solid #1 (collected on 7/9). Providing a brief narrative describing how the soil/solid samples were collected and analyzed would be a useful for interpreting this data.

Solid samples #1-3 and Soil Samples #1-3 are the same samples. They were erroneously mislabeled, but still correspond to the same soil piles we sampled. The reason why Solid Sample #1 was sampled at two different dates is due to the lab not running leachate analysis for all of the parameters that we requested. A second sample was submitted on 7/9 to completely characterize the soil pile. Solid Sample #2 had leach analysis done on 7/25.

Geo-Bag Sample #1 also had leach analysis done on 7/25 to fill in missing data. The sample of the bag was entered in the lab analysis as Solid Sample #11, receiving redundant Total Elemental

analysis as a result. Geo-Bag Sample #1 has results entered in the sediment table under the Sample ID's (Geo-Bag Sample #1) and (Solid Sample #11). ASTM leach analysis for the Geo-Bag is entered once in the sediment table under Solid Sample #11. The redundant Total Elemental Analysis will be used as a third Quality Control (QC) sample for the project.

2. The volume of material currently proposed to be managed under the exemption needs to be stated. Is this request for the initially 500 yards of soils, or is it intended to apply to a greater volume? Is it expected that future requests will be made to reuse additional material at this location?

This request is for a total of approximately 11,000 cys of sediment-soil that has all been stored, sampled, and/or characterized representing entire project. The table has been updated to include the approximate volumes that each sample analysis characterizes. The lab report for these additional results has also been included as an attachment. No future requests are intended to be made for material.

3. Explain how the sampling criteria in NR 718.12(1)(e) has been met by explaining what the sample results on the attached table represent. Were solid samples #1, #2, and #3 collected during the accumulation of the first 500 yards of stockpiled dewatered sediment as was originally proposed? Explain what a Geo-Bag sample is and if these results are being used to characterize stockpiled soil that will be reused at the former JATCO.

The initial stockpile was sampled for all contaminants that were previously detected during the initial pilot study in 2018 representing the first 100 cubic yards (cys). Additional samples were collected in 2019 in accordance with the approved RADR, including one sample collected from the first 300 cys, and one sample collected from the first 500 cys. These are identified under the sample ID's: Pilot Test Sample, Solid Sample #1-300 cys, and Solid Sample #1, respectively. A representative sample from each 500-CY stockpile was collected as a composite from five discrete locations within each stockpile from areas most likely to contain residual soil contamination. The analytical results were compared to the industrial RCLs. Sampling of each stockpile was completed to characterize the soil quality for reuse or final disposal offsite. Sampling of the dried sediment-soil consisted of both total elemental analyses and analyses of leachate (by ASTM method).

The tables have been updated to show the volumes that are represented for each sample. The "Solid Samples" consist of material that was typically coarse grained in nature and placed in open 500 yd stockpiles. "Geo-Bag samples" refer to the sediment that had more fine-grained material that needed further dewatering, so the material was subsequently placed in Geo-Textile Bags that can hold up to 500 cys of dewatered sediment. The material in the Geo-Textile bags is considered suitable for reuse at the former JATCO site.

4. A map depicting the reuse area was provided. If the cap tapers off as shown on the figure it should extend beyond fill area to ensure the thickness will be protective.

See Figures 1, 2 and 3 depicting the re-use area. A revised cross-section showing the cap soil overlapping the excavation to minimize potential for infiltration through the fill material is attached. If deemed essential, soil may be compacted and amended to support an impermeable cover over a portion of the area.

5. Confirm whether the soil managed at the proposed reuse location will be placed more than 3 feet from the high-water level in that area.

The Final Case Closure letter for BRRTS # 03-54-000405, Section 2.B.(iv). indicates the depth to groundwater on the site ranged from 61.33 ft bgs to 69.53 bgs on the site in Section 2.B.(i). The depth of the reuse location will be more than 50 feet above the highest groundwater level at the site and the area is not within a floodplain.

6. Provide a justification that reuse will meet requirements of NR 726.12(1)(b)1-5 (which generally means that the reuse of the contaminated soil in the proposed location will not result in harm to human health or the environment).

The analytical data provided so far indicates that the soil potentially exceeds industrial direct contact RCLs and that naphthalene has the potential to leach such that an enforcement standard could be exceeded by this compound. The flow chart included with the Application suggests that soil with these characteristics be reused under a concrete cap or be disposed at a licensed facility. Explain how reusing the soil in the newly identified reuse area is as protective as these other strategies. The DNR does not typically consider a soil cap to be protective for preventing groundwater contamination.

See attached update data summary table with statistical evaluation, revised decision tree for soil characterization, existing and proposed continuing obligations that include a soil management plan, and a cap maintenance plan demonstrating the remaining level of contamination does NOT:

- **1.** Pose a threat to public health, safety, or welfare or the environment. The land use restrictions in conjunction with the proposed repository will prevent exposure to the low concentrations of residual contaminants are protective of human health and the environment.
- 2. Cause a violation of a ch. NR 140 groundwater quality enforcement standard at any applicable point of standards application, except where the department has granted an exemption under s. NR 140.28 for a specific hazardous substance or the criteria under s. NR 726.05 (6) are met. Only three of the 26 soil leachate results slightly exceed the Enforcement Standard for lead. A statistical evaluation of the data using the USEPA ProUCL demonstrates that the 95 Upper Confidence Limit on the mean concentration (0.0125 mg/L) is **below** the ES of 0.015 mg/L for lead. One soil sample leachate result for Naphthalene slightly exceeded the ES (0.11 mg/L versus ES of 0.10 mg/L) and was qualified data (B-flag) also detected in the laboratory blank. The repository is shallow (< 6 ft bgs) and well above the uppermost saturated lithology. The fill material will be separated from contact with groundwater by over 50 feet (depth of 2-6 ft bgs versus GW @ > 60 ft bgs). We believe grading the soil cap will minimize infiltration and be sufficiently protective of groundwater. Furthermore, a groundwater use restriction is already in place at the site associated with BRRTS No. 03-54-00405 and was granted on October 26, 1999 and filed in Rock County Register of Deeds, document number 1434932). No potable groundwater wells are present on the site, and groundwater use restrictions will continue to be upheld as referenced in the final closure of BRRTS # 03-54-000405, Section 2.B.(iv). Attached are extracted pages from the Final Case Closure letter.
- **3.** Cause a violation of surface water quality standards in chs. <u>NR 102</u> to <u>106</u>. A Notice of Intent for Construction was filed online last week and a Stormwater Pollution Prevention Plan is available. The cover materials will be graded to minimize erosion and segregate impacted materials from contact with stormwater runoff.
- **4.** Cause a violation of air quality standards contained in chs. <u>NR 400</u> to <u>499</u>. Dust will be managed by watering as necessary. No air quality violations are anticipated.

**5.** Cause a vapor action level in indoor air to be attained or exceeded. No volatile organic compounds were identified in the sediments; therefore, no IA exceedances expected.

Leach test results should always be tabulated and compared to the enforcement standards to support the proposed management plan.

The summary table of analytical results and a statistical evaluation of the data have been attached for your consideration.

7. State specifically what continuing obligations will be required to address soil reused offsite and provide the applicable review and database fees.

As a condition for approving the 718 exemption the DNR will impose continuing obligations on the site where the contaminated soil will be managed. The applicant must propose these obligations as part of the exemption request.

It is unclear whether requiring industrial land use would be beneficial, as the sample results from Solid Sample #2 indicate that PAH concentrations exceed industrial direct contact RCLs. The only advantage to using industrial direct contact RCLs is when contaminant concentrations are between industrial and non-industrial standards, the soil is located at a property that is zoned for industrial uses, and a cap will not be maintained over the contaminated material. Recommending the continuous maintenance of the proposed cap would address the direct contact risk posed by residual contamination and would not require land use restrictions.

A two-foot minimum soil capping layer (consisting of uncontaminated native soil), vegetative cover, and maintenance plan is proposed. The current zoning is M2 - General Industrial. Future zoning may include commercial uses; however, the proposal addresses continuing obligations for non-residential land use, maintenance of the cover system, a soil management plan, and continuation of the existing restriction on groundwater use. Some of these deed restrictions were already memorialized in the Case Closure approval for BRRTS No. 02-54-560181 GM Former Haul-Away Yard per a letter from DNR to GM dated August 1, 2017. A groundwater use restriction is in place at the site associated with BRRTS No. 03-54-00405 and was granted on October 26, 1999 and filed in Rock County Register of Deeds, document number 1434932). No potable groundwater wells are present on the site, and groundwater use restrictions will continue to be upheld as referenced in the final closure of BRRTS # 03-54-000405, Section 2.B.(iv). A copy of the Final Case Closure letter and excerpted supporting documentation is attached. An Amended Soil Management Plan is included in this submittal.

The land use / zoning plan was not included with the application, so it is unclear if requiring industrial zoning to be maintained would be an issue for this property.

A copy of the current proposed planning is attached.

A \$1,000 check was previously submitted. No paper copy of this submittal is being sent (unless requested by WDNR).

We trust this supplemental information satisfies your current needs to grant approval of our request. If you have any questions, please contact me at 314-835-2814 or by email at <a href="mailto:ddunn@enviroanalyticsgroup.com">ddunn@enviroanalyticsgroup.com</a>.

#### Sincerely,

Daniel M. Dunn

VP - Director of Remediation EnviroAnalytics Group, LLC 1515 Des Peres Rd, Suite 300 St. Louis, MO 63131

Daniel M. Dunn

cc: Bill Fitzpatrick, PE

#### **Enclosures:**

- Figures:
  - o Aerial site plan with fill location
  - o Site Plan
  - o Cross-section
- Revised Summary table of lab data dried sediment-soil
- Lead Leachate UCL Data evaluation
- Amended Soil Management Plan (w/cover maintenance plan)
- Current zoning
- Proposed land use / zoning plan
- Decision tree
- Excerpts of Case Closure file with continuing obligations and example soil boring log
- Stormwater Pollution and Erosion Managment Plan
- Test America Analytical reports

#### **EXISTING ZONING**

The project site is primarily zoned M2, General Industrial. The M2 industrial district is generally designed to accommodate manufacturing, production, storage, and general industrial activities in areas relatively remote from residential development or as otherwise allowed and designated in the Comprehensive Plan. The entire site falls within the South Jackson Overlay District, which was designed to ensure that industrial development of the Centennial Industrial Park is compatible with adjacent land uses and less intensive than would typically be permitted in the M2 District.

The zoning of the Centennial Industrial Park and adjacent properties is summarized in brief below. A full description of allowable uses can be founded in the City's Code of Ordinances in Chapter 18.36: Zoning Districts & Maps.

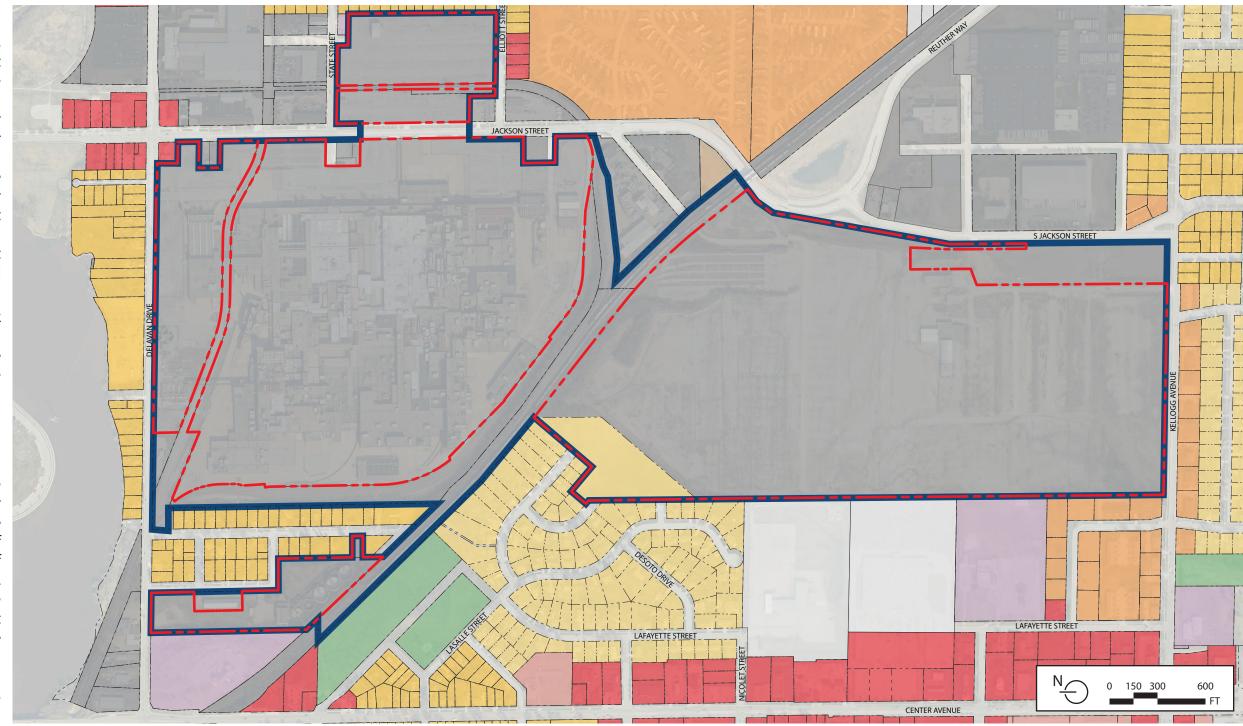
South Jackson Overlay District The South Jackson Street Overlay (SJO) district was created specifically to guide the redevelopment of the former GM Assembly Plant and maximize its positive impact on the surrounding community. The boundaries of the 300 acre SJO district encompass all of the parcels in the Centennial Industrial Park. Generally, the SJO requires that all future use, adaptive reuse, or redevelopment within the district be approved under the Planned Unit Development Process. A full description of the SJO can be found in the City of Janesville's Code of Ordinances 18.36.070 (4).

M1: Light Industrial

uses permitted.

M2: General Industrial

permitted.



O1: Office/Residence District

buildings, and open space.

C: Conservancy District

nuisances or hazards. No residential use and drainageways, wetlands, floodplains, located along major commercial arterials. residential dwellings. greenbelts, natural areas, or other beneficial Residential uses primarily limited to second green spaces.

B2: Community Shopping District

primarily limited to second floor.

**B3: General Commercial District** floor.

R1: Single & Two-Family Residence

Designed for industrial activities that require Single and two family residences, apartment Designed to provide for a large consumer Low density, single family residences with All uses permitted in R1 and R2, as well as twoand contribute to a pleasant, hazard, and buildings, offices, civic uses like museums population; generally located along major limited two-family dwellings allowed by family and multiple family dwellings, mobile nuisance-free environment. No residential and libraries, health care, education, religious commercial arterials. Residential uses conditional use. Parks, open spaces, schools, homes, college residence halls, nursing and churches are also permitted.

homes, museums, and cemeteries.

R3: General Residence District

R2: Limited General Residence Designed for heavier industrial activities and Preserves designated areas as open space Intended for motorist-oriented commercial All uses permitted in R1, as well as smaller lots manufacturing that may produce moderate in perpetuity. Land uses may include rivers activities with large service areas. Generally and a higher density of single and two family

### **REDEVELOPMENT CONCEPT**

Three concept alternatives were reviewed by the owner, project stakeholders, and the City of Janesville. The preferred concept shown on this page was developed based on feedback from City representatives and stakeholders.

#### **Site Statistics**

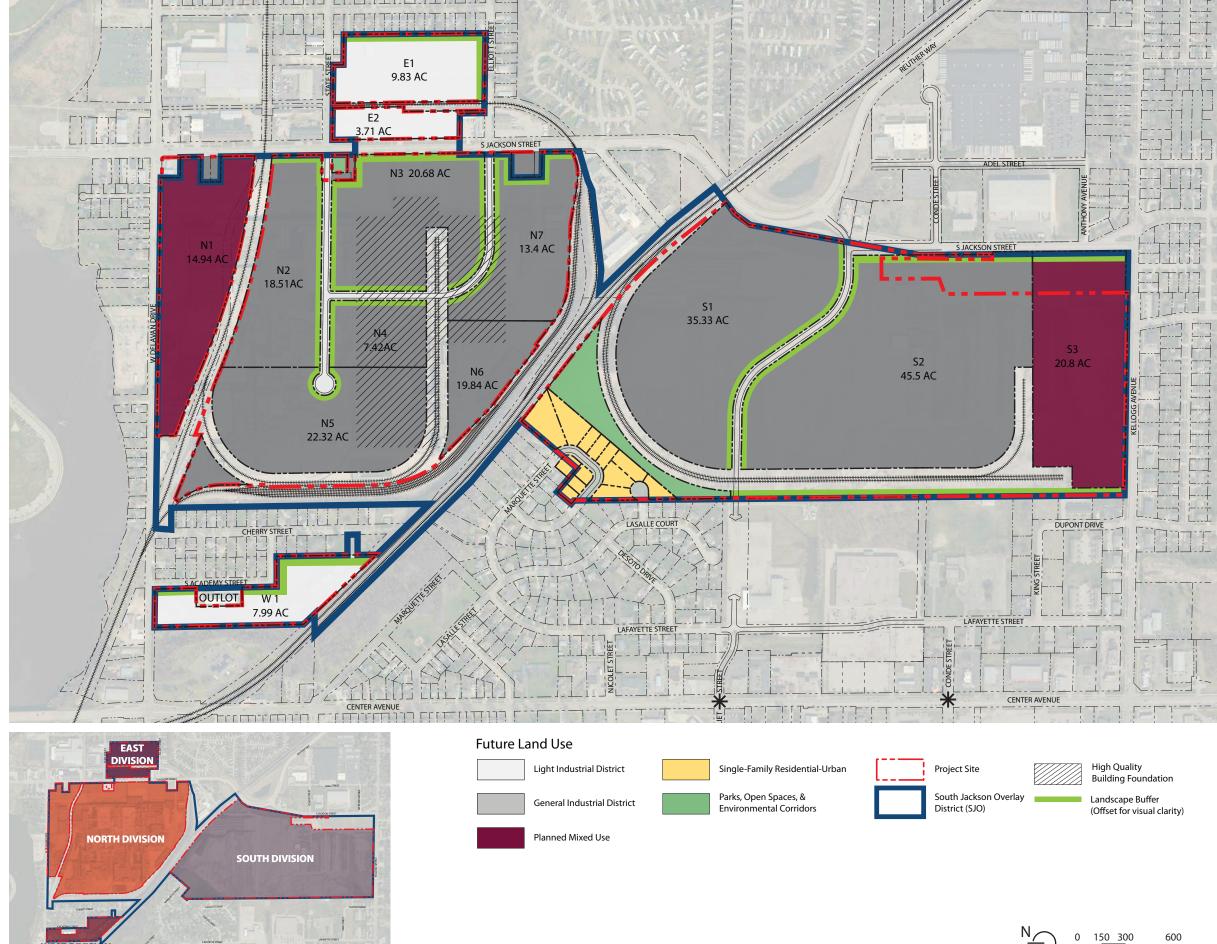
- 13 total lots
- 10 mid to large-size lots ranging from 7.42-72.65 AC in the Northern and Southern Divisions.
- Average parcel size of 20.5 AC.
- Mixed use (Transitional) land use on the northern border of the North Division and the southern border of the South Division.
- Land between Joliet and Conde streets repurposed for light industrial uses.
- Conservancy district provided between the Union Pacific Rail spur in the South Division and new residential lots.

#### Rail

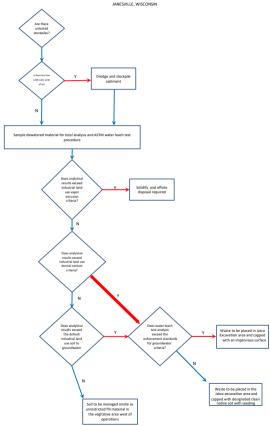
- 12 parcels with rail access.
- Realigned WATCO rail line through Northern District to create a larger more functional lot between W Delavan Drive and the WATCO rail line.
- Proposed WATCO rail spur in the North Division.
- Proposed Union Pacific rail spur in the South Division.

#### Circulation

- Possible new street extending east from Joliet Street would provide direct circulation through the site to Jackson Street from Center Avenue to Reuther Way.
- Connect Lafayette St. between Joliet and Conde Streets.
- No through-access provided from the site's southern border along Kellogg Ave
- Internal circulation provided in the North Division, aligned with State and Elliot streets.



#### SOIL WASTEMANAGMENT PLAN - DECISION DIAGRAM 1000 GENERAL MOTORS DRIVE



State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 3911 Fish Hatchery Road Fitchburg, WI 53711

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



#### **VIA EMAIL**

June 6, 2017

Kim D. Tucker-Billingslea General Motors, LLC – GEC & S Remediation Team 30400 Mount Rd., WTC Mfg. B MC:480-109-MB1, Off: 1 AP23 Warren, MI 48092

Subject: Remaining Actions Needed

GM Haul Away Yard, Former, 544 Kellogg Avenue, Janesville, Wisconsin

DNR BRRTS Activity # 02-54-56081

Dear Ms. Tucker-Billingslea:

On June 1, 2017 the South Central Region Closure Committee (Closure Committee) reviewed your request for closure of the case described above. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. The following actions are needed to complete our review of your request. Upon completion of these actions, closure approval will be provided.

#### Remaining Actions Needed

#### Monitoring Well Abandonment

The monitoring wells at the site must be properly abandoned in accordance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment for all wells must be submitted to Jason Lowery on Form 3300-005, found at <a href="http://dnr.wi.gov/topic/groundwater/forms.html">http://dnr.wi.gov/topic/groundwater/forms.html</a>.

#### Additional Figures

Due to the relatively large amount of data collected from a small area within the Tank L basin, we would like you to incorporate figures specifically associated with the Tank L basin (1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> figures that you submitted to us separately on April 25, 2017) into the closure package.

#### Documentation

When the required actions have been completed, submit the appropriate documentation within 60 days of the date of this letter, to verify their completion. At that point, your closure request can be approved and your case can be closed.

Submit all changes to the original closure request in one final, complete compact disk. For the paper copy, only revisions or updates need to be submitted. The submittal of both an electronic and paper copy are required in accordance with s. NR 726.09 (1), Wis. Adm. Code.

#### **GIS Registry**

Your site will be listed on the DNR Remediation and Redevelopment Program's GIS Registry, to provide public notice of remaining contamination and continuing obligations. The continuing obligations will be specified in the final closure approval. Information that was submitted with your closure request application will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web), at <a href="http://dnr.wi.gov/topic/Brownfields/rrsm.html">http://dnr.wi.gov/topic/Brownfields/rrsm.html</a>.



#### In Conclusion

We appreciate your efforts to restore the environment at this site. This remedial action project is nearing completion. I look forward to working with you to complete all remaining actions that are necessary to achieve closure.

If you have any questions regarding this letter, please contact the project manager, Jason Lowery, at (608) 267-7570, or by email at <u>jason.lowery@wisconsin.gov</u>.

Sincerely,

Steve L. Martin

Team Supervisor, South Central Region Remediation & Redevelopment Program

cc: Mauricio Barrera and Glenn Turchan, GHD (email)

State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov Case Closure – GIS Registry
Form 4400-202 (R 8/16) Page 1 of 20

#### SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

**Notice:** Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information				
BRRTS No.	VPLE No.			
02-54-560181				
Parcel ID No.				
04-12-100149				
FID No.	WTM Coo	rdinates		
15/062910	X (00002.2	7	12005	1
BRRTS Activity (Site) Name	600093.3 WTM Coordinates Represent:	24	2805.	1
	'			
Former Haul-Away Yard Site Address	Source Area	Parcel C		ZIP Code
544 Kellogg Avenue Acres Ready For Use	Janesville		WI	53546
•	39			
Responsible Party (RP) Name				
General Motors, LLC - GEC&S-Remediation Team				
Company Name				
Mailing Address	City	5	State Z	ZIP Code
30400 Van Dyke VEC - East 5th Floor	Warren		MI	48093
Phone Number	Email			
(248) 255-2797	kim.tucker-billingslea@gm.com			
Check here if the RP is the owner of the source property.				
Environmental Consultant Name				
Mauricio Barrera				
Consulting Firm				
GHD Inc (formerly CRA)	7			
Mailing Address	City	5	State Z	ZIP Code
14496 Sheldon Rd, Suite 200	Plymouth		MI	48170
Phone Number	Email			
(519) 884-0510	mauricio.barrera@ghd.com			
Fees and Mailing of Closure Request				
<ol> <li>Send a copy of page one of this form and the applicable ch. N (Environmental Program Associate) at http://dnr.wi.gov/topic</li> </ol>				
\$1,050 Closure Fee	\$300 Database Fee for So	oil		
\$350 Database Fee for Groundwater or	Total Amount of Payment \$			
Monitoring Wells (Not Abandoned)	Resubmittal, Fees Previou	usly Paid		_

Send one paper copy and one e-copy on compact disk of the entire closure package to the Regional Project Manager
assigned to your site. Submit as <u>unbound, separate documents</u> in the order and with the titles prescribed by this form. For
electronic document submittal requirements, see <a href="http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf">http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf</a>.

Activity (Site) Name

Case Closure - GIS Registry Form 4400-202 (R 8/16)

Page 2 of 20

#### Site Summary

If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.

#### **General Site Information and Site History**

A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings. The Former Haul-Away Yard (a.k.a. Former Allied Systems Ltd) is located at 544 Kellogg Avenue in Janesville, Rock County, Wisconsin (Site). The Site is located across the following quarter sections: SE 1/4, SW 1/4, S1, T2N, R12E; SW 1/4, SE 1/4, S1, T2N, R12E; NE 1/4, NW 1/4, S12, T2N, R12E; SE 1/4, NW 1/4, S12, T2N, R12E; and NW 1/4, NE 1/4, S12, T2N, R12E. The Site is owned by General Motors LLC (GM).

The Site Location Map is presented on Figure B.1.a and the Detailed Site Map is presented on Figures B.1.b.1 and B.1.b.2 in Attachment B. The Site comprises approximately 139 acres. The Site is bordered to the north by the Chicago and Northwestern railroad line and beyond by Abitec Corporation (provider of specialty fats and oils to industry), and the former GM Janesville Assembly Plant. The Site is bordered to the east by a large soil pile and stormwater detention pond (the soil pile was generated from construction of the detention pond by the City of Janesville) and South Jackson Street, with several commercial facilities located beyond (including an unnamed junkyard, PPG Industrial Coatings, and Border States Electrical Supply). The Site is bordered to the south by Kellogg Avenue with residential properties located beyond. The Site is bordered to the west by residential properties and several commercial facilities located beyond (including Monroe Truck Equipment, Pick N Save Plaza, and a former United Auto Workers [UAW] training center).

- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use. The Site was formerly occupied by Allied Automotive Systems (Allied). The Site was acquired by GM on May 13, 2005 and leased back to Allied from the purchase date until the end of 2010. Allied used the property as an automotive hauling business and for the repair and maintenance of semi tractors and trailers. The Site is occupied by eight buildings including the main Site building (also referred to as the West Shop), the East Shop, a former remediation shed, a fuel island building, two sheds, and a guard shack. The remainder of the Site consists of asphalt paved areas, landscaped and vegetated areas, and gravel areas, situated on relatively flat terrain with gentle slope to the east (see Figures B.1.a, B.1.b.1 and B.1.b.2 in Attachment B). The Site has a perimeter security fence. The Site was developed for the purpose of storing GM product vehicles and the maintenance of semi tractors and trailers in 1956, and has been owned by various entities since development. Based on available historical information, prior to Site development in 1956, the Site was utilized as cultivated land. The Site is currently vacant.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G). According to the City of Janesville Planning Services Zoning Map, dated September 9, 2014, the Site is zoned M2 - General Industrial. A copy of the City of Janesville Zoning Map is included as Attachment F.3.
- D. Describe how and when site contamination was discovered.
  - In February 2010, CRA (now GHD) conducted a subsurface investigation at the Site and 13 soil borings (SB-1-10 through SB-13-10) were advanced to depths ranging between 20 and 70 feet (ft) below ground surface (bgs). Soil boring locations are presented on Figure B.1.b.2 in Attachment B. The soil borings were advanced to evaluate potential environmental impairment to the Site associated with current and historical operations, including potential releases from non-sanitary wastewater discharges, material storage, and current and historical operations associated with the Site buildings, the used oil aboveground storage tank (AST), an existing underground storage tank (UST) and dispenser island, and former and closedin-place USTs. Based on field observations, evidence of impact (elevated photoionization detector [PID] readings and odors) was observed in shallow soils (generally from 0 to 2.5 ft bgs) in soil borings SB-8-10 and SB-9-10, located south-southwest of the main Site building. Based on laboratory analytical results, Total Petroleum Hydrocarbons (TPH) as Diesel Range Organics (DRO) and TPH as Gasoline Range Organics (GRO) were detected above the Chapter (ch.) NR 720, Wisconsin Administrative Code (Wis. Adm. Code) Generic Residual Contaminant Levels (RCLs) in the shallow soil samples collected from soil borings SB-8-10 and SB-9-10. Naphthalene was detected above the Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment Publication RR-519-97, "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs)" (RR-519-97 Soil Cleanup Levels) in the shallow soil sample collected from soil boring SB-8-10.
- E. Describe the type(s) and source(s) or suspected source(s) of contamination. Based on available information, 26 USTs were formerly used at the Site. At the time of the 2010 subsurface investigation, 13 of the 26 USTs were closed-in-place (Tanks A through M) and registered as "closed" on the Wisconsin Department of Safety and Professional Services (WDSPS) UST Database. Based on available information, the WDNR approved closure-in-place for at least 12 (Tanks A through K, and Tank M) of the 13 closed-in-place USTs. Residual soil contamination was identified at the time of closure in 10 of the 13 closed-in-place USTs, which is further discussed in Section 3.A.i.
- Other relevant site description information (or enter Not Applicable). No surface water bodies are present on the Site. No surface water bodies were observed on Site in the available historical

BRRTS No.

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aerial photographs or topographic maps reviewed. A stormwater detention pond is located adjacent to the southeast portion of the Site. No other surface water bodies are located adjacent to the Site. The next nearest surface water body is the Rock River, located approximately one mile north of the Site, and a tributary of the Rock River is located approximately one mile south-southeast of the Site. No environmentally sensitive areas are known to exist on the Site. An area of cattails and grass is present in the southwest corner of the Site and an area of brush and trees is present along the railroad load-out area in the northern portion of the Site. Based on data obtained from the Federal Emergency Management Agency (FEMA) and reviewed by Environmental Data Resources, Inc. (EDR), the Site is not within the 100-year or 500-year flood zones.

- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.
  - 1) Bureau for Remediation and Redevelopment Tracking System (BRRTS) Number (#) 02-54-560181 GM Haul Away Yard Former, Type-Status: ERP Open
  - 2) BRRTS # 03-54-560180 Allied Systems Former Diesel UST, Type-Status: Lust Closed
  - 3) 03-54-000405 Complete Auto Transport, Type-Status: Lust Open
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property. According to the WDNR BRRTS on the Web database, the northern and downgradient adjacent property Abitec Corporation (Activity Name: Abitec Corp and/or 1530 S Jackson St) located at 1530 South Jackson Street, was listed as having seven closed spill cases (BRRTS# 04-54-044256, 04-54-052491, 04-54-190516, 04-54-544046, 04-54-548079, 04-54-547816, and 04-54-554100) occurring over the period between December 4, 1989 and September 3, 2009, in addition to a closed LUST case (BRRTS# 03-54-001898, Activity Name: Karl Shamn USA) occurring over the period between June 14, 1993 and January 21, 1994.

According to the WDNR BRRTS on the Web database, the northern and downgradient adjacent property (GM Janesville Assembly Plant) located at 1000 General Motors Drive, was listed as having 26 BRRTS #s (25 closed, 1 open) which are listed below:

- 1. BRRTS # 04-54-038385 Industrial Dr & Delavan Dr (June 26, 1981 June 29, 1981) Spill Closed
- 2. BRRTS # 04-54-051690 General Motors (GM) Paint Dept (October 2, 1983 October 14, 1983) Spill Closed
- 3. BRRTS # 04-54-040128 General Motors (GM) (January 28, 1985 February 1, 1985) Spill Closed
- 4. BRRTS # 04-54-040743 General Motors (GM) (December 3, 1985 December 10, 1985) Spill Closed
- 5. BRRTS # 04-54-041738 General Motors (GM) (February 17, 1987 February 18, 1987) Spill Closed
- 6. BRRTS # 04-54-042083 General Motors (GM) (July 7, 1987 August 28, 1987) Spill Closed
- 7. BRRTS # 04-54-042126 General Motors (GM) (July 20, 1987 July 21, 1987) Spill Closed 8. BRRTS # 04-54-042803 General Motors (GM) (May 31, 1988 June 2, 1988) Spill Closed
- 9. BRRTS # 04-54-042949 General Motors (GM) (July 22, 1988 July 26, 1988) Spill Closed
- 10. BRRTS # 02-54-000981 General Motors (GM) Boc Tank Farm (August 15, 1988 February 2, 1989) ERP Closed
- 11. BRRTS # 04-54-043568 General Motors (GM) (April 12, 1989 April 27, 1989) Spill Closed
- 12. BRRTS # 04-54-052617 General Motors (GM) (September 18, 1989 September 20, 1989) Spill Closed
- 13. BRRTS # 03-54-000782 General Motors (GM) (April 16, 1991 September 1, 1993) LUST Closed
- 14. BRRTS # 03-54-001063 Bobos Tavern (July 23, 1991 August 26, 1996) LUST Closed
- 15. BRRTS # 04-54-047174 General Motors (GM) Tank Farm (May 22, 1992 May 22, 1992) Spill Closed
- 16. BRRTS # 03-54-001652 Condon Property (June 12, 1992 January 24, 1994) LUST Closed
- 17. BRRTS # 02-54-270694 General Motors (GM) Corp (January 11, 1994 May 9, 2003) ERP Closed
- 18. BRRTS # 04-54-049366 General Motors (GM) (March 8, 1994 March 11, 1994) Spill Closed
- 19. BRRTS # 03-54-002842 General Motors (GM) Corp (September 17, 1996 February 4, 1997) LUST Closed
- 20. BRRTS # 02-54-225757 General Motors (GM) Conveyor Pit (June 7, 1999 July 19, 1999) ERP Closed
- 21. BRRTS # 04-54-284199 General Motors (GM) Tank Farm (November 11, 2001 November 26, 2001) Spill
- 22. BRRTS # 04-54-408417 General Motors (GM) (August 17, 2002 To August 30, 2002) Spill
- 23. BRRTS # 04-54-506277 General Motors (GM) Storm Water Outfall (July 8, 2003 July 10, 2003) Spill
- 24. BRRTS # 04-54-550501 General Motors (GM) Spill (October 16, 2007 November 9, 2007) Spill Closed
- 25. BRRTS # 04-54-555156 General Motors (GM) Plant Spill (March 29, 2010 April 5, 2010) Spill Closed
- 26. BRRTS # 02-54-560205 General Motors (GM) Property (February 15, 2013 Present) ERP Open

Based on a review of available information, no off-Site sources of contamination have been identified and identified contamination on Site has not migrated beyond Site boundaries.

#### 2. General Site Conditions

- A. Soil/Geology
  - i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.

Site soil types consist of silt loam soils, which are moderately coarse in texture. Based on soil borings advanced at the Site, the uppermost materials beneath the surface concrete or asphalt pavement were generally sand with fine to coarse grained gravel or gravel to depths of 80 ft bgs, alternating with clay or sandy or silty clay at depths of 0 ft bgs to 18 ft

Activity (Site) Name

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bgs and thicknesses ranging from 0 ft to 13 ft. Silt was encountered at depths of 0 ft bgs to 14.8 ft bgs and thicknesses ranging from 0.1 ft to 4 ft. Scattered areas of fill material were also encountered across the Site in areas of former USTs. Soil stratigraphy is presented on the cross sections included in Attachment B (Figures B.3.a.1 through B.3.a.4).

- Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site. Scattered areas of fill material were encountered across the Site at depths ranging from 0 ft bgs to 9 ft bgs. Fill materials consisted mostly of sand, with the exception of asphalt and concrete chips at the location of soil boring SB-2-12. The thickness of fill materials encountered at the Site ranged from 0 ft to 9 ft. The location of fill materials coincides with approximate excavation areas of former USTs. The locations of the former USTs are presented on Figure B.1.b.2 in Attachment B. No waste deposits are present on Site.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation. Based on information reviewed, bedrock underlying the Site consists of sandstone or carbonate of the Paleozoic Era Cambrian System Cambrian Series. Based on information in previous reports reviewed, the bedrock is anticipated to be 100 to 300 ft deep. Bedrock was not encountered during any of the subsurface investigations.
- iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).

There are eight unoccupied buildings at the Site, including the main Site building (also referred to as the West Shop), the East Shop, a former remediation shed, a fuel island building, two sheds, and a guard shack. The remainder of the Site consists of asphalt paved areas, landscaped and vegetated areas, and gravel areas, situated on relatively flat terrain with gentle slope to the east (see Figures B.1.a, B.1.b.1 and B.1.b.2 in Attachment B).

#### B. Groundwater

Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.

Groundwater elevations measured at monitoring wells MW-1-12, MW-2-12, MW-3-12, and MW-1-16 between 2012 and 2016 are summarized in Table A.6 included in Attachment A. Depth to groundwater ranged from 61.33 ft bgs to 69.53 ft bgs.

Water elevations ranged from 766.48 ft above mean sea level (AMSL) to 767.5 ft AMSL. Free product was not encountered in any of the wells. Monitoring wells were screened in sand and/or sand and gravel.

Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

The approximate groundwater flow direction is expected to be to the north and north-northwest toward the Rock River. According to groundwater elevations measured by Montgomery Watson on February 18, 1999 (see Figure B.3.c.1 in Attachment B), from monitoring wells previously installed at the Site in association with BRRTS # 03-54-000405, groundwater was reported to flow in a northwesterly direction. All monitoring wells associated with BRRTS # 03-54 000405 have been abandoned. Based on water levels collected on September 22, 2016 from the existing monitoring wells at the Site (MW 1 12, MW 2 12, MW 3 12, and MW-1-16), groundwater flow direction was generally consistent with observations made during previous investigations (see Figure B.3.c.2 in Attachment B).

iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

According to data collected from monitoring wells installed at the Site by Warzyn in 1991, groundwater flow was reported to flow in a north-northwesterly direction and the hydraulic conductivity of the sand ranged from  $1.7 \times 10^2$  centimeters per second (cm/s) to  $5.2 \times 10^2$  cm/s.

iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).

The Site is provided with municipal water by the City of Janesville. No potable groundwater wells are present on Site. In addition, there is a groundwater use restriction in place at the Site associated with BRRTS # 03-54-000405. Final closure of BRRTS # 03-54-000405 was granted on October 26, 1999, subsequent to abandonment of the monitoring wells and implementation of a deed restriction filed with Rock County. The filing placed a groundwater use restriction on the deed for the Site (Rock County Register of Deeds, document number 1434932).

CRA conducted an online search to identify the potential presence of private wells located within approximately 1 mile of the Site and adjacent northern property (Former GM Assembly Plant), which includes the following Sections:

<sup>\*</sup> Section 35, Township 3N Range 12E (northwest)

<sup>\*</sup> Section 36, Township 3N, Range 12E (north)

<sup>\*</sup> Section 31, Township 3N, Range 13E (northeast)

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- \* Section 2, Township 2N, Range 12E (northwest)
- \* Section 1, Township 2N, Range 12E (north and north portion of the Site)
- \* Section 6, Township 2N, Range 13E (east/northeast)
- \* Section 11, Township 2N, Range 12E (west/southwest)
- \* Section 12, Township 2N, Range 12E (south and south portion of the Site)
- \* Section 7, Township 2N, Range 13E (east/southeast)

The following online databases were searched:

- \* Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Well Construction Reports (WCRs) (1936 to 1989)
- \* WDNR Drinking Water System WCRs (1988 to current)
- \* WDNR Drinking Water System: High Capacity Wells
- \* WDNR Well Filling and Sealing Reports System

In addition, locations of high capacity wells were confirmed through various correspondence (email and telephone) with WDNR personnel.

A total of 84 WCRs were identified in the DATCP WCR database. It should be noted that the well locations are mapped in the database to the centroid of either a section, quarter section, or quarter-quarter section as recorded on the original WCR. Locations are not field verified. Locations were refined by address or proximity to a named landmark where possible. Four records were identified in the WDNR Drinking Water System WCRs database. Twenty high capacity wells were identified based on the information provided in the WDNR Drinking Water System: High Capacity Wells database and correspondence received from the WDNR. Of these 20 records, six were identified in the database as abandoned, two were identified as inactive, and eight are water supply wells for the City of Janesville. A total of 29 abandonment records were identified in the WDNR Well Filling and Sealing Reports System database. One of these was matched to a high capacity well marked as abandoned in the WDNR Drinking Water System: High Capacity Wells database. None of the other abandonment records were matched to either high capacity wells or private wells in the other databases listed above. Wells located within an approximate one-mile radius of the Site are presented on Figure B.1.a located in Attachment B.

The closest identified high capacity well (BG786) is approximately 2,800 ft northeast of the Site. The owner of the well is listed as Gillman Center, LLC. The well name was identified as "cooling water".

A total of 15 private wells were identified within 1,200 ft of the Site and are listed below:

- R03099, R03104, R03105, R03112, R03114, R03119, and R03478 located approximately 200 ft southeast (upgradient) of the Site
- R03115 and R03116 located approximately 600 ft east (cross-gradient) of the Site
- R03102 and R03103 located approximately 750 ft southeast (upgradient) of the Site
- R03110 located approximately 800 ft south (upgradient) of the Site
- R03113 located approximately 1000 ft southeast (upgradient) of the Site
- R03117 located approximately 1000 ft east (upgradient) of the Site
- R03109 located approximately 1200 ft southwest (cross-gradient) of the Site No wells were identified downgradient and within 1,200 ft of the Site.

#### 3. Site Investigation Summary

#### A. General

i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

Based on available information, 26 USTs were formerly used at the Site. The locations of 25 (Tanks A through M, and Tanks O through Z) of the 26 former USTs are presented on Figure B.1.b.2 in Attachment B. An additional UST was listed as closed/removed on the WDSPS UST Database; however, the former location and details regarding closure of this UST are unknown. A summary of the available closure information and removal activities conducted at the Site associated with the 26 USTs was presented in the Site Investigation Work Plan, prepared by CRA on behalf of GM and dated May 13, 2013 (Work Plan). The Work Plan was submitted to the WDNR on May 14, 2013 and subsequently approved on June 10, 2013. The Work Plan covered activities associated with BRRTS # 02-54-560181 (this case closure package) and BRRTS# 03-54-000405. The area encompassing BRRTS# 03-54-000405 is presented on Figure B.1.b.2 included in Attachment B.

In February 2010, CRA conducted a subsurface investigation at the Site which included the advancement of 13 soil borings (SB-1-10 through SB-13-10) to depths ranging between 20 and 70 ft bgs and associated soil sampling.

Additional information regarding the 2010 subsurface investigation was presented in Section 1.3.2 of the Work Plan.

State of Wisconsin						
Department of Natural Resources  Route To:	Watershed/Wastewater		nagement $\square$	MONITORING WELL CONSTI		MOIT
	Remediation/Redevelops			Form 4400-113A Rev. 7-	98	
Facility/Project Name	Local Grid Location of We		ПР	Well Name		
Allied Systems / Former Haul-Away Yard	ft. N.  Local Grid Origin (e	ft.	Ŭ₩	MW-3-12		
Facility License, Permit or Monitoring No.	Local Grid Origin [ ] (e	stimated:   ) or V	Vell Location 🛛	Wis. Unique Well No. DNR Well	Num	ber
N/A	Lat. o '	Long	or		85	
Facility ID	St. Plane 258,480	ft. N,493,289	_ft.E. S/C/N	Date Well Installed		
154062810	Section Location of Waste			06/07/2012		
Type of Well	NE 1/4 of NW 1/4 of	ec. 12 m 2	N. P. 12 DE	Well Installed By: (Person's Name	and !	Firm)
Well Code 11/mw	Location of Well Relative	to Waste/Source	Gov. Lot Number	Don Tonnancour		
Distance from Waste/ Source 60 ft. Apply		s 🗆 Sidegradient		Major Drilling		
	6.00 n. MSL		. Cap and lock?	⊠ Ye	s 🗆	No
no.		100/2	2. Protective cover p	ipe:		
B. Well casing, top elevation 85	5.73 fl. MSL	"IHI"	a. Inside diameter		8	3.0 in.
C. Land surface elevation	36.0 ft. MSL <		b. Length:	a	1	.0 ft.
		The same sa	c. Material:	Stee	1 🛛	04
D. Surface seal, bottom 836.0 ft. MSL	Or1.0 II.	14.74.76		Othe	r 🗆	
12. USCS classification of soil near screen:	Silver Col	- AyEnyenye	d. Additional prote	ection?	s 🗆	No
	V⊠ SP⊠		If yes, describe	flushmount 8" road box		
	CH D	# # / / /	Surface seal:	Bentonite		30
Bedrock □	1		s, Surface seat:	Concrete		
13. Sieve analysis attached? ☐ Ye	s ⊠ No	3	· · · · · · · · · · · · · · · · · · ·	Othe	c 🗆	
14. Drilling method used: Rotar	y □50	₩ ₩ `4	. Material between	well casing and protective pipe:		
Hollow Stem Auge	r 🗆 4 1			Bentonite	· 🛛	30
ROTOSONIC Othe	r 🛛 🖺			Othe	r 🗆	
		₩ ₩5	. Annular space sea	l: a. Granular/Chipped Bentonite		3 3
15. Drilling fluid used: Water ⋈ 0 2 Ai	r 🗆 0 1			and weight Bentonite-sand slurry		
Drilling Mud □ 0 3 Non	e □99			and weight Bentonite slurry		
			d. 50 % Benton			
16. Drilling additives used? ☐ Ye	s 🛛 No			volume added for any of the above	2 (3	
		DOM DOM	f. How installed:		. $\square$	01
Describe				Tremie pumped		
17. Source of water (attach analysis, if required	);			Gravity		
Potable	•		. Bentonite scal:	a. Bentonite granules		
. 0.000		6		8/8 in. □ 1/2 in. Bentonite chips		
E. Bentonite seal, top 836.0 ft, MSL of	or57.9 ft.		с.	Other		
L. Dononic scar, top	16	<b>X X</b> / 7	. Fine sand material	: Manufacturer, product name & m		
F. Fine sand, top 836.0 ft. MSL of	or63.0 ft.	<b>₩ /</b> /	9	, processing the same of the s		
T. Thie said, top	11.		b, Volume added	ft <sup>3</sup>		THINGS.
G. Filter pack, top 836.0 ft. MSL of	or 65.2 ft.	8		al: Manufacturer, product name & n	noch s	eize
O. Pitter pack, top	n n.	周 》 /。	.774	#2 Sand	ICSH 5	and better to
H. Screen joint, top 836.0 ft, MSL c	or <u>67.5</u> ft.		b. Volume added			
H. Scieen John, top II, MSL C	n	4-11/ .		1.65	- E2	n n
1 W-111-4 836.0 p xot -	or <u>80.0</u> ft.		. Well casing:	Flush threaded PVC schedule 40		
1. Well bottom 836.0 ft. MSL c	or n.			Flush threaded PVC schedule 80		
P26.0	79.0	10	-	Other	Ш	
J. Filter pack, bottom 836.0 ft. MSL c	r	<b>N</b>	. Screen material: _		-	
02.60	00.0		a. Sereen Type:	Factory cut		
K. Borehole, bottom 836.0 ft. MSL c	r <u>80.0</u> ft.			Continuous slot		
				Other		
L. Borehole, diameter6.0 in.		VIIIIIX				
			c. Slot size:	t. <del>-</del>	0.01	0 in.
M. O.D. well casing <u>2.00</u> in.			d. Slotted length:	-		.5 ft.
		11.	. Backfill material (1	[1] [1] [1] [2] [2] [2] [2] [2] [2] [2] [3] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4		500000000
N. I.D. well casing 2.00 in.			Bei	ntonite Chips Other		
A700						
I hereby certify that the information on this form		est of my knowledge.				
Signature Nartha Shumpon	Firm Cones	toga-Rovers & Associa	atcs			Tel:
1 "WULLWCZOWYMOO!			especial			Fax:

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

#### State of Wisconsin Department of Natural Resources

#### MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route To: Watersh	ed/Wastewat	er 🗌	Waste Management				
Remedia	tion/Redevel	opment	Other				
Facility/Project Name		County	LLLAN - DECEMBER	Well	Name		
Allied Systems / Former Haul-Aw	av Yard	1	Rock		MW	-1-12	
Facility License, Permit or Monitoring Number		County Code	Wis. Unique Well N	umber	DNR Well		
N/A		54	VM5	86		586	
1. Can this well be purged dry?	☐ Yes	s ⊠ No	11. Depth to Water	Before	e Development	After Developm	ent
2. Well development method:			(from top of	2	64.70 ft.		ft.
surged with bailer and bailed	□ 4	1	well casing)	a.	04.70 n.		II.
surged with bailer and pumped		1					
surged with block and bailed	□ 4		Date	ъ.	6/9/2012		
<u> </u>	1 man 1 m		Date	o.	0/5/2012		
surged with block and pumped					57		-
surged with block, bailed, and pumped	10-00	0	m,	920	⊠ a.		⊠ a.
eompressed air		0	Time	e.	12:00 □ p	.m.	□ p.
bailed only		0	10 0 1		1 <b>■</b> 7557L <b>●</b> 5,57555		c <b>4</b> 0.000
pumped only	( <del></del>	1	12. Sediment in wel	i	inches	1116	ches
pumped slowly		0	bottom	_2		200 200	
other	_ □ □		13. Water clarity		□ 10	Clear ⊠ 20	
					d ⊠ 15	Turbid 2 5	
3. Time spent developing well		min.		(Descr	ibe)	(Describe)	
CONT. INDUCTIONS OF A CONTROL O				398	NTU, Brown	9.3 NTU, Clear	PS .
4. Depth of well (from top of well easing)		ft.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
5. Inside diameter of well	7	1.4 in.				() of the Control of	
6 Values of metalin filt most and wall					3.04.04.04.04.04.04.04.04.04.04.04.04.04.		
6. Volume of water in filter pack and well casing		1.1 gal.		****		S 1 200 100 0	
casing		1.1 gai.	Fill in if drilling flui	de were us	ed and well is at sol	id waste facility	
7. Volume of water removed from well	9	.5.0 gal.	TITI III II CAIMING II CA	us were us	ca and well is at so	id waste facility.	
7, volume of water removed from well	. 4	.o. gai.	14. Total suspended	1	mg/l	a	mg/l
8. Volume of water added (if any)		gal.	solids		8		- 6 -
		•	16 000		1		Л
9. Source of water added		****	15. COD		mg/l	,	mg/l
			16. Well developed l	y. Person	's Name and Firm		
10. Analysis performed on water added?	□ Ye	s 🗆 No	1	150 14			
(If yes, attach results)		1000000	Rob R	edman			
(11 ) 55, 11111111111111			Cones	toga-Ro	vers & Associat	tes	
17. Additional comments on development:		311,100					
Facility Address or Owner/Responsible Party A	ddress		I hereby certify that	the above	information is true	and correct to the best	t of

NOTE: See instructions for more information including a list of county codes and well type codes.

Former Haul Away Yard/ Allied Systems Ltd

300 Renaissance Center M/C: 482-30C-96C

Detroit, Michigan 48265

Name:

Firm:

City/State/Zip:

GM LLC

my knowledge.

Signature:

Print Name:

Firm:

Conestoga-Rovers & Associates

### STORM WATER POLLUTION AND EROSION PREVENTION PLAN

Jaines LLC.
(Former Haul Away Yard)

Facility Location: 544 Kellogg Drive Janesville, WI

July 2019

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**Appendix A- Stormwater Discharge Form** 

**Appendix B- Employee Training Outline** 

**Appendix C- General NPDES Permit** 

**Appendix D-Log of SWPPP Modifications** 

FIGURE 1 Site Location Map

FIGURE 2 Site Figure and Adjacent Properties Map

FIGURE 3 Soil Cap Location Map

FIGURE 4 Plan View map

FIGURE 5 Soil Cap Cross Section View

#### **GENERAL FACILITY INFORMATION**

Name of Facility: Jaines, LLC	
Facility Address: 544 Kellogg Ave, Janesville, WI	
Facility Contact:	
Name:	
Title:	
Telephone:	
Mailing Address:	
Owner: Jaines, LLC	
Operator:(if different from Owner)	
Standard Industrial classification (SIC) Code:	
Permit Information:	
Facility Permit Name:	
Permit Number: WI-S067831-05	
Initial Date of Coverage: July 23, 2019	
Number of Storm Water Outfalls: three	
Receiving Waters: Rock River	
Emergency Contact (preferably on-site):	
Name:	
Telephone:	

#### 1.0 INTRODUCTION

This storm water pollution prevention plan (SWPPP) has been prepared to cover the soil disturbance activities at the former GM Haul Away Yard in accordance with NR 216. A SWPPP is required under Part III of Wisconsin's Pollutant Discharge Elimination System (WPDES) general permit Number WI-S067857-4 for storm water discharges and in accordance with good engineering practices. This SWPPP describes this Site and activities, identifies potential sources of storm water erosion and pollution at the facility, recommends appropriate best management practices (BMPs) or erosion control measures to reduce the discharge of pollutants in storm water runoff, and provides for regular site inspection and review of this SWPPP.

#### 1.1 OBJECTIVES

The primary goal of the storm water permit program is to implement and maintain erosion control practices to limit sediment-contaminated runoff to waters of the State in accordance with the permit.

#### This SWPPP will:

- 1. Identify any potential sources of erosion, storm water, and non-storm water contamination to the storm water drainage system;
- 2. Identify and prescribe appropriate "source area control" type best management practices designed to prevent erosion from occurring;
- 3. Identify and prescribe "limit sediment runoff" type best management practices to reduce pollutants in contaminated storm water;
- 4. Prescribe an implementation schedule so as to ensure that the storm water management actions prescribed in the Storm Water Pollution Prevention Plan are carried out and evaluated on a regular basis.

#### 2.0 STORM WATER POLLUTION PREVENTION TEAM

The storm water pollution prevention team is responsible for developing, implementing, maintaining, and revising this SWPPP. The members of the team are familiar with the management and operations of the Former Haul Away Yard.

<u>Identify by job title the person in charge</u> of all aspects of SWPPP development and implementation. The member(s) of the team and their responsibilities (i.e. implementing, maintaining, record keeping, submitting reports, conducting inspections, employee training, conducting the annual compliance evaluation, testing for non-storm water discharges, signing the required certifications) are as follows:

Name & Title	Responsibility
Daniel M. Dunn (Consultant, Enviroanalytics Group LLC)	Organizing, Implementing, and submittal of SWPPP

#### 3.0 POTENTIAL SOURCES OF POLLUTANTS

#### 3.1 Site Drainage

Storm water generated at the Site consists of precipitation runoff from roofs of the Site buildings and related impervious surfaces such as the asphalt-paved parking areas. Storm water generated at the Site infiltrates into undeveloped Site surfaces or flows via sheet flow towards catch basins in the paved areas, which according to previous environmental reports reviewed, are collected and discharged to three separate outfalls. Some runoff also flows to the municipal-owned storm water detention pond located adjacent to the east of the Site. Figure 2 presents a site map of the facility showing the following features as required by the permit:

- Historical Locations where storm water drains to groundwater, surface water, or wetlands,
- the facility property boundaries;
- Depiction of the storm drainage collection and disposal system, including all known surface and subsurface conveyances, with the conveyances named;
- Any secondary or other containment structures;
- The location of all outfalls, including outfalls recognized as permitted outfalls under another WPDES permit that discharge channelized flow to surface water, groundwater, or wetlands;
- The surface area in acres draining to each outfall, including the
  percentage that is impervious such as paved, roofed, or highly
  compacted soil and the percentage that is pervious such as grassy areas
  and woods;
- existing structural storm water controls;

#### 3.2 INVENTORY OF POTENTIAL SOURCES OF CONTAMINATION

The following have been identified as potential sources of storm water contamination:

#### 3.2.1 Outdoor manufacturing areas

No manufacturing areas are active at the site.

## 3.2.2 Rooftops contaminated by industrial activity or a pollution control device;

All structures on-site have been demolished, leaving no rooftops.

#### 3.2.3 Areas of significant soil erosion;

Most of site consists of impervious surfaces (asphaltic concrete). The areas around the disturbed area (see figure 1.3) will present approximately 1 +/- acre of surface to address for erosion prevention purposes.

#### 3.2.4 Industrial plant yards;

No manufacturing areas are active or outside

#### 3.2.5 Storage and maintenance areas for material handling equipment;

Bulk storage of materials and manufacturing products are no longer stored at site.

#### 3.2.6 Material handling sites

Soil from the Rock River sediment dredging project will be beneficially re-used as fill on-site. Necessary actions will be taken to limit sediment runoff through the implementation of a vegetated and/or impervious surface.

#### 3.2.7 Shipping and receiving areas;

Shipping areas are no longer in use and do not contain bulk materials.

#### 3.2.8 Manufacturing buildings;

Manufacturing building no longer exist on site.

## 3.2.10 Residual treatment, storage, and disposal sites;

Not applicable.

## 3.2.11 Storage areas (including tank farms) for raw products materials, finished and intermediate;

No storage areas currently exist on the site.

#### 3.2.12 Refuse sites;

Not applicable.

3.2.13 Disposal or application of wastewater;

Not applicable

3.2.14 Areas containing residual pollutants from past industrial activity, spills and leaks;

Not applicable

3.2.15 Vehicle maintenance and cleaning areas;

Not applicable

3.2.16 Non-storm Water Discharges to Storm Sewer;

Not applicable

#### 4.0 BEST MANAGEMENT PRACTICES

Erosion management controls, or best management practices (BMPs), will be implemented to reduce the amount of storm water in contact with contaminated sediment at the JATCO (former GM Haul Away Yard) excavation area. Structural or source area control BMPs that are in place are indicated on Figure 3.

#### **4.1 Erosion Control Measures**

Due to the excavation of approximately 1 acre of surface area on the site, erosion of the stockpile is possible during excavation operations and after the area has been back-filled.

#### Silt Fences

Silt Fences may be used on the site during excavation for managing runoff from the soil piles. Wooden posts, or steel posts if deemed necessary, supporting the silt fence will be spaced 4 to 6 feet apart and driven securely into the ground; a minimum of 12 inches deep. The silt fence will be fastened securely to the posts with wire ties spaced every 24 inches at the top, mid-section, and bottom of the wooden post. The bottom edge of the silt fence will extend across the bottom of the trench and the trench will be backfilled and compacted to prevent storm water and sediment from discharging underneath the silt fence.

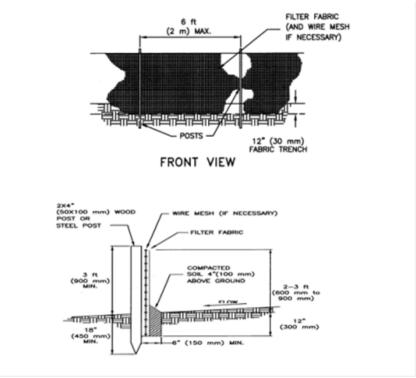


Figure A- Silt Fence

#### Engineered Barrier

A 2-foot thick engineered barrier or "cap" consisting of uncontaminated "clean" soil material will be placed on top of the fill area to isolate the impacted soils. The native soils were sampled and analyzed to demonstrate no impacts for unrestricted use as a cover material. Vegetation (native grasses) will be established as a final surface feature in order to prevent sediment laden storm water from infiltrating the water table. The cross section view of the barrier is located in Figure 3.

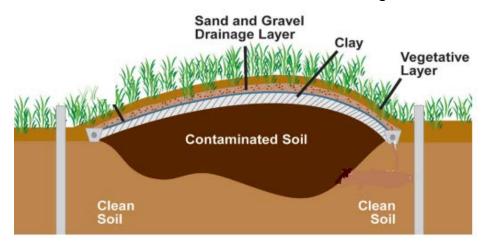


Figure B- Engineered Cap Example

#### Good Housekeeping

Employees are expected to keep the work areas clean. This includes cleaning up spills as necessary and properly disposing of clean-up materials (rags, sweepings, etc.). Employees should routinely inspect their work areas and report leaks, spills, stains, etc. to their supervisor. All materials stored outside having the potential for storm water contact should be covered by using tarps or taken to an appropriate facility off-site.

#### **4.2 PREVENTATIVE MAINTENANCE**

Preventive Maintenance involves the regular inspection, testing, and cleaning of equipment and operational systems. These inspections will help to uncover conditions that might lead to a release of materials, allowing for maintenance to prevent such a release.

The following equipment/activities will be included in the preventive maintenance program. (Examples: fuel pumps, storage tanks for waste fluids, all structural controls, etc.)

Daily facility walk-through to identify all storage and conveyance systems

operational with no visible blockages, corrosion, erosion, leaks and/or severe weathering;

- Routine inspection of facility equipment including: tanks, heaters, pumps, piping, valves, and emergency response supplies (booms, absorbents, etc.);
- Maintenance of facility lighting, fencing, security cameras, etc.

#### **4.3 Spill Prevention and Response Procedures**

Spills and leaks together are the largest source of storm water pollution. This SWPPP specifies material handling procedures and storage requirements for significant materials. All employees have been made aware of the proper procedures.

The procedure outlined in the "Emergency Response Section" should be followed for large spills. Most releases are less than 5 gallons occurring in the form of a leaking truck, spilled product from hoses used during transfer, etc. Generally, a "small" release occurs when less than 1 gallon of fluid is spilled. The steps detailed below can serve as a cleanup guideline if a small release is detected.

- 1. Notify the general manager of the spill.
- 2. Stop the source of the leak as much as possible. If the leak is coming from the undercarriage of a truck, place a pan to catch the material as it is discharged.
- 3. Seal the area off with construction cones, flagging, and ribbon to prevent vehicles from driving over and dragging the material.
  - 4. Immediately cover the spill with absorbent material.
  - 5. Contain the spent absorbent material in a drum labeled "Special Waste" or "Hazardous Waste" depending on the material.

#### 5.0 Monitoring and Recordkeeping

#### 5.1 Chemical Monitoring

Site is deemed inactive and chemical monitoring is not in place for this site, as the site is not in any current operation.

#### **5.2 Non-Storm Water Discharges**

Non-storm water discharges are not applicable for this site as the site is not in any current operation.

#### 5.3 Inspections

The general permit requires that erosion and sediment controls be routinely inspected at least every 7 days, and within 24 hours after a rainfall event of 0.5 inches or greater. Weekly written reports of all inspections must be maintained. The reports must contain the following information:

Inspections shall be conducted within the first 30 minutes of a discharge or as soon thereafter as practical, but not exceeding 60 minutes. The inspections shall include any

observations of color, odor, turbidity, floating solids, foam, oil sheen, or other obvious indicators of storm water pollution.

#### 5.4 Annual Facility Site Compliance Inspection

The environmental consultant shall make an annual inspection to evaluate the effectiveness of the SWPPP. The inspection shall be adequate to verify that the site drainage conditions and potential pollution sources identified in the SWPPP remain accurate, and that the best management practices prescribed in the SWPPP are being implemented, properly operated and adequately maintained. Information reported shall include the inspection date, inspection personnel, scope of the inspection, major observations, and revisions needed in the SWPPP.

#### 6.0 Employee Training

Storm water pollution prevention training is held to include topics for discussion shown below, but are not necessarily limited to:

- Good housekeeping practices designed to control the amount of sediment in storm water and non-storm water from the site.
- Preventive maintenance of storm water controls.
- Inspection and documentation requirements
- Appropriate material handling and storage
- Spill reporting procedures.

The Occupational Safety and Health Organization and the Department of Transportation offer training programs for workers who handle hazardous materials. Specific training programs suggested for BOT employees and transporters who use the pump system or handle stored products and hazardous materials are listed below:

**OSHA Hazard Communication** 

Employees participate in site-specific pollution prevention training programs. Topics covered in such training should include instructions on handling wastes, pertinent environmental laws, personal protective clothing and equipment, and emergency response procedures. Training sessions such as these for new employees should take place within 3 months of hire with annual refreshers for all employees.

#### 7.0 CERTIFICATION OF THE SWPPP

I certify under penalty of law that this document and attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information contained in the plan. Based on my inquiry of the person, or persons, who manage the system, or those persons directly responsible for gathering the information; the information contained in this document is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for providing false information, including the possibility of fine and imprisonment. In addition, I certify under penalty of law that, based upon inquiry of persons directly under my supervision, to the best of my knowledge and belief, the provisions of this document adhere to the provisions of the storm water permit for the development and implementation of a Storm Water Pollution Prevention Plan and that the plan will be complied with."

(Signature of Plan Preparer)	
(Printed Name)	(Date)
(Signature of Authorized Representative)	(Date)
(Printed Name)	(Title)

**TABLE 1 – Summary of Facility Storm Water Information** 

Janesville	
sconsin	
)	
ock	
I	
!E	
66 N	
2.02 W	
139	
8	
ock River	
ock River atershed	
)	

E = East

N = North

NA = Not Applicable

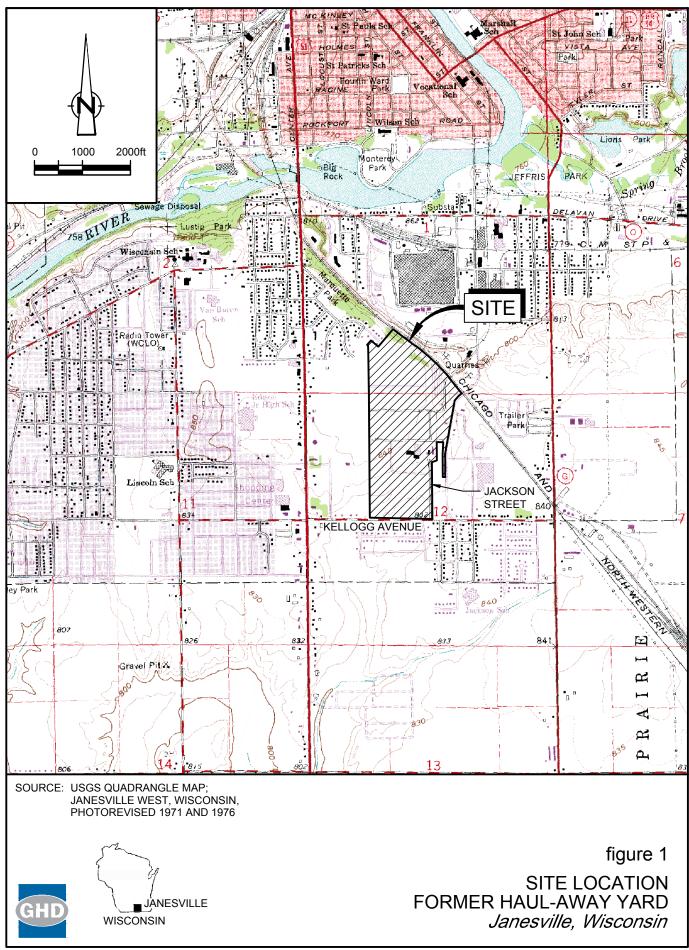
No. = Number

in. = inches

sf = square feet

UTM = Universal Transverse Mercator

deg-sec-min = degrees, seconds, minutes



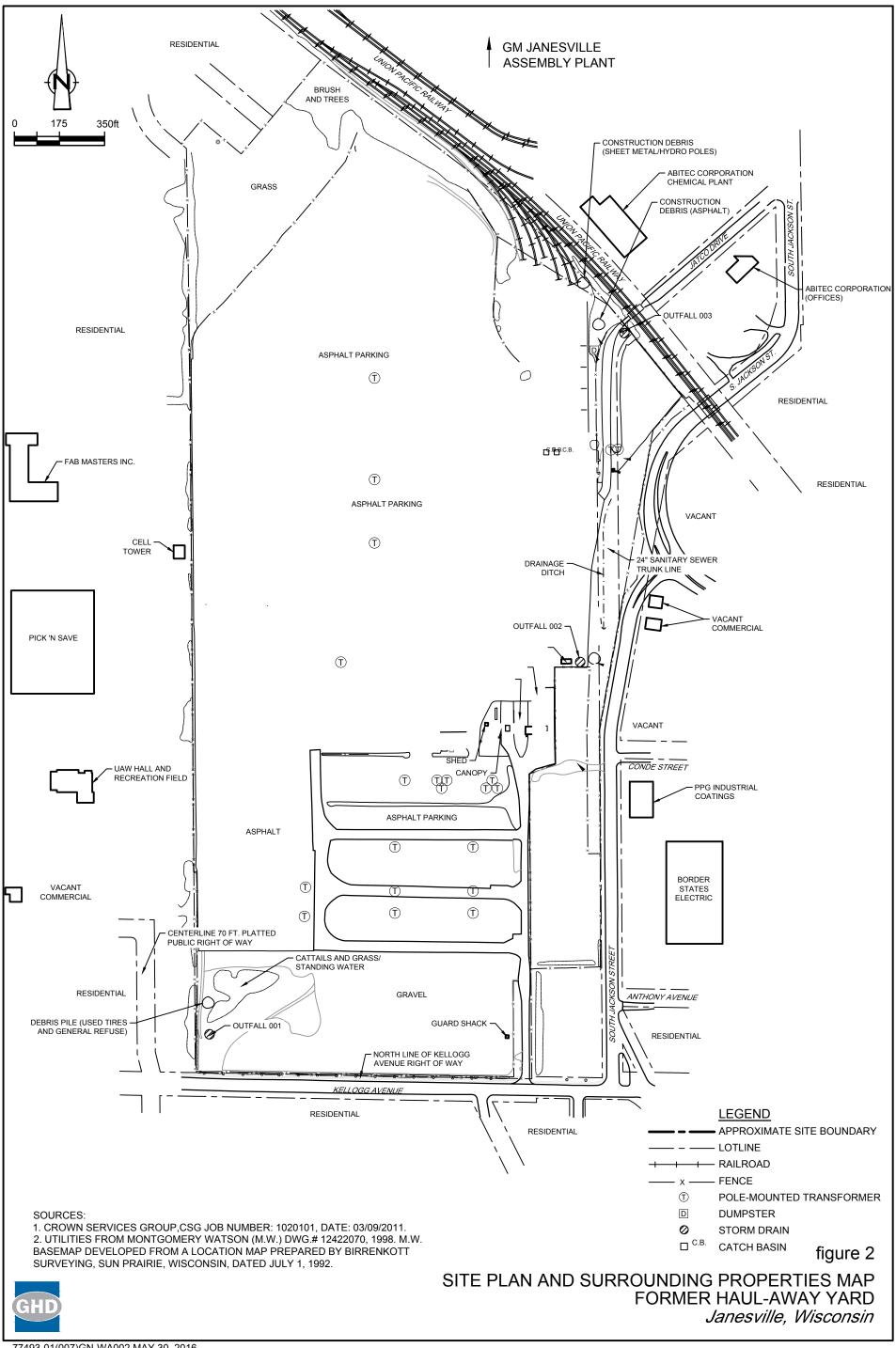
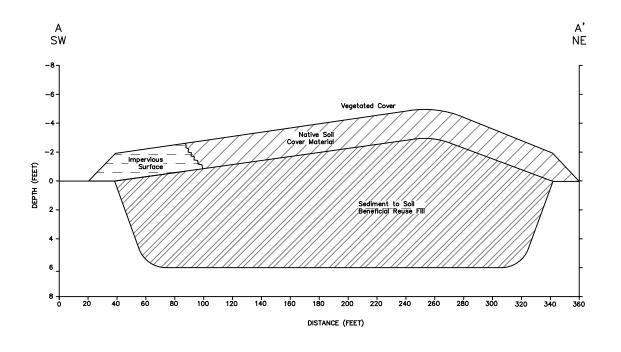






FIGURE 3
SITE LOCATION MAP
JAINES, LLC
ROCK RIVER SEDIMENT REMOVAL REPOSITORY
JANESVILLE, WI





LEGEND:

Native Soil Material

Sediment to Soil Beneficial Reuse Fill

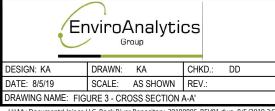


FIGURE 5 CROSS SECTION A-A' JAINES, LLC ROCK RIVER SEDIMENT REMOVAL REPOSITORY JANESVILLE, WI

Storm Water Pollution Prevention Plan (SW3P)
Former Janesville Assembly Plant
Janesville, WI

Appendix A:

**Storm Water Discharge Record Form** 

Storm Water Pollution Prevention Plan (SW3P) Former Janesville Assembly Plant Janesville, WI

#### Facility Storm Water Inspection Form

Outfall Location/Number:			
WEATHER: Precipitation: Start: SAMPLING: Location:  1) Nearest Surface Water / Dr.	·	Method:	Time:
<ul> <li>2) Nearest Surface Water / Dra</li> <li>3) Discharge Data</li> <li>a. Runoff:</li> <li>b. Open / Pump Start Date</li> <li>c. Closed / Pump End Date</li> </ul>	te:	<u> </u>	
d. Volume (gallons, estima	nted):		(attack drawing)
testing.  Muddy (N)(Y)  testing.  Foam (N)(Y)  testing.	If (Y) Do NO If (Y) Do NOT If (Y) Do NOT	T pump & Take Sa pump & Take Sai pump & Take Sa	(attach drawing) ample for possible further mple for possible further mple for possible further e (i.e floating, suspended,
b. Results of Waste Water (Light Blue)G (Dark Blue)[	Good to pump		ssible further testing.
c. Lab Tests (N)(Y) d. Parameters Analyzed: _			
5) Photos Collected (N)(Y) 6) Comments			
7) Inspection By: Printed Name: _			
Signed:		Da	ate:

#### APPENDIX B

**Training Outline and Records** 

#### TRAINING RECORD

Instructor(s):	Date:
Topics Covered:	
Other	
Issues:	
Recommendations and	
Suggestions:	
Attendees:	
	<u> </u>
	_

**APPENDIX C** 

**WPDES Permit** 

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Dodgeville Service Center
1500 N. Johns Street
Dodgeville, WI 53533-2116

Tony Evers, Governor Preston D. Cole, Secretary Telephone (608) 935-3368 Toll Free 1-888-936-7463 TTY Access via relay - 711



July 23, 2019

Mike Roberts Jaines LLC 1515 Des Peres Rd, Ste 300 St. Louis MO 63131

Via email: troberts@cdcco.com

SUBJECT: Coverage Under WPDES General Permit No. WI-S067831-05: Construction Site Storm Water Runoff

Permittee Name: Jaines LLC

Site Name: Rock River Beneficial Reuse Repository

FIN: 67520

#### Dear Permittee:

The Wisconsin Department of Natural Resources received your Water Resources Application for Project Permits or Notice of Intent, on July 12, 2019, for the Rock River Beneficial Reuse Repository site and has evaluated the information provided regarding storm water discharges from your construction site. We have determined that your construction site activities will be regulated under ch. 283, Wis. Stats., ch. NR 216, Wis. Adm. Code, and in accordance with Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-S067831-05, Construction Site Storm Water Runoff. All erosion control and storm water management activities undertaken at the site must be done in accordance with the terms and conditions of the general permit.

The **Start Date** of permit coverage for this site is July 23, 2019. The maximum period of permit coverage for this site is limited to 3 years from the **Start Date**. Therefore, permit coverage automatically expires and terminates 3 years from the Start Date and storm water discharges are no longer authorized unless another Notice of Intent and application fee to retain coverage under this permit or a reissued version of this permit is submitted to the Department 14 working days prior to expiration.

A copy of the general permit along with extensive storm water information including technical standards, forms, guidance and other documents is accessible on the Department's storm water program Internet site. To obtain a copy of the general permit, please download it and the associated documents listed below from the following Department Internet site:

http://dnr.wi.gov/topic/stormwater/construction/forms.html

- Construction Site Storm Water Runoff WPDES general permit No. WI-S067831-05
- Construction site inspection report form
- Notice of Termination form

If, for any reason, you are unable to access these documents over the Internet, please contact me and I will send them to you.

To ensure compliance with the general permit, please read it carefully and be sure you understand its contents. Please take special note of the following requirements (This is not a complete list of the terms and conditions of the general permit.):

1. The Construction Site Erosion Control Plan and Storm Water Management Plan that you completed prior to submitting your permit application must be implemented and maintained throughout construction. Failure to do so may result in enforcement action by the Department.



- 2. The general permit requires that erosion and sediment controls be routinely inspected at least every 7 days, and within 24 hours after a rainfall event of 0.5 inches or greater. Weekly written reports of all inspections must be maintained. The reports must contain the following information:
  - a. Date, time, and exact place of inspection;
  - b. Name(s) of individual(s) performing inspection;
  - c. An assessment of the condition of erosion and sediment controls;
  - d. A description of any erosion and sediment control implementation and maintenance performed;
  - e. A description of the site's present phase of construction.
- 3. A **Certificate of Permit Coverage** must be posted in a conspicuous place on the construction site. The Certificate of Permit Coverage (WDNR Publication # WT-813) is enclosed for your use.
- 4. When construction activities have ceased and the site has undergone final stabilization, a Notice of Termination (NOT) of coverage under the general permit must be submitted to the Department.

It is important that you read and understand the terms and conditions of the general permit because they have the force of law and apply to you. Your project may lose its permit coverage if you do not comply with its terms and conditions. The Department may also withdraw your project from coverage under the general permit and require that you obtain an individual WPDES permit instead, based on the Department's own motion, upon the filing of a written petition by any person, or upon your request.

If you believe that you have a right to challenge this decision to grant permit coverage, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with s. NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with s. NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Thank you for your cooperation with the Construction Site Storm Water Discharge Permit Program. If you have any questions concerning the contents of this letter or the general permit, please contact E. Dan Bekta, P.E. at (608) 275-3201.

Sincerely,

Laura Spears

Wastewater Specialist – Stormwater

Caura Spears

South Central Region - Dodgeville Office

ENCLOSURE: Certificate of Permit Coverage



# **CERTIFICATE OF PERMIT COVERAGE**

# UNDER THE WPDES CONSTRUCTION SITE STORM WATER RUNOFF PERMIT Permit No. WI-S067831-05

Under s. NR 216.455(2), Wis. Adm. Code, landowners of construction sites with storm water discharges regulated by the Wisconsin Department of Natural Resources (WDNR) Storm Water Permit Program are required to post this certificate in a conspicuous place at the construction site. This certifies that the site has been granted WDNR storm water permit coverage. The landowner must implement and maintain erosion control practices to limit sediment-contaminated runoff to waters of the state in accordance with the permit.

### **EROSION CONTROL COMPLAINTS**

should be reported to the WDNR Tip Line at

1-800-TIP-WDNR (1-800-847-9367)

Please provide the following information to the Tip Line:

WDNR Site No. (FIN): 67520

**Site Name: Rock River Beneficial Reuse Repository** 

Address/Location: 544 Kellogg Avenue

**City of JANESVILLE** 

#### Additional Information:

**Landowner: Jaines LLC** 

**Landowner's Contact Person: Mike Roberts** 

Contact Telephone Number: (314) 253-2814

Permit Start Date: July 23, 2019

By: Caura Spears

**APPENDIX D** 

**Log of SWPPP Modifications** 

## STORM WATER POLLUTION PREVENTION PLAN COMPLIANCE INSPECTION REVIEW & REVISIONS

Sign this form and complete the log of modifications below each time the SWPPP Plan is reviewed, evaluated, and amended.

#### **LOG OF PLAN MODIFICATIONS**

DATE	PLAN MODIFICATION (Section, page and description of change)	TYPE OF CHANGE (none, minor, or significant)	MODIFIED BY