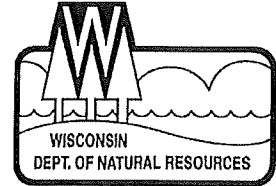


State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
Milwaukee Headquarters  
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Milwaukee, WI 53212

Scott Walker, Governor  
Cathy Stepp, Secretary  
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June 2, 2017

FID#: 436033730  
BRRTS# 02-36-545108  
Manitowoc County

Mr. Nicolas Sparacio  
City of Manitowoc  
900 Quay Street  
Manitowoc, WI 54220

Subject: Low-Hazard Waste Grant of Exemption for Beneficial Reuse of Concrete Coated with Lead-Bearing Paint at the Former Mirro Plant #9 Property, City of Manitowoc, Manitowoc County, Wisconsin

Dear Mr. Sparacio:

The department has completed our review of your low-hazard waste grant of exemption request dated and received by the department on May 17, 2017, for the above referenced project. The information submitted in your request and additional documentation reviewed provided sufficient justification for this low-hazard waste grant of exemption under s. 289.43(8), Stats. This exemption is limited to the beneficial reuse of concrete/bricks coated with lead-bearing paint at the former Mirro Plant #9 property (Mirro Property) as proposed in your request and is subject to conditions provided in the attached exemption. Please read the conditions carefully.

It is the department's opinion that the proposed reuse of concrete in the request will not cause environmental pollution provided that it is conducted in accordance with the proposed plan that was submitted and the conditions of this exemption.

Please keep in mind that this exemption does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements. If the project will involve the disturbance of more than one acre of land at either the generating site or the disposal site, you may need a storm water permit; please contact the department's Storm Water Manager to determine what, if any, permit is needed.

If you have any questions regarding this grant of exemption, please contact Jackie Marciulionis at 920-662-5433 or by e-mail at [Jacqueline.Marciulionis@wisconsin.gov](mailto:Jacqueline.Marciulionis@wisconsin.gov).

Sincerely,

Matt Matrise  
Waste and Materials Management Program Supervisor  
Southeast Region

CC: Tauren Beggs – WDNR, Remediation and Redevelopment Program, Green Bay (via e-mail)  
Jackie Marciulionis – WDNR, Waste and Materials Management Program, Green Bay (via e-mail)  
Harris Byers – Stantec (via e-mail)  
Hiedi Waller – Stantec (via e-mail)  
Richard Binder – Stantec (via e-mail)  
Nicolas Rojas – Brandenburg (via e-mail)

## PROJECT SUMMARY

The Mirro Property is a Wisconsin Department of Natural Resources Remediation and Redevelopment (RR) site with multi-story former industrial buildings. The buildings are scheduled to be demolished for future redevelopment of the property. Numerous investigations have been conducted onsite, including sampling and analysis of porous building materials for waste characterization purposes. The sampling was conducted to characterize visibly distinguishable stained flooring within the building for polychlorinated biphenyls (PCBs) and painted wood and concrete surfaces for Resource Conservation and Recovery Act (RCRA) metals.

A majority of the porous building materials are painted with lead-bearing paint and a few areas within the buildings are designated as having PCBs. As a result, a majority of the demolition debris will be disposed of offsite at a licensed landfill; however, a small portion of the concrete from outside of the PCB-designated areas is proposed to be used to fill areas onsite. The city proposes to reuse a portion of concrete to:

- Fill the sub-grade coil boiler room (650 cubic yards),
- Backfill vaults/pits to prevent collapse (640 cubic yards),
- Backfill the heat treat pit (350 cubic yards),
- Backfill apparent anomalies consistent with voids to prevent collapse (350 cubic yards), and
- Fill tunnel access-ways to eliminate entrance into the subsurface service tunnel network following building demolition (650 cubic yards)

Concentrations of total lead in concrete samples ranged from 1.7 - 2400 milligrams per kilogram (mg/kg). Toxicity Characteristic Leach Procedure (TCLP) was conducted on four samples with high total lead concentration, each with a different paint color, and concentrations generally ranged from <0.0075 to 0.021 J mg/L (J-flagged indicates a result that is less than the laboratory limit of quantitation). One sample which was painted with dark green paint had a TCLP result of 8.5 mg/L, which is above the regulatory level for lead in s. NR 661.24 for hazardous waste. Concrete painted with dark green paint will not be reused on site and will be disposed of as a hazardous waste.

Prior to filling each feature, the concrete floors will be broken to prevent ponding of rain water in the backfill, which may allow for rainwater to infiltrate through the concrete and into the subsurface. Infiltration of rainwater through concrete and into the subsurface is a concern identified for the entire site because concrete slabs across the site have existing cracks that may serve as conduits for infiltration of rainwater following building demolition and decommission of the onsite storm water conveyance network. A subsurface investigation (SI) will be conducted per ch. NR 716, Wis. Adm. Code, requirements immediately following demolition activities to confirm breaking the floor of the features and backfilling with painted material has not exacerbated the subsurface soil and/or groundwater impacts already associated with the site.

The concrete will be broken and processed onsite to minimize dust emission as much as possible, and any visible dust generated will be controlled with a low-pressure water mist, which will be applied in a way to avoid uncontrolled runoff to adjacent areas. The crushed painted concrete will be placed in each of the proposed locations to fill the structure to within 4-inches of the surrounding ground surface. The features will then be brought to grade with non-painted concrete material, such as brick from the exterior of the south building, to create a temporary engineered barrier/cover.

Results of the post-demolition NR 716 subsurface investigation will be evaluated to determine appropriate measures to facilitate case closure and redevelopment through the RR program. The concrete material will be disposed of appropriately to manage long-term risk, which may include removal and disposal of the material

offsite and/or the construction of a permanent engineered barrier and implementation of an appropriate institutional control, depending on future redevelopment plans and the results of the investigation.

BEFORE THE  
STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL LOW HAZARD WASTE GRANT OF EXEMPTION  
FOR THE REUSE OF CONCRETE COATED WITH LEAD-BEARING PAINT  
AT THE FORMER MIRRO PLANT #9 PROPERTY, CITY OF MANITOWOC, WI

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. The city of Manitowoc owns a site located at 1512 Washington Street in the city of Manitowoc, Manitowoc County, Wisconsin. The description of the property using Public Land Survey System (PLSS) is the Northeast  $\frac{1}{4}$  of Section 30, Township 19 North, Range 24 East. The coordinates for the site in the Wisconsin Transverse Mercator coordinate system of 1983 based on the 1991 adjustment to the North American Datum of 1983 (WTM91) system are: 706677 (X), 404479 (Y).
2. The city of Manitowoc plans to demolish the multi-story former industrial buildings located at the former Mirro Plant #9 property. The buildings have undergone extensive investigation to identify contaminants associated with the buildings. Porous building materials are painted with lead-bearing paint and a few building areas have been identified as having polychlorinated biphenyls (PCBs). The city proposes to use porous building materials coated with lead-bearing paint to fill areas of the site in order to prevent collapse and limit entry after the demolition process. The concrete to be used for fill will be taken from outside of the areas designated as having PCB impacts.
3. On May 17, 2017 Harris Byers of Stantec, consultant to the city of Manitowoc, submitted a low-hazard waste grant of exemption request for the reuse of concrete coated with lead-bearing paint to fill areas of the site that pose a risk to health and safety during and after the demolition process.
4. Additional facts relevant to the review of the low-hazard waste grant of exemption include the following:
  - a. There is little environmental risk if the painted concrete is handled properly and used where the structure has been demolished. Lead in paint is not very mobile in neutral or slightly alkaline environments, which are likely to exist where buildings are being demolished, especially when lead paint is attached to alkaline materials such as concrete. In this type of setting there is little chance the lead would go into solution and exceed a groundwater standard.
5. Additional documents and information considered in review of the exemption request include:
  - a. Email dated May 25, 2017 from Harris Byers (Stantec) to Jackie Marciulionis (WDNR) in response to a request for additional information.
  - b. Email dated May 30, 2017 from Nick Rojas (Brandenburg) to Jackie Marciulionis (WDNR) in response to a request for additional information regarding concrete processing methods and storm water best management practices.
  - c. An article published by Recycling Today, entitled "Lead-Based Paint Picture" by Stephen Cospo, Construction Engineering Research Laboratory, U. S. Army Corps of Engineers, Research and Development Center, April 2004, published on the internet at:  
<http://www.recyclingtoday.com/article/lead-based-paint-picture/>

- d. Results of tests performed in April 2004 by William P. Scott on lead-bearing paint on concrete and submitted to the department. The tests were completed to determine the percentage of lead in paint on a concrete surface and the amount of lead leached using the ASTM D3987 water leach test.
  - e. Wisconsin Department of Natural Resources guidance document titled 'Concrete Recycling and Disposal Fact Sheet' (WA 605).
  - f. Wisconsin Department of Natural Resources internal guidance document titled 'Managing Painted Concrete' (WA 1518).
  - g. Wisconsin Department of Natural Resources guidance document titled 'Guidance for Hazardous Waste Remediation' (RR-705).
6. The correct plan review fee of \$550 (Invoice#11274) was received on May 25, 2017.
  7. The estimated volume of concrete materials coated with lead-based paint to be used as fill is 2,640 cubic yards. The lead-based painted concrete will be filled to within 4-inches of the ground surface and covered with 4-inches of clean crushed concrete. This is anticipated to be a temporary cover for the materials until demolition is completed.
  8. Concentrations of total lead in concrete samples ranged from 1.7 - 2400 milligrams per kilogram (mg/kg). Toxicity Characteristic Leach Procedure (TCLP) was conducted on four samples with high total lead concentration, each with a different paint color, and concentrations generally ranged from <0.0075 to 0.021 J mg/L. One sample which was painted with dark green paint had a TCLP result of 8.5 mg/L, which is above the regulatory level for lead in s. NR 661.24 for hazardous waste. Concrete painted with dark green paint will not be reused on site and will be disposed of as a hazardous waste.
  9. Concrete materials painted with lead-based paint for use as fill will come from areas that are not known to be impacted with PCBs. A majority of the concrete will likely come from the south building due to the proximity to the fill areas and ease of handling.
  10. The bottom of the deepest feature to be filled is estimated to be approximately 3-4 feet above shallow groundwater.
  11. Most of the concrete materials will be sized appropriately during demolition using a grapple or stationary hammer attachment and the final breaking/processing will be conducted using a hydraulic concrete processing attachment connected to an excavator. Processing will be conducted to minimize dust as much as possible and dust will be controlled using low pressure water mist.
  12. Storm water best management practices will be implemented during demolition and will include a combination of silt socks, silt sacks, and inlet filter projection to prevent water from leaving the site.
  13. A site investigation will be conducted following requirements of ch. NR 716, Wis. Adm. Code, immediately following demolition. An evaluation will be conducted to determine the final management of the concrete coated with lead-based paint. This may include removing the concrete or covering with a permanent impermeable cover, depending on the NR 716 investigation results and the final redevelopment plans for the property.
  14. The department has considered the environmental impacts of the proposal and has complied with the

requirements of ch. NR 150, Wis. Adm. Code and s. 1.11, Stats., and, consistent with social, economic, and other essential considerations, the department has adopted all practical means to avoid or minimize environmental harm.

15. The department considers this action to be a routine approval and a minor action as defined in s. NR 150.03 (15), Wis. Adm. Code.
16. If the conditions set forth below are complied with, the disposal of the materials will not result in environmental pollution as defined in s. 289.01(8), Stats.
17. The department has conducted a continuing review of the potential hazard to public health and the environment of solid waste disposal facilities in general as well as this specific proposal. Based upon this review, the department finds that regulation under s. 289, Stats., is not warranted in light of the low potential hazard to public health or the environment.

#### CONCLUSIONS OF LAW

1. Based upon the foregoing, the department has authority under s. 289.43(8), Stats., to grant the conditional exemption set forth below.
2. The conditions set forth below are needed to ensure that the disposal of the material as proposed, and in accordance with the conditions of this approval, will not result in environmental pollution as defined in s. 289.01(8), Stats.
3. The department has authority under s. NR 150.20(1m)(k), Wis. Adm. Code, to consider a routine approval a minor action and authority under s. NR 150.20(1m), Wis. Adm. Code, to not perform an environmental analysis under the provisions of Wisconsin Environmental Policy Act (WEPA) for minor actions.

#### CONDITIONAL GRANT OF EXEMPTION

The department hereby grants the city of Manitowoc a low-hazard waste exemption, and authorizes the city of Manitowoc to reuse crushed concrete and building materials from the demolition of the Mirro buildings, subject to the following conditions:

1. Concrete materials coated with lead-bearing paint that is processed (broken or crushed) prior to beneficial use shall be processed in a manner that prevents fugitive dust from being emitted from the property. Crushing units shall be operated in conformance with applicable Air Management Program requirements. Demolition and concrete processing must be accomplished in accordance with city of Manitowoc requirements.
2. Concrete materials coated with lead-bearing paint shall be stored before and after processing in a nuisance-free manner, and in a way that will minimize wind and water transport (according to department site storm water discharge requirements). In addition, concrete coated with lead-bearing paint shall not be stored within a floodplain or in areas where storage may cause an adverse impact on wetlands, critical habitat areas, or surface waters.
3. Placement of processed concrete materials coated with lead-bearing paint shall be performed in a manner to minimize windblown dust.

4. Processed concrete materials coated with lead-bearing paint shall not be placed in standing water or below the water table and shall adhere to the performance standards found in s. NR 538.04, Wis. Adm. Code.
5. Any media containing lead-based paint in PCB-designated areas shall not be utilized under this exemption and shall be properly disposed of in a licensed landfill.
6. Construction documentation shall be submitted to the department to document the final placement and management of concrete materials coated with lead-based paint used for fill. If the fill is left in place, the report shall include a map of the fill placement and details about the final cover. The department must also be notified if the waste is removed and disposed of offsite. Construction documentation can be submitted as part of the NR 716 remedial action documentation report. Concurrence for the final cover should be received from the waste program prior to placing the cap. If the materials are disposed at a location other than a licensed landfill, a new low-hazard waste grant of exemption request must be submitted to the department for review.
7. Permanent covering or removal of the concrete coated with lead-based paint shall be performed within 1-year of the date of this approval. If an extension is needed, an extension request must be submitted to the department.
8. The department shall be notified of a change in land use of the subject property. An exemption to build on historic fill will be required for any future development.

This grant of exemption is based on the information available to the department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this exemption, the department may ask that further information relating to this activity be provided. Likewise, the department accepts proposals to modify exemptions, as provided for in state statutes and administrative codes. Unless specifically noted, the conditions of this grant of exemption do not supersede or replace any previous conditions of approval for this property.

#### NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that 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 section 227.52 and 227.53, 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 shall name the Department of Natural Resources as the respondent.

