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Project Reference #10225

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GP#07-68-550475

Mr. Tom Wentland
c/o Victoria Stovall
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Drive
Milwaukee, WI 53121-0436

RE: Request for Exemption from NR 500-series for Historic Fill
Westwood Aluminum Castings, Inc.
1242 Lincoln Avenue, Waukesha, Wisconsin

Dear Mr. Wentland:

On behalf of Westwood Aluminum Castings, Inc., (Westwood), Sigma Environmental Services, Inc. (Sigma), has prepared this correspondence in order to request an exemption from NR 500-series regulations for an apparent layer of foundry sand at their facility located at 1242 Lincoln Avenue, City of Waukesha, Wisconsin ("the site"). Due to this material, the site appears to be a historic fill site, and the exemption is sought in order to place asphalt pavement over this historic fill. A completed WDNR Form 4400-226 ("Development at Historic Fill Site or Licensed Landfill Exemption Application") is included as ***Appendix A***. A check for $500 in payment of the fee associated with this application is also enclosed.

Background

The site has historically been a foundry. Following a site inspection by WDNR personnel in regards to stormwater management issues in late 2006, WDNR required investigation activities at the site in order to determine whether certain activities had resulted in a hazardous substance discharge. An investigation was conducted by Sigma in early 2007, consisting of the completion of eight soil borings (designated GP-1 through GP-8) and the submission of select soil samples for laboratory analysis of volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). The results of this investigation were presented in a July 2, 2007 letter report, which was forwarded to WDNR in July 2007.

During the advancement of soil borings, material was observed in the top several feet which was characteristic of foundry sand. The apparent foundry sand fill material was overlain by a sand and gravel fill material which was not characteristic of foundry sand. The site was not a licensed landfill, and the current site operator had no knowledge of this fill having been placed; therefore it appears to be historic in nature. PAHs and low-level VOCs were reported in the laboratory results. PAHs were reported in select soil sample locations at elevated concentrations relative to the remaining locations; nevertheless, Sigma and Westwood contend that these PAHs and low-level VOCs reported in the soil samples are consistent with contamination frequently present in foundry sand at the time it is placed as fill, and believe that it is appropriate to consider them fill-related impacts. Investigation results indicate that no significant environmental impacts, as defined by the presence of significant PAH or VOC concentrations in environmental media outside of the fill layer, are present or likely to occur as a result of the historic fill, and give no indication that materials of special concern or gas generation potential may be present in this fill.

Additional Investigation Activities and Results

In correspondence dated September 6, 2007, Mr. Philip Peterson of the Wisconsin Department of Justice indicated that additional investigation was required to determine the exact location of the foundry sand and the degree and extent of contaminants within the foundry sand. On October 2, 2007, an additional five soil borings (designated GP-9 through GP-13) were advanced at the site for this purpose. Select soil samples from borings GP-11 and GP-13 only were submitted for laboratory analysis of PAHs. The results of these additional activities will be more fully documented, and the required determinations discussed, in subsequent correspondence. Analytical results of soil sampling conducted during this additional investigation are presented in this report, and are discussed below.

Form 4400-226, Section V Information

A. ***Existing Site Conditions.*** The site layout and soil boring locations are shown on the attached ***Figure***. Subsurface investigation information indicates the following:

- The site is located in an industrial area and has a municipal zoning code of M-2 ("General Manufacturing District").
- Soils consist of sands with varying gravel and silt percentages.
- Saturated conditions were not observed within 12 feet of the ground surface, the maximum depth of soil borings completed at the site by Sigma.
- Apparent foundry sand was encountered within the top approximately 3 feet of soil in certain soil borings, overlain by non-foundry sand material. This material was not observed at greater depths.
- Soil analytical results are summarized on the attached ***Tables***.

1. ***Waste Types.*** As indicated above, the material is most likely foundry sand. As discussed in previous correspondence, generally low levels of PAHs are present in this material and are suspected to have been present in it when the material was placed in its current location. VOC detections were reported in select samples, which are generally petroleum-related and reported at relatively low levels. Total phenols were detected in samples from two soil borings at low-level concentrations. Based on the inorganic nature of foundry sand, the potential for the generation of methane or other potentially harmful gases is not anticipated.

2. ***Potential For Impacts.***

   - Based on an apparent separation of approximately 9 feet or more between the bottom of the foundry sand layer (3 feet below ground surface (bgs)) and groundwater (likely greater than 12 feet bgs) and the strong sorbing properties, limited solubility, and limited extent of the PAHs, it is not expected that the PAHs have the potential to adversely affect groundwater quality. Additionally, based on the suspected age of the fill and the absence of features which would act as caps, it is anticipated that the current limited contaminant distribution represent a "worst case scenario"; i.e. the passage of time does not likely favor migration of the identified contaminants to greater extents or additional media. In the absence of contaminant mobility as described above, other pathways and receptors are precluded with the possible exception of direct contact, which is addressed below.

   - Based on comparison of reported PAH concentrations in some locations of the

shallow fill material with suggested generic RCL's for direct contact listed in WDNR publication RR-519-97 ("Soil Cleanup Levels for Polyclyclic Aromatic Hydrocarbons (PAHs), Interim Guidance"), the potential exists for risk to human health from PAHs in shallow soil via the direct contact pathway in both residential and industrial scenarios.

3. ***Evaluation of Existing Impacts.*** Based on comparison of results from soil samples which included apparent fill with those of soil samples collected from beneath the apparent fill layer (i.e. the 4 - 8 foot interval samples from soil borings GP-1 through GP-8), PAH concentrations are insignificant, where present, in the native soil immediately below the fill layer. Therefore, consistent with the observations outlined above which suggest that the PAHs are not prone to significant migration via leaching, PAH impacts in the fill layer do not appear to be significantly impacting the environment. Based on laboratory analytical results for soil samples collected from the 0 - 1 foot depth interval (above the apparent foundry sand fill), PAH concentrations are insignificant, which supports the conclusion that the source of the impacts is the apparent foundry sand fill material. These topics will be further discussed in forthcoming correspondence documenting the October, 2007 additional site investigation activities.

B. ***Proposed Development Summary.*** The proposed development consists of the placement of asphalt pavement over a portion of the site. No significant grading is anticipated. The area to be paved is shown on the attached ***Figure***.

C. ***Summary of Actions To Be Taken.*** Based on the nature of the fill material, the types and concentrations of soil constituents detected, and the type of construction which is planned, environmental consultant oversight and documentation of the construction activities will be sufficient to minimize adverse environmental impacts and potential threats to human health.

As indicated above, an additional submittal will be prepared soon regarding the October, 2007 and previous site investigation activities as they relate to the points indicated in the September 6, 2007 letter from Mr. Philip Peterson. Please call Sigma at (414) 643-4200 with any questions you may have.

Sincerely,

SIGMA ENVIRONMENTAL SERVICES, INC.

Dale C. Armbruster, P.G.
Senior Project Manager

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Enclosures

cc: Mr. Hank Adams - Westwood Aluminum Castings
Ms. Pamela Schaefer – Reinhart, Boerner, Van Deuren, S.C.
Mr. David Volkert – WDNR Waukesha Office

State of Wisconsin
Department of Natural Resources

Development at Historic Fill Site or Licensed Landfill Exemption Application

Form 4400-226 (R 12/05)

Notice: Use of this form is required by the DNR for any application to develop at a historic fill site or licensed landfill pursuant to secs. NR 506.085 and NR 500.08(4), Wis. Adm. Code. The Department will not consider your application unless you provide complete information requested. Personally identifiable information collected will be used to process your application and will also be accessible by request under Wisconsin's Open Records law [ss.19.31 - 19.39, Wis. Stats.]

Instructions: See *Development at Historic Fill Sites and Licensed Landfills: What you need to know* (PUB-RR-683, April 2002) for detailed instructions.

- All Exemption Application materials should be sent to the region where the site is located, as listed on page 6.
- Include $500 fee payment with this application unless a fee was already paid for the review of the remedial design report under the NR 700 process.
- Determine the appropriate exemption type for the site and check appropriate box below.
- Provide complete information requested for each type of exemption. Include the following attachments:
  Required: Summary of Existing and Potential Impacts described in Section V as an attachment, under the seal of a professional engineer or geologist registered to practice in Wisconsin.
  Optional: Site Visit Summary Comments (Section IX) including any photos, sketches or site visit notes.

Exemption Type

☐ **Remediation and Redevelopment Program NR 700 Rule Series Process Exemption:** Site with remedial actions conducted in accordance with NR 700 series
Required: Sections I - VI ***Optional:*** Sections VII - X

☒ **Case-by-Case Evaluation:** Sites with anticipated environmental impacts or wastes of special concerns
Required: Sections I - VI ***Optional:*** Sections VII - X

☐ **Expedited Exemption:** Site with no expected environmental impact
Required: Sections I - VI and Form 4400-256A Expedited Exemption Application ***Optional:*** Sections VII - X

I. Applicant Information

~~Owner - Last Name~~ Tenant	First	MI	Telephone Number
Westwood Aluminum Castings, Inc.			(262) 542-6343

Contact Name (if different): Mr. Hank Adams

Street Address	City	State	ZIP Code
1242 Lincoln Avenue P.O. Box 1646	Waukesha	WI	53187-1646

Developer - Last Name	First	MI	Telephone Number
Adams	Hank		

Street Address	City	State	ZIP Code
Same			

II. Site Name and Location

Site Name: Westwood Aluminum Castings

Location / Address: 1242 Lincoln Avenue

Is the site known by another name(s)? ☐ Yes ☒ No ☐ Unknown

If yes, provide name.

☒ City ☐ Town ☐ Village of Waukesha

ZIP Code: 53186 State: WI

Does the site have a license number? ☐ Yes ☒ No ☐ Unknown

If yes, License Number:

County: Waukesha

A. Attach a map with site location and limits of fill/waste disposal area.

B. Global Positioning System Coordinates

Latitude: DEG	MIN	SEC		Longitude: DEG	MIN	SEC	
43	0	32.0	N	88	12	40.7	W

Describe method for collecting GPS Coordinates: "Surface Water Data Viewer" website at a scale of 1:3044

Program Lead, Fee Status and Regulatory ID Numbers *(This area for DNR use only)*

☐ **Waste Management Bureau**

☐ **Remediation and Redevelopment Bureau - Exemption is part of remedy under NR 700 program**

☐ Fee already paid for review of remedial design report.

☐ Review of remedial design report not requested and payment is attached.

☐ Payment Attached

Amount: $

Hazardous Waste Facility License ID No. (5 digits)	DNR FID No. (9 digits)	USEPA ID No. (used for both RCRA and CERCLIS #s) (WI+Alpha+9 digits)

Region	Project Manager	Telephone Number

Development at Historic Fill Site or Licensed Landfill Exemption Application
Form 4400-226 (R 12/06)

III. Site Ownership History

Previous Owner - Last Name	First	MI	Telephone Number
Unknown			

Street Address	City	State	ZIP Code

Responsible Municipal / Private Operator - Last Name (if applicable)	First	MI	Telephone Number

Street Address	City	State	ZIP Code

IV. Evaluation of Existing and Potential Impacts. See Development at Historic Fill Sites and Licensed Landfill: Guidance for Investigation and Development at Historic Fill Sites and Licensed Landfill: Potential Problems and Considerations.

A. Analytical data for the following media have been collected and/or examined *before* completing this application:

1. Groundwater: ☐ Yes ☒ No
2. Soil: ☒ Yes ☐ No
3. Surface water / sediment: ☐ Yes ☒ No
4. Air: ☐ Yes ☒ No
5. Methane or other explosive gases: ☐ Yes ☒ No

B. Based on known or suspected sources and wastes, their physical characteristics, containment and geologic environment, do you suspect a release of pollutants to the environment?

☐ Yes: ☐ Groundwater ☐ Soil ☐ Surface Water / Sediment ☐ Methane or Other Explosive Gases
☒ No The selection is based on the absence of or insignificant concentrations of impacts in soil samples collected from beneath the apparent foundry sand material.

If yes, an expedited exemption is not appropriate unless further investigation shows that a release of pollutants is not likely.

C. If there is NOT a likelihood of a release of pollutants or evidence of a release, would the impact of the proposed development be likely to cause a release to the environment?

☐ Yes **If yes, be sure to summarize actions to be taken to prevent adverse environmental impacts in V. Part C below.**
☒ No

V. Summary of Existing and Potential Impacts. See Development at Historic Fill Sites and Licensed Landfill: Guidance for Investigation and Development at Historic Fill Sites and Licensed Landfill: Potential Problems and Considerations.

Describe the following in an attached narrative under the signature of a qualified professional. Organize, label and package as listed below.

A. Existing Site Conditions
   1. existing site conditions including waste types,
   2. potential for impacts, and
   3. evaluation of existing impacts.

B. Proposed Development Summary. Include explanation for overall site decision.

C. Summary of actions to be taken and engineering controls that will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety.

VI. Certification of Application Information

I certify that information in this application and all its attachments is true and correct and in conformity with applicable Wis. statutes.

Print / Type Name of Applicant
WESTWOOD ALUMINUM CASTING INC. — HENRY L. ADAMS

Applicant Signature	Date Signed
Henry L. Adams	OCT 12 2007

Sections VII - IX are optional for all Applicants.

VII. Current and Historic Type of Waste Disposal Site (Check all that apply)

- [ ] Licensed Landfill
- [ ] Non-approved {See s.289.01(3)}, Wis Stats.
- [ ] Approved
- [ ] One-time Disposal
- [ ] Construction / Demolition
- [X] Historic Fill Site

Liner

- [ ] Unlined
- [ ] Lined
- [ ] Composite Liner
- [ ] Other Liner (Describe): _____
- [ ] Clay Liner
- [ ] Unengineered

Total Landfill Volume

- [ ] < 50,000 yd^3
- [ ] 50,000-500,000 yd
- [ ] > 500,000 yd^3

Does the landfill have a closure plan? [ ] Yes [ ] No [ ] Unknown
Does the landfill have a groundwater monitoring plan? [ ] Yes [ ] No [ ] Unknown
Have groundwater monitoring wells been installed? [ ] Yes [ ] No [ ] Unknown

Was a cover installed? [ ] Yes [ ] No **If no, go to Past Land Uses.**

- [ ] Composite cap
- [ ] Layered soil cap with clay barrier
- [ ] Clay cap
- [ ] Soil cap - not recompacted clay
- [ ] Other cover
- [ ] Unknown

What is the thickness of the cover? [ ] <6 in [ ] 6-12 in [ ] 12-24 in [ ] >24 in [ ] Unknown

Past Land Uses. (Check all that apply)

- [ ] Agricultural co-op
- [ ] Brush pile
- [ ] Bulk plant
- [ ] Coal gas manufacturer
- [ ] Deer pit
- [ ] Dry cleaner
- [ ] Electroplater
- [ ] Lagoon
- [X] Manufacturing Type: Foundry
- [ ] Old burn pit
- [ ] Pipeline
- [ ] RCRA generator
- [ ] Salvage yard
- [ ] Service Station
- [ ] Tannery
- [ ] Unknown
- [ ] Other: _____

Date(s) of Site Operation
From: _____ To: _____
No. of Years
[ ] Unknown

VIII. Waste Information & Geologic Environment. See Development at Historic Fill Sites and Licensed Landfills: Guidance for Investigation

A. Known or Suspected Sources/Wastes. (Check all that apply)

- [ ] Abandoned containers
- [ ] Above ground pipeline or tank
- [ ] Animal carcasses
- [ ] Buried drums
- [ ] Burning of materials
- [X] Foundry sand
- [ ] Industrial accident
- [ ] Known or suspected hazardous materials
- [ ] Municipal waste
- [ ] Paper mill sludge
- [ ] Transformer
- [ ] Trees/brush
- [ ] Surface spills
- [ ] Fly ash
- [ ] Demolition/construction waste
- [ ] Surface impoundment/lagoons
- [ ] Underground pipeline or tank
- [ ] Exempted fill {NR 500.08(1) and (2)}
- [ ] Unknown
- [ ] Other: _____

B. Physical Characteristics of Sources/Wastes

[ ] Liquid [X] Solid [ ] Liquid & Solid [ ] Unknown

VIII. Waste Information & Geologic Environment *(continued)*

C. Waste Containment ☐ Liner ☐ Unknown ☒ Not applicable

☐ Engineered cover
☐ Maintained ☐ Not maintained

☐ Functioning leachate collection & removal system
☐ Functioning & maintained run-off management system
☐ Functioning groundwater monitoring system

D. Soil Type: Estimate distances or determinations based on regional or site specific information.

☒ Regional ☒ Site specific

Clay, silt or other fine grained soils present? (lacustrine, tills, etc.) ☐ Yes ☒ No

At surface? ☐ Yes ☐ No At depth? ☐ Yes ☐ No _____ feet

Sand & gravel, coarse grained soils present? ☒ Yes ☐ No

At surface? ☒ Yes ☐ No At depth? ☒ Yes ☐ No to 15 - 20 feet

E. Depth to Groundwater

☒ Regional ☐ Site specific about 15 feet

F. Direction of Groundwater Flow

☐ Regional ☐ Site specific unknown direction

G. Depth to Bedrock

☒ Regional ☐ Site specific 15 - 20 ft direction

H. Bedrock Type

☒ Regional ☐ Site specific ☐ Sandstone ☒ Limestone/Dolomite ☐ Metamorphic/Igneous

IX. Site Visit

Conduct a site visit to complete site screening and determine general site conditions, on-site activities and adjacent land use encroachment issues. As appropriate to document the site, take photos, sketch the site and prepare a Site Visit Report.

On-site visit conducted? ☐ Yes ☐ No

General site conditions: Document any observed releases and note whether or not you were able to walk the site. Examples of things to be aware of include the following:

- leachate seeps or evidence of seeps such as stained soil/vegetation
- stressed vegetation as a sign of gas migration to the surface or of leachate seeps;
- quality and coverage of vegetation on the cap;
- odors which may indicate gas migration to the atmosphere;
- erosion of the cap;
- maintenance of positive drainage over the capped area;
- visual desiccation cracks in the cap.

Attach the following to your application:

☐ Photographs, regular or digital ☐ Site sketch ☐ Sit Visit Report

Name(s) of Person(s) Conducting Site Visit	Date of Site Visit

IX. Site Visit *(continued)*

A. Adjacent Land Uses. Indicate all directions. (Check all that apply)

☐ Agricultural	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Industrial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Recreational	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Residential	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Undeveloped	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Commercial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
☐ Other: _____	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW

B. Potential Groundwater Receptors. Estimate distances. (1 mile = 5,280 ft)

Distance to and direction of nearest municipal well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest other-than-municipal well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest non-community well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest private well: _____ feet ☐ > ½ mile from the waste _____ direction

Distance to and direction of nearest residence: _____ feet ☐ > ½ mile from the waste _____ direction

C. Potential For Gas Migration

_____ No. of homes within 300 feet of waste (gas migration potential)

_____ No. of homes between 300 & 1,000 ft to waste (gas migration potential)

Distance to and direction of nearest building: _____ feet ☐ > ½ mile from the waste _____ direction

Type of building: ☐ On-site building ☐ Municipal ☐ Residential ☐ Commercial ☐ Industrial ☐ Unknown

D. Potential Surface Water Receptors. Estimate distances.

☐ Creek: _____ feet ☐ Drainage ditch: _____ feet ☐ Intermittent stream _____ feet

☐ River: _____ feet ☐ Lake: _____ feet ☐ Wetland: _____ feet

E. Based on the site visit, did you visually observe…

1. a release to a surface water body? ☐ Yes ☐ No ☐ Unknown
2. a leachate seep? ☐ Yes ☐ No ☐ Unknown
3. a release to soils? ☐ Yes ☐ No ☐ Unknown

X. Comments: Use this section to provide comments on any aspect of the site visit. Attach any information or explanations labeled with the appropriate section number to which the material applies.