



October 17, 2016

JP HAMMERTON
ALBANY INTERNATIONAL CORP
3601 ELECTRIC CITY BLVD
KAUKAUNA WI 54130

SUBJECT: DNR Response to *Supplemental Site Investigation Report and Remedial Action Options Report* for Appleton Wire (Former), 908 N. Lawe St., Appleton, Outagamie County, WI
DNR BRRTS # 02-45-000015

Dear Mr. Hammerton:

On July 29, 2016, the Wisconsin Department of Natural Resources (DNR) received a *Supplemental Site Investigation Report* by Badger Laboratories & Engineering Co., Inc. ("Badger Labs") dated June 25, 2016 (SSIR) and a *Remedial Action Options Report* by Badger Labs dated July 25, 2016 (RAOR). Both reports were submitted on behalf of Albany International Corp. ("Albany") for the environmental case, *Appleton Wire (Former)*, located at 908 North Lawe Street (formerly addressed as 831 North Meade Street), city of Appleton, Outagamie County, Wisconsin (the "Property"). A review fee of \$1,050 accompanied the SSIR and RAOR in accordance with ch. NR 749, Wis. Adm. Code.

Brief History of 2016 Communications and Submittals

The DNR sent Albany a Notice of Noncompliance on March 17, 2016 indicating that a supplemental site investigation report and remedial action options report should be submitted by April 1, 2016. The DNR sent Albany a Notice of Violation on June 8, 2016 and scheduled an environmental enforcement conference for June 22, 2016. Upon Albany's request, DNR rescheduled the enforcement conference for July 20, 2016 with Albany, Badger Labs and ChemReport (attending on behalf of the Property owner, Luvata Appleton, LLC). The DNR sent a summary of the enforcement conference on July 25, 2016.

A follow-up phone call took place with DNR, Albany and Badger Labs on July 21, 2016 to discuss the administrative and technical deficiencies in previous reports (*Phone Log, July 21, 2016* attached). As stated above, a SSIR and RAOR were received on July 29, 2016. The SSIR was a resubmittal of the *Additional Site Investigation Report, June 15 – 2016*, by Badger Labs dated June 15, 2016 and received on July 12, 2016 with minor changes to visual aids and additional attachments included. The RAOR was a resubmittal with revisions of the *Remedial Options Evaluation* by Badger Labs dated March 30, 2016 and received on June 21, 2016.

A *Semi-Annual Operation & Maintenance Report, January through June – 2016*, by Badger Labs dated August 25, 2016 and submitted on behalf of Albany (the "2016 O&M Report") was received on August 29, 2016 and reviewed during this evaluation as well.

Department Response to SSIR and RAOR

The SSIR and RAOR cannot be approved at this time. Additional work is necessary to meet the requirements of chs. NR 716 and 722, Wis. Adm. Code.

Mr. JP Hammerton, Albany International Corp
DNR Response to SSIR and RAOR
Appleton Wire (Former), 908 N. Lawe St., Appleton, WI
BRRTS #02-45-000015

It should also be noted that in the *Semi-Annual Operation & Maintenance Report, July through December – 2015* by Badger Labs, dated February 28, 2016 and received June 23, 2016, the report mentions, "...a remedial action plan (was) submitted to Albany to more efficiently remove chromium...", and that, "...the collection system could be made more efficient to speed up the chromium removal". However, a remedial action plan has not been submitted to the DNR and no system optimization efforts have been proposed.

Evaluation of the SSIR and RAOR

The SSIR states, "Drill cuttings and sample cores from the push sampler are stored on site in closed-top drums awaiting disposal." Any investigative waste generated during the 2014 investigation that is still stored on the Property is in violation of storage limitations and must be immediately properly disposed. Please submit documentation of proper disposal to the DNR upon receipt.

In June 2007, the DNR met with Ron Buck of Albany and consultants to proactively discuss the case. At that time, the need for additional investigation beyond the Property boundaries and timing to discuss that work was discussed. Albany proposed to delay investigation beyond the Property boundaries until such time as the groundwater collection trench could be shut down based on discussion of the groundwater collection and treatment system and other contributing factors.

Since 2007, a comprehensive revision of the ch. NR 700 Rule Series, Wis. Adm. Code was promulgated in November 2013; a second chromium source area was identified at the Property in 2014 revealing hazardous waste concentrations in soil; and the RAOR did not provide a projected time frame for entertaining shutting down the collection trench or performing the additional site investigation. In addition, the groundwater data presented in the SSIR, RAOR and 2016 O&M Report demonstrate that the degree and extent of contamination has not been defined in compliance with ch. NR 716, Wis. Adm. Code.

A separate list of deficiencies of the SSIR and RAOR is included in the attached *Report Review Notes, October 2016*. In summary, the SSIR and RAOR do not meet the minimum requirements of chs. NR 716 and 722, Wis. Adm. Code and are not acceptable submittals. Regardless, additional investigation is necessary and must proceed.

Monitoring well, MW-21A, was installed on May 14, 2014 with a two-foot screen but not discussed in the narrative of the SSIR. The two-foot screen length may contribute to the slow recovery rate mentioned in the monitoring well development form. A piezometer (well screened below the water table) typically is installed with a five-foot screen, as done for this site at MW-2A, MW-5A, MW-17A, MW-19A and MW-20A. Future reports should include a discussion of the reasoning behind this limited screened interval at MW-21A.

Additional Actions Required

1. Any investigative waste from the 2014 investigation still stored on site must be immediately properly disposed and transportation and disposal documentation submitted to the DNR upon receipt.
2. A work plan in compliance with s. NR 716.09, Wis. Adm. Code needs to be submitted to the DNR by **Friday, December 16, 2016**. A work plan needs to be prepared with the intent to definitively define the horizontal and vertical extent of chromium contamination in soil and groundwater both on and off the Property including via preferential pathways such as utility

corridors. Special emphasis should be placed on the sampling and analysis strategy and the field investigation requirements of s. NR 716.11, Wis. Adm. Code. A review fee of \$700 should accompany the work plan in accordance with ch. NR 749, Wis. Adm. Code if Albany requests the DNR perform a detailed review and response.

3. Operation and maintenance (O&M) of the groundwater collection and treatment system should continue during additional site investigation, system optimization and remedial action options evaluation activities. Semi-annual submittal of O&M Reports should continue in accordance with s. NR 724.13(3), Wis. Adm. Code and the April 23, 2009 Compliance Agreement between Albany and DNR.
4. Routine groundwater monitoring should continue at the existing wells during site investigation. S. NR 716.14, Wis. Adm. Code requires responsible parties to notify property owners and tenants of sampling results from their relative property within 10 days of receipt of the data unless otherwise approved by the DNR. A template notification letter (Form 4400-249) is available on the internet to assist responsible parties with this notification and can be found at the following link: <http://dnr.wi.gov/files/PDF/forms/4400/4400-249.pdf>. Albany should contact all property owners with monitoring points located on their property and establish a reporting schedule acceptable to all parties. The schedule(s) should then be submitted to the DNR for approval.

Please contact me in Oshkosh by phone at 920-424-7887 or by email at jennifer.borski@wisconsin.gov with any questions in regard to this letter.

Sincerely,



Jennifer Borski
Hydrogeologist
Remediation & Redevelopment Program

Attachment:

- *Phone Log, July 21, 2016* for BRRTS #02-45-000015
- *Report Review Notes, October 2016* for BRRTS #02-45-000015

Copy:

- JP Hammerton, Albany International, jp.hammerton@albint.com
- Joseph Gaug, Albany International, joseph.gaug@albint.com
- Rob Biersteker, Luvata Appleton, LLC, rob.biersteker@luvata.com
- Sam Edwards, Luvata Appleton, LLC, sam.edwards@luvata.com
- Dave Casper, Badger Labs & Engineering, dcasper@badgerlabs.com
- Mark Love, Bay Environmental, mlove@bayenvironmental.com
- Mike Boozer, ChemReport, mboozer@chemreport.com
- Benton Stelzel, DNR Environmental Enforcement, benton.stelzel@wisconsin.gov
- Roxanne Chronert, DNR Remediation & Redevelopment, roxanne.chronert@wisconsin.gov



Phone Log

July 21, 2016

Site Name: Appleton Wire (Former)
BRRTS #: 02-45-000015

Name: JP Hammerton, Albany International & Dave Casper, Badger Labs
Phone:
Initiated By: Scheduled conference call
Time: 9:00 – 10:00 a.m.

Subject: status of site, SSIR & RAOR deficiencies, NR 716, 722, 724 & 726

At the enforcement conference on July 20, 2016, Hammerton requested to discuss the non-compliant SSIR & RAOR submitted with Borski & Casper. The phone conference was scheduled for 9 a.m. the following day.

In addition to the SSIR & RAOR, Hammerton requested information on electronic vs. hard copy reporting and clarification on what stage the site is in (e.g. long-term monitoring in O&M?).

Borski covered the following with Hammerton:

- NR 700.11, Wis. Adm. Code hard copy & electronic copy reporting requirements,
- The Spill Law
- NR 700 Rule Series typical progression: discovery, investigation, interim action (if necessary), remedial action options evaluation, remedial action implementation, long-term monitoring, flexible closure & continuing obligations.
- The potential for jumping around this progression based on site-specific issues such as the need to revisit the site investigation at this site with discovery of the new source area and need to re-evaluate remedial action options based on system performance, evolutions in science & technology while maintaining O&M of the existing interim action that turned out to be the remedial action, etc.

Hammerton inquired on the severity of this level of contamination. Borski compared this data to Superfund level concentrations and discussed the likelihood for USEPA involvement if there was not a viable RP but also acknowledged Casper's comment that while the contamination is severe, it is limited to a localized area – primarily on the source property.

Borski discussed the SSIR along with ch. NR 716 with Hammerton & Casper. Specifically, deficiencies in the maps and data tables, lack of proper certifications, no chain of custody, interpretation of data, soil boring logs, abandonment forms, deed, CSM, WTM coordinates, conclusions or recommendations, etc. Borski also discussed shifts in RR management since the Compliance Agreement in 2009 and emphasis, primarily driven by vapor discussions, on priority for delineation of the complete extent of contamination and the need to complete the investigation. Since there is not time before the submittal deadline of July 29, 2016 to complete the field work necessary for this, the revised SSIR should at least include recommendations for supplemental investigation to fully delineate the extent of the contamination in soil and groundwater and a schedule to implement the work.

Borski discussed the RAOR along with ch. NR 722 and revisions in Nov 2013 with Hammerton & Casper. Specifically, deficiencies in the maps and data tables, lack of proper certifications, no detailed

economic feasibility considerations, discussion on how long the selected remedy will take to achieve cleanup goals and sustainability evaluation of the selected remedy. Borski also asked the rhetorical question to Albany of whether Albany is satisfied with the status of the site - consider that the existing remedy has been operating for nearly 30 years and hexavalent chromium remains in groundwater at three orders of magnitude above the ES at MW-20 with closure not anywhere in sight. Borski discussed closure criteria in NR 726 and the need to show for flexible closure (with residual contamination) that the plume is not only stable to receding without the influence of a pump & treat system, but also that natural attenuation will actually occur and standards will eventually be met within a reasonable amount of time. This will be difficult with hexavalent chromium in tight clay.

Hammerton stated Albany's intention is to submit the revised SSIR & RAOR with fee by the deadline of July 29, 2016 laid out by Enforcement Specialist, Benton Stelzel. The reports will include as much as can be included based on information in house and will provide a recommendation for additional actions & evaluations with a time frame for implementation.

Notes prepared by Jennifer Borski, WDNR



Report Review Notes

October 2016

Site Name: Appleton Wire (Former)
BRRTS #: 02-45-000015

Report: *Supplemental Site Investigation Report*, June 25, 2016 – Received July 29, 2016

- Electronic copy submitted does not match hard copy submitted. Official public file is hard copy.
- S. NR 712.07, Wis. Adm. Code certifications not included.
- List of responsible party, property owners and consultant contacts not included.
- Site Wisconsin Trans Mercator (WTM) Coordinates for the site not included.
- All street names, utilities and buildings not included on figure.
- Recommend at least one map utilize current aerial as base map.
- At least one figure needs to include all historical soil boring, temp well and monitoring well locations for reference with historical soil and groundwater data (i.e. STS, McMahon & Badger Labs).
- Legends need to include definitions for all symbols included on respective figures.
- All historical soil and groundwater data must be included (i.e. STS, McMahon & Badger Labs data). Report only included May 2014 soil data, May 2014 temp well groundwater data and June 2014 groundwater data from new wells.
- Depth to groundwater, groundwater flow direction, smear zone, etc. not discussed in detail.
- Degree and extent of soil and groundwater contamination not defined.
- Discussion of GP-4 and GP-5 missing from text – are these geoprobe attempts that met refusal? No soil boring logs.
- Missing Form 4400-89 groundwater well info.
- Soil boring abandonment forms for GP-4-6 missing, if applicable.
- Pg 1, Project Background - Facility name change in 2001 not included.
- **Pg 5, Soil Boring and Sampling – It appears drill cuttings from 2014 investigation work still stored on site awaiting disposal. This exceeds the storage limitations in NR 718. Some cuttings may include hazardous waste.**
- Figure 5, *Cross Section*, does not meet minimum criteria. Not printed in color and difficult to decipher information, especially MW-20/20A & GP-11. Units incorrect. Does not reflect soil types. Need to identify high and low water table. Need to indicate path of cross section on plan view. At least two cross sections are appropriate for this site, possibly a third.
- Figure 7, *April 27, 2015 Total Chromium Isoconcentration Map*, and Figure 8, *April 14, 2016 Total Chromium Isoconcentration Map*, are misleading as MW-5 & MW-19 are significantly above the enforcement standard & extent is not defined.
- No soil isoconcentration map included.
- Soil data table does not include standards, note exceedances or include historical soil data.
- No recommendations included.
- What is the agreed schedule between Albany & Luvata (908 N. Lawe St.) and Albany & Appvion (714 E. Hancock St.) for reporting under s. NR 716.14(2), Wis. Adm. Code (10-day reporting to property owners)?

Report: *Remedial Action Options Report*, July 25, 2016 – Received July 29, 2016

- S. NR 712.07, Wis. Adm. Code certifications not included.
- List of responsible party, property owners and consultant contacts not included.

- Economic feasibility – more detail required for each option ruled out due to cost and for the selected option.
 - How will pump and treat address the haz waste soil at GP-11? Discuss how contaminated soil can be protected with continuing obligations to maintain a cover.
 - Groundwater shall be restored to the extent technically and economically feasible. Report lacks documentation & discussion of specifics to support conclusion that current approach is the only and most technically and economically feasible option. In addition, without assurance the extent is defined, complete capture of the plume cannot be confirmed.
 - A NR 722.09(2m) evaluation of the selected groundwater pump and treat is necessary, including optimization.
 - What is the projected time frame to achieve closure?
 - To what level can groundwater concentrations effectively be reduced with pump and treat?
 - How will effectiveness/performance be measured?
 - Disagree with statements:
 - “With the data provided by the addition of the 4 monitoring wells in 2014, the extent of the Chromium contamination has been confirmed to lie solely under the warehouse building.”
 - “...the contaminant plume is contained on the site. Perimeter wells have revealed little or no Chromium contamination has reached the property boundaries...”
- Site investigation not complete and clearly extends outside the building was shown by MW-5 (off-site) and the “French drain” located near the property boundary.
- “In 2014, several design variations for enhancements to the current collection system were developed, cost estimated and presented.” To whom? No submittal to DNR.
 - “Cost estimates for construction of several of the designs were obtained.” No cost analysis submitted to DNR.
 - Same comments on figures and tables as SSIR.

Report: *Semi-Annual Operation & Maintenance Report, January through June – 2016* – received August 29, 2016

- S. NR 712.07, Wis. Adm. Code certifications not included.
- Appleton Industrial Use Permit Number 04-17 mentioned. Previous report mentions Permit No. 05-17. Which is correct?
- Same comments on figures and tables as SSIR.
- Figure 5, *Site Layout on 2005 Aerial Photo*, illegible. More recent aerial photos available.
- Table 4, *Groundwater Analytical Results*, and Table 5, *Groundwater Analytical Results-Manhole and Sump*, PAL and ES exceedances need to be reviewed corrected. Temp well data needs to be included in historical groundwater results table. 1/13/11 total chromium and hex chromium need to be reconciled. 5/17/16 Hex Cr data in sump not entered.
- Future O&M form 4400-194 version 11/14 to be used.

Notes prepared by Jennifer Borski, DNR