



Illinois Environmental Protection Agency  
Division of Water Pollution Control

Fee Exempt No

**WPC State Permit Lifecycle Worksheet**

Monday, November 23, 2015

**Account Name**

Arnold Magnetic Tech

Date Received 11/23/2015

New Application Receipt

Log Number 2015-60605

Due Date 2/21/2016

Engineer Shu-Mei Tsai

BOW ID W1110650002

Unit Industrial

Facility Name Arnold Engineering Co-Marengo

Plans No Plans or Specs.

County Mchenry

Region Des Plaines

45/90 Day 90-Day

Project Name Industrial Treatment Plant Marengo

117 Number

Township Marengo

Project Manager

Project Type(s) Industrial Treatment/Pretreatment

Permit Number \_\_\_\_\_

Loading P.E. \_\_\_\_\_

Loading GPD DAF \_\_\_\_\_

**Action**

Permit  NPR  Denial  NOI  Void  Sludge Fee  Fee Exempt

30-Day Review Period Ends \_\_\_\_\_

DNR Letter Approval \_\_\_\_\_

IHPA Letter Approval \_\_\_\_\_

No Permit Required \_\_\_\_\_

Denial Letter Date \_\_\_\_\_

SMT 2-19-2016

Notice of Incompleteness Date \_\_\_\_\_

~~DEC~~ ~~2/19/16~~

Permit Voided Date \_\_\_\_\_

Approved by Engineer \_\_\_\_\_

Approved by Unit Manager \_\_\_\_\_

DEC 2/19/16

Approved by Section Manager \_\_\_\_\_

GAK by DEC 2/19/16

Date Permit Mailed \_\_\_\_\_

dm 2-19-16

Issue Date \_\_\_\_\_

Permit Expiration \_\_\_\_\_

*(Handwritten signature and checkmark)*

## Tsai, Shu-Mei

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**From:** Tsai, Shu-Mei  
**Sent:** Tuesday, December 08, 2015 9:35 AM  
**To:** Buscher, Bill  
**Cc:** LeCrone, Darin  
**Subject:** Log#2015-60605 Arnold Engineering  
**Attachments:** Arnold Engineering 1.pdf; Arnold Engineering 2.pdf; Arnold Engineering 3.pdf

Bill:

The Permit Section received a renewal request from Arnold Engineering. I believe they have some violations from the Agency. Could you check on any groundwater concerns from site and use of any on-site lagoon treatment concerns?  
Thanks

I also enclosed the current permits in this email.

*Shu-Mei Tsai,*

Environmental Protection Engineer, Industrial Unit  
Permit Section  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

ph: 217-782-0610

fax: 217-782-9891

[Shu-Mei.Tsai@Illinois.gov](mailto:Shu-Mei.Tsai@Illinois.gov)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 1001-10

PERMIT NO.: 2011-EO-1001

FINAL PLANS, SPECIFICATIONS, APPLICATION  
AND SUPPORTING DOCUMENTS  
PREPARED BY: Arnold Magnetic Technologies

DATE ISSUED: January 12, 2011

SUBJECT: ARNOLD ENGINEERING CORPORATION (MARENGO FACILITY) - Wastewater Treatment and Recycle System - McHenry County

PERMITTEE TO OPERATE

Arnold Magnetic Technologies - Arnold Engineering  
300 North West Street  
Marengo, Illinois 60152

RELEASABLE

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows:

Wastewater treatment and recycle system consisting of a series of four ponds (ponds #1-4) of 3 million gallon total capacity, one extended aeration activated sludge treatment plant with a rated capacity of 30,000 gpd tributary to Pond#1, one diked percolation field and all pumps, piping and appurtenances necessary to treat sanitary wastewater, cooling water and process wastewater (an average of 163,030 gpd, and a maximum of 217,333 gpd). Treated wastewater from the four ponds (Ponds #1-4) will either be recycled back to plant operations or discharged to the percolation field via an industrial ditch.

This operating permit expires on December 31, 2015.

This operating permit renews and replaces permit number 2006-EO-0690 which was previously issued for the herein permitted facilities.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

**SPECIAL CONDITION 1:** All sludges generated on-site shall be transported for disposal at an Illinois Environmental Protection Agency permitted facility using the Agency's Supplemental Permit and manifest system in accordance with the Environmental Protection Act. If the sludge is a hazardous waste, the generator must comply with all applicable requirements of 35 Ill. Adm. Code Parts 702, 703, 705 and 720 to 725.

**SPECIAL CONDITION 2:** This Permit is issued with the expressed understanding that there shall be no surface discharge from these facilities. If such discharge occurs, additional or alternate facilities shall be provided. The construction of such additional or alternate facilities may not be started until a Permit for the construction is issued by this Agency.

**SPECIAL CONDITION 3:** The operation of the treatment facilities must be under the direct and active field supervision of

Page 1 of 2

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

SAK:SMT.1001-10.docx

DIVISION OF WATER POLLUTION CONTROL

cc: EPA-Peoria FOS  
Arnold Magnetic Technologies  
Records - Industrial  
Binds

  
Alan Keller, P.E.  
Manager, Permit Section

R 002982

**READ ALL CONDITIONS CAREFULLY:  
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:
  - a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
  - b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
  - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit;
  - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants;
  - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
  - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed; or
  - b. upon finding that any standard or special conditions have been violated; or
  - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

RELEASEABLE

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 1001-10

PERMIT NO.: 2011-EO-1001

FINAL PLANS, SPECIFICATIONS, APPLICATION  
AND SUPPORTING DOCUMENTS

DATE ISSUED: January 12, 2011

PREPARED BY: Arnold Magnetic Technologies

RELEASEABLE

SUBJECT: ARNOLD ENGINEERING CORPORATION (MARENGO FACILITY) - Wastewater Treatment and Recycle System - McHenry County

a certified industrial treatment plant operator in accordance with the State of Illinois Rules and Regulations, Title 35, Subtitle C, Chapter 1, Part 312.

SPECIAL CONDITION 4: Monitoring and Reporting Requirements – The discharge to the percolation pond shall not exceed the Class I Groundwater Standards.

A. Samples shall be collected of the treated wastewater at a point representative of the discharge from Pond #4 (final stage) but prior to entry into the ditch tributary to the percolation field. Monthly samples shall also be collected from the monitoring wells identified in the permit application as MW-1, MW-2, MW-3, MW-A4, MW-A5, MW-A6, MW-A7, and MW-A8. All samples shall be analyzed for the following parameters:

Parameter	Sample Type	Frequency	Class I Groundwater Quality Standards
1.1.1 - Trichloroethane, mg/l	Grab	Once/Month	0.2 mg/l
Tetrachloroethylene, mg/l	Grab	Once/Month	0.005 mg/l
Trichloroethylene, mg/l	Grab	Once/Month	0.005 mg/l
Total Dissolved Solids, mg/l	Grab	Once/Month	1,200 mg/l
Nickel, mg/l	Grab	Once/Month	0.1 mg/l
pH	Grab	Once/Month	6.5 - 9.0 SU
Ammonia Nitrogen	Grab	Once/Month	Monitoring Only
Nitrate	Grab	Once/Month	10 mg/l

B. Flow rate from Pond #4 to the ditch tributary to the percolation field shall be recorded, in million gallons per day, as a daily maximum and monthly average.

C. Monitoring shall be conducted according to test procedures approved in 40 CFR 136 or other Agency approved methods. The monitoring results and flow data shall be tabulated and submitted to the Agency on a semi-annual basis (May and November of each year) to the following addresses:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Compliance Assurance Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency  
DWPC - Des Plaines Region  
9511 W. Harrison  
Des Plaines, Illinois 60016

**READ ALL CONDITIONS CAREFULLY:  
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:
  - a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
  - b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
  - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit;
  - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants;
  - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
  - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed; or
  - b. upon finding that any standard or special conditions have been violated; or
  - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

**RELEASABLE**

**Subject:** The Arnold Engineering Corporation

**Data:** 1001-10

**Reviewed By:** Shu-Mei Tsai

**Date:** Tuesday, December 28, 2010

### Names of Project

<b>Permittee:</b> Arnold Engineering Corporation 300 North West Street Marengo, Illinois 60152 (McHenry County) 585-385-9010	
<b>Facility:</b> Arnold Engineering Corporation 300 North West Street Marengo, Illinois 60152 (McHenry County) 585-385-9010	<b>RELEASABLE</b>
<b>Engineer:</b> Arnold Magnetic Technologies 770 Linden Avenue Rochester, New York 14625	
<b>Intermediate Sewer Owner:</b>	
<b>POTW:</b>	

### Signatures:

<b>Applicant(s)</b>	Michael D. Kaser, Chief Financial Officer of Arnold Engineering Corporation
<b>Engineer</b>	Jessica A Wojick 585-385-9010 x 289 (Office) 585-303-5344 (Cell) jwojick@arnoldmagnetices.com
<b>Owner/Operator</b>	N/A
<b>Intermediate Sewer Owner</b>	N/A
<b>POTW</b>	N/A

### PROJECT:

Arnold Magnetic Technologies Corporation requests to renew the state permit #2006-EO-0690. The existing system neither discharge to POTW nor associated with a municipal sewer. An on-site well provides the potable and process water.

The recycled water system contains a series of 4 ponds of 3 million gallons and 1.5 mgd of cooling water through a separate distribution system. A 850 feet deep private well

**Subject:** The Arnold Engineering Corporation

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**Reviewed By:** Shu-Mei Tsai

**Date:** Tuesday, December 28, 2010

supplies sanitary water, make-up cooling water, and process water and approximately 126,000gpd (90%) of well water flows into the recycle water system.

Sanitary Wastewater System

RELEASABLE

The remaining 14,000 gpd of well water is used in the plant's domestic sanitary sewage system. The sewage is collected in a separate sanitary sewer system and is treated in an Amcodyne extended aeration activated sludge treatment plant with a rated capacity of 30,000 gpd.

1. The Amcodyne system has a Worthington comminutor that breaks down any large particles before wastes enter the aeration tank with a capacity of 30,485 gallons.
2. Low-pressure air less than six pounds per square inch is supplied to porous diffusers. Spray devices are present to control foam, and activated sludge is returned from the bottoms of the 2 Imhoff cone settling tanks by an air lift method.
3. The diffusers are placed so that incoming waste is mixed with returned activated sludge.
4. A continuous air supply is provided to maintain aerobic conditions, solids suspension, and contact in the aeration tank.
5. The overflow from the aeration tank goes through 2 Imhoff cones which settle out the solids.
6. The supernatant overflows into a pipe air lift devices return the settled activated sludge to the aeration tank.
7. The sludge goes to the 1,224 ft<sup>3</sup> aerated sludge holding tank, and the sludge is hauled away by a disposal service.

The chlorination tank and related components previously associated with this system have been removed and are no longer present at the site.

The recycle water system

The water flows from the bottom of 200 feet x 160 feet x 8 ½ feet of Pond 1, to 200 feet x 80 feet x 6 feet 6 inch of Pond 2, to 200 feet x 80 feet x 7 feet inch of Pond 3, and then 200 feet x 80 feet x 7 feet 6 inch of Pond 4.

1. Ponds 1 and 2 receive the greatest amount of sedimentation which is usually FeCl<sub>3</sub>, Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>. Phosphates from the carlite coating line reacts to form Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> which settles in the ponds. All the water pumped by the pump station plus 140,000 GPD well water returns to the ponds by means of 4 recycle lift stations.
2. The water treatment consists of sedimentation of suspended solids. Sodium hypochlorite is applied at the pump station to kill any bacteria and algae.
3. A phosphate solution known as AquaMag is also added at the pump station as a corrosion inhibitor. Suspension chemicals are added by metering pumps at the pump station to



State of Illinois  
Environmental Protection Agency

Page 3 of 3

**Subject:** The Arnold Engineering Corporation

**Data:** 1001-10

**Reviewed By:** Shu-Mei Tsai

**Date:** Tuesday, December 28, 2010

clean out pipe deposits and keep these in suspension until the slower velocity waters of the ponds allows particles to settle out.

Potable water system

The potable water supply consists of a 850-foot deep well with a submersible turbine pump which pumps on plant demand or to fill up the level in our water tower. The well water is chlorinated to a residual of greater than 0.5 ppm for disinfection

**ACTION:**

The Agency will issue a permit with appropriate special conditions

RELEASABLE



Illinois Environmental Protection Agency  
 Permit Section, Division of Water Pollution Control  
 P.O. Box 19276  
 Springfield, Illinois 62794-9276

1001-10  
 For IEPA Use:  
**RECEIVED**  
 OCT 25 2010  
 Environmental Protection Agency  
 WPC-Permit Log In

**Application for Permit or Construction Approval  
 WPC-PS-1**

1. Owner Name: Arnold Magnetic Technologies

Name of Project: Arnold Magnetic Technologies - Arnold Engineering Wastewater Treatment and Recycle System

Township: Marengo County: McHenry

2. Brief Description of Project:

**RELEASABLE**

Renewal of Operating Permit 2006-EO-0690 for the existing sanitary and industrial water recycling system. Original permit application was submitted in 1975 and the system has been in operation since that date, however the discharge from the system has decreased significantly. See Schedule J for process diagram and description.

3. Documents Being Submitted: If the Project involves any of the items listed below, submit the corresponding schedule, and check the appropriate boxes.

	<u>Schedule</u>		<u>Schedule</u>
Private Sewer Connection/Extension	A/B <input type="checkbox"/>	Spray Irrigation	H <input type="checkbox"/>
Sewer Extension Construct Only	C <input type="checkbox"/>	Septic Tanks	I <input type="checkbox"/>
Sewage Treatment Works	D <input type="checkbox"/>	Industrial Treatment/Pretreatment	J <input checked="" type="checkbox"/>
Excess Flow Treatment	E <input type="checkbox"/>	Waste Characteristics	N <input checked="" type="checkbox"/>
Lift Station/Force Main	F <input type="checkbox"/>	Erosion Control	P <input type="checkbox"/>
Fast Track Service Connection	FTP <input type="checkbox"/>	Trust Disclosure	T <input type="checkbox"/>
Sludge Disposal	G <input type="checkbox"/>		

Plans: Title Arnold Magnetic Technologies - Arnold Engineering Water Recycling System

No. of Pages: \_\_\_\_\_

Specifications: Title NA

No. of Books/Pages: \_\_\_\_\_

Other Documents: NA  
 (Please Specify)

3.1 Illinois Historic Preservation Agency approval letter: Yes  No

4. Land Trust: Is the project identified in item number 1 herein, for which a permit is requested, to be constructed on land which is the subject of a trust? Yes  No

If yes, Schedule T (Trust Disclosure) must be completed and item number 7.1.1 must be signed by a beneficiary, trustee or trust officer.

5. This is an Application for (Check Appropriate Line):

- A. Joint Construction and Operating Permit
- B. Authorization to Construct (See Instructions) NPDES Permit No. IL00 \_\_\_\_\_
- C. Construct Only Permit (Does Not Include Operations)
- D. Operate Only Permit (Does Not Include Construction)

6. Certifications and Approval:

6.1 Certificate by Design Engineer (When required: refer to instructions)

I hereby certify that I am familiar with the information contained in this application, including the attached schedules indicated above, and that to the best of my knowledge and belief such information is true, complete and accurate. The plans and specifications (specifications other than Standard Specifications or local specifications on file with this Agency) as described above were prepared by me or under my direction.

Engineer Name: NA

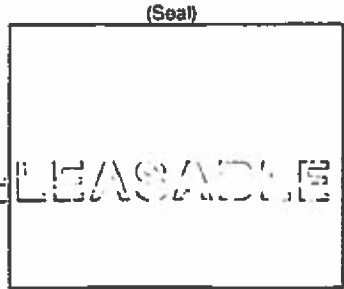
Registration Number: \_\_\_\_\_  
(3 digits) (6 digits)

Firm: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone No: \_\_\_\_\_

Signature X \_\_\_\_\_ Date: \_\_\_\_\_



7. Certifications and Approvals for Permits:

7.1 Certificate by Applicant(s)

I/We hereby certify that I/we have read and thoroughly understand the conditions and requirements of this Application, and am/are authorized to sign this application in accordance with the Rules and Regulations of the Illinois Pollution Control Board. I/We hereby agree to conform with the Standard Conditions and with any other Special Conditions made part of this Permit.

7.1.1 Name of Applicant for Permit to Construct: NA

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Signature X \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Phone No: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

7.1.2 Name of Applicant for Permit to Own and Operate: Arnold Magnetic Technologies - Arnold Engineering

Address: 300 N. West Street

City: Marengo State: IL Zip Code: 60152

Signature X  Date: 10/15/2010

Printed Name: Jessica A. Wojick, CHMM Phone No: (585) 392-5211

Title: Corporate Director of Environmental Health & Safety Affairs

7.2 Attested (Required When Applicant is a Unit of Government)

Signature X \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_  
(City Clerk, Village Clerk, Sanitary District Clerk, Etc.)

7.3 Applications from non-governmental applicants which are not signed by the owner, must be signed by a principal executive officer of at least the level of vice president, or a duly authorized representative.

7.4 Certificate By Intermediate Sewer Owner

I hereby certify that (Please check one):

RELEASEABLE

- 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the environmental Protection Act or Subtitle C, Chapter I, or
- 2. The Illinois Pollution Control Board, in PCB \_\_\_\_\_ dated \_\_\_\_\_ granted a variance from Subtitle C, Chapter I to allow construction of facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary:

NA \_\_\_\_\_

Sewer System Owner: NA \_\_\_\_\_

Address: NA \_\_\_\_\_

City: NA \_\_\_\_\_ State: NA \_\_\_\_\_ Zip Code: NA \_\_\_\_\_

Signature X \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: NA \_\_\_\_\_ Phone No: \_\_\_\_\_

Title: \_\_\_\_\_

7.4.1 Additional Certificate By Intermediate Sewer Owner

I hereby certify that (Please check one):

- 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the environmental Protection Act or Subtitle C, Chapter I, or
- 2. The Illinois Pollution Control Board, in PCB \_\_\_\_\_ dated \_\_\_\_\_ granted a variance from Subtitle C, Chapter I to allow construction facilities that are the subject of this application.
- 3. Not applicable

Name and location of sewer system to which this project will be tributary:

NA \_\_\_\_\_

Sewer System Owner: NA \_\_\_\_\_

Address: NA \_\_\_\_\_

City: NA \_\_\_\_\_ State: NA \_\_\_\_\_ Zip Code: NA \_\_\_\_\_

Signature X \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: NA Phone No: \_\_\_\_\_

Title: \_\_\_\_\_

7.5 Certificate By Waste Treatment Works Owner

I hereby certify that (Please check one):

- 1. The waste treatment plant to which this project will be tributary has adequate reserve capacity to treat the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or
- 2. The Illinois Pollution Control Board, in PCB \_\_\_\_\_ dated \_\_\_\_\_ granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.
- 3. Not applicable

RELEASED

I also certify that, if applicable, the industrial waste discharges described in the application are capable of being treated by the treatment works.

Name of Waste Treatment Works: NA

Waste Treatment Works Owner: NA

Address: NA

City: NA State: NA Zip Code: NA

Signature X \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: NA Phone No: \_\_\_\_\_

Title: NA

Please return completed form to the following address:

Illinois Environmental Protection Agency  
Permit Section, Division of Water Pollution Control  
P.O. Box 19276  
Springfield, Illinois 62794-9276

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

1001-10  
**RECEIVED**  
 FOR EPA USE:  
 LOG # \_\_\_\_\_  
 DATE RECEIVED: OCT 25, 2010

Environmental Protection Agency  
 WPC-Permit Log In

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 DIVISION OF WATER POLLUTION CONTROL  
 PERMIT SECTION

Springfield, Illinois 62706

**SCHEDULE J INDUSTRIAL TREATMENT WORKS CONSTRUCTION OR PRETREATMENT WORKS**

1. **NAME AND LOCATION:**

1.1 Name of project Arnold Magnetic Technologies - Arnold Engineering

1.2 Plant Location

1.2.1 NW 35 44N 5E 3rd  
 Quarter Section Section Township Range P.M.  
 1.2.2 Latitude 42 deg. 15 min. 14 sec. "NORTH"  
 1.2.3 Longitude 88 deg. 37 min. 14 sec. "WEST"  
 1.2.3 Name of USGS Quadrangle Map (7.5 or 15 minute) Harvard IL-WI 15 Minute

2. **NARRATIVE DESCRIPTION AND SCHEMATIC WASTE FLOW DIAGRAM:** (see instructions)

Original application was submitted in 1975. Permit updates were submitted in 1984, 1989 and 1993. Except flow rates, operation of the system has remained essentially the same since 1993. See attached description

2.1 **PRINCIPAL PRODUCTS:**

Industrial and commercial magnets and magnetic materials.

2.2 **PRINCIPAL RAW MATERIALS:**

Aluminum, nickel, cobalt, iron, steel, acids and oils

3. **DESCRIPTION OF TREATMENT FACILITIES:**

3.1 Submit a flow diagram through all treatment units showing size, volumes, detention times, organic loadings, surface settling rate, weir overflow rate, and other pertinent design data. Include hydraulic profiles and description of monitoring systems.

3.2 Waste Treatment Works is: Batch  , Continuous  , No. of Batches/day \_\_\_\_\_ , No. of Shifts/day \_\_\_\_\_

3.3 Submit plans and specifications for proposed construction.

3.4 Discharge is: Existing  ; Will begin on \_\_\_\_\_

4. **DIRECT DISCHARGE IS TO:** Receiving Stream  Municipal Sanitary Sewer  Municipal storm or municipal combined sewer

If receiving stream or storm sewer are indicated complete the following:

Name of receiving stream NA ; tributary to NA ;  
 tributary to NA ; tributary to NA ;

5. Is the treatment works subject to flooding? Yes  No  If so, what is the maximum flood elevation of record (in reference to the treatment works datum) and what provisions have been made to eliminate the flooding hazard?

6. **APPROXIMATE TIME SCHEDULE:** Estimated construction schedule:

Start of Construction \_\_\_\_\_ ; Date of Completion \_\_\_\_\_  
 Operation Schedule \_\_\_\_\_ ; Date Operation Begins \_\_\_\_\_  
 100% design load to be reached by year \_\_\_\_\_

7. **DESIGN LOADINGS**

7.1 Design population equivalent (one population equivalent is 100 gallons of wastewater per day, containing 0.17 pounds of BOD<sub>5</sub> and 0.20 pounds of suspended solids;

BOD \_\_\_\_\_ ; Suspended Solids \_\_\_\_\_ ; Flow \_\_\_\_\_

7.2 Design Average Flow Rate NA MGD.

- 7.3 Design Maximum Flow Rate NA MGD.  
7.4 Design Minimum Flow Rate NA MGD.  
7.5 Minimum 7-day, 10-year low flow NA cfs NA MGD.  
Minimum 7-day, 10-year flow obtained from NA  
7.6 Dilution Ratio NA; NA.

B. FLOW TO TREATMENT WORKS (if existing):

- 8.1 Flow (last 12 months)  
8.1.1 Average Flow 0.163030 MGD  
8.1.2 Maximum Flow 0.217333 MGD

RELEASEABLE

8.2 Equipment used in determining above flows

9. Has a preliminary engineering report for this project been submitted to this Agency for Approval?

Yes  No  . If so, when was it submitted and approved. Date Submitted 9/30/1964  
Certification # 19640-FA-546  
Dated 10/9/1964

10. List Permits previously issued for the facility:

1994-EO-1340-2; 1999-EO-4027; 2004-EO-0971; 2006-EO-0690

11. Describe provisions for operation during contingencies such as power failures, flooding, peak loads, equipment failure, maintenance shut downs and other emergencies.

Back up pumps are present to provide emergency assistance in case of a main pump failure.

12. Complete and submit Schedule G if sludge disposal will be required by this facility.

13. WASTE CHARACTERISTICS: Schedule N must be submitted.

14. TREATMENT WORKS OPERATOR CERTIFICATION: List names and certification numbers of certified operators:

James B. Roozee - Industrial Wastewater Treatment Works Operator (Issued 2/2/2010)

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that section. Failure to do so may prevent this form from being processed and could result in your application being denied.

1001-10

For IEPA Use:  
 LOG # **RECEIVED**  
 DATE RECEIVED: **OCT 25 2010**

Environmental Protection Agency  
 WPC-Permit Log In

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 DIVISION OF WATER POLLUTION CONTROL  
 PERMIT SECTION  
 Springfield, Illinois 62794-9276

SCHEDULE N WASTE CHARACTERISTICS

RELEASEABLE

1. Name of Project Arnold Magnetic Technologies - Arnold Engineering

2. FLOW DATA	EXISTING	PROPOSED-DESIGN
2.1 Average Flow (gpd)	<u>163,030 gpd</u>	<u>NA</u>
2.2 Maximum Daily Flow (gpd)	<u>217,333 gpd</u>	<u>NA</u>

2.3 TEMPERATURE

Time of Year	Avg. Intake Temp. F	Avg. Effluent Temp. F	Max. Intake Temp. F	Max. Effluent Temp. F	Max. Temp. Outside Mixing Zone F
SUMMER	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
WINTER	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

2.4 Minimum 7-day, 10-year flow: NA cfs NA MGD.

2.5 Dilution Ratio: NA ; NA

2.6 Stream flow rate at time of sampling NA cfs NA MGD.

3. CHEMICAL CONSTITUENT Existing Permitted Conditions  ; Existing conditions  ; Proposed Permitted Conditions

Type of sample:  grab (time of collection TBD);  composite (Number of samples per day     )

(see instructions for analyses required)

CONSTITUENT	RAW WASTE (mg/l)	TREATED EFFLUENT Avg. (mg/l) Max.	UPSTREAM (mg/l)	DOWNSTREAM SAMPLES (mg/l)
Ammonia Nitrogen (as N)	NTF	NTF	NA	NA
Arsenic (total)	TBD	TBD	NA	NA
Barium	TBD	TBD	NA	NA
Boron	TBD	TBD	NA	NA
BOD <sub>5</sub>	TBD	TBD	NA	NA
Cadmium	TBD	TBD	NA	NA
Carbon Chloroform Extract	NTF	NTF	NA	NA
Chloride	TBD	TBD	NA	NA
Chromium (total hexavalent)	TBD	TBD	NA	NA
Chromium (total trivalent)	TBD	TBD	NA	NA



CONSTITUENT	RAW WASTE (mg/l)	TREATED EFFLUENT Avg. (mg/l) Max.	UPSTREAM (mg/l)	DOWNSTREAM SAMPLES (mg/l)
Copper	TBD	TBD	NA	NA
Cyanide (total)	NTF	NTF	NA	NA
Cyanide (readily released @ 150° F & pH 4.5)	NTF	NTF	NA	NA
Dissolved Oxygen	TBD	TBD	NA	NA
Fecal Coliform	TBD	TBD	NA	NA
Fluoride	NTF	NTF	NA	NA
Hardness (as Ca CO <sub>3</sub> )	NTF	NTF	NA	NA
Iron (total)	TBD	TBD	NA	NA
Lead	TBD	TBD	NA	NA
Manganese	TBD	TBD	NA	NA
MBAS	NTF	NTF	NA	NA
Mercury	TBD	TBD	NA	NA
Nickel	TBD	TBD	NA	NA
Nitrates (as N)	NTF	NTF	NA	NA
Oil & Grease (hexane solubles or equivalent)	NTF	NTF	NA	NA
Organic Nitrogen (as N)	NTF	NTF	NA	NA
pH	TBD	TBD	NA	NA
Phenols	TBD	TBD	NA	NA
Phosphorous (as P)	TBD	TBD	NA	NA
Radioactivity	NTF	NTF	NA	NA
Selenium	NTF	NTF	NA	NA
Silver	TBD	TBD	NA	NA
Sulfate	NTF	NTF	NA	NA
Suspended Solids	TBD	TBD	NA	NA
Total Dissolved Solids	TBD	TBD	NA	NA
Zinc	TBD	TBD	NA	NA
Others	TBD	TBD	NA	NA

RECEIVED

NARATIVE DESCRIPTION OF THE  
ARNOLD ENGINEERING RECYCLE WATER SYSTEM  
REFERENCE SCHEDULE J

1001-10  
RECEIVED  
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Environmental Protection Agency  
WPC-Permit Log In

The Arnold Magnetic Technologies Corporation recycled water system contains a series of 4 ponds of 3 million gallons total capacity that provides 1.5 million gallon per day (M.G.D) of cooling water through a separate distribution system to the manufacturing processes. The recycled water is treated prior to reuse in the plant. Approximately 140,000 gallons per day (gpd) of water pumped from a private well (850' deep) to supply sanitary water, make-up cooling water, and process water. Approximately 90% of the well water (126,000 gpd) flows into the recycle water system drains which load pond #1.

RELEASEABLE

SANITARY WASTEWATER SYSTEM:

The remaining 14,000 gpd of well water is used in the plant's domestic sanitary sewage system. The sewage is collected in a separate sanitary sewer system and is treated in an Amcodyne extended aeration activated sludge treatment plant with a rated capacity of 30,000 gpd. The principle of treatment is that flocculated biological growths (return activated sludge) are mixed with raw wastewater on a continuous basis and are aerated. The aerobic microorganisms utilize the organic waste matter as a food and energy source to sustain life. The biological growths are then aerated and settled out. A portion of the material is wasted and the rest is recirculated for mixture with additional waste.

The Amcodyne system has a Worthington comminutor that breaks down any large particles before wastes enter the aeration tank. The aeration tank has a capacity of 30,485 gallons. Low-pressure air (less than 6 pounds per square inch (psi)) is supplied to porous diffusers. Spray devices are present to control foam. Activated sludge is returned from the bottoms of the 2 Imhoff cone settling tanks by an air lift method.

The diffusers are placed so that incoming waste is mixed with returned activated sludge. A continuous air supply is provided to maintain aerobic conditions, solids suspension, and contact in the aeration tank. The overflow from the aeration tank goes through 2 Imhoff cones which settle out the solids. The supernatant overflows into an 8 ft. long weir, and a 2 1/2" diameter pipe air lift devices return the settled activated sludge to the aeration tank. Valves can

be opened to waste part of this sludge to the 1224 cubic foot aerated sludge holding tank. The waste sludge is hauled away by a disposal service as needed. The chlorination tank and related components previously associated with this system have since been removed and are no longer present at the site.

The effluent from the sewage treatment plant has a greater than 4 parts per million (ppm) residual and is pumped into Pond #1 of the recycle system. In 2005, this effluent had an average biological oxygen demand (BOD.) of 6.1 milligram per Liter (mg/L) and total suspended solids (TSS) of 9.4 mg/L. The influent has an average B.O.D. of 231.9 mg/L, C.O.D. of 420 mg/L, and T.S.S. of 180.4 mg/L. Removal efficiency is 97.4% B.O.D., 88% C.O.D., and 94.8% T.S.S. Testing of the mixed liquor and return sludge for settled solids and T.S.S. is done periodically. B.O.D. and T.S.S. are also run on the effluent. Daily maintenance includes inspecting air diffusers in aerating and holding tanks, back flushing sludge return lines so sludge does not build up and skimming off floatable solids from the skimmer. Monthly maintenance includes checking blower operation including belts, air cleaner, air check valves and lubrication.

#### RECYCLE WATER SYSTEM:

RELEASEABLE

The recycle water system is diagrammed on the attached schematic layout. The pump station draws from the bottom of Ponds 3 and 4 and is pumped under 60 psi pressure to all of the buildings on the property. Pond 1 is 200' long, 160' wide, and is 8 ½" deep. Ponds 2, 3, and 4 are all 200' long by 80' wide and are 6'6", 7', and 7'6" deep, respectively. Water flows from the bottom of Pond 1 to the surface of Pond 2 and so on to Pond 4. This helps to cool the water by air evaporation.

Ponds 1 and 2 receive the greatest amount of sedimentation which is usually  $\text{FeCl}_3$ ,  $\text{Ca}_3(\text{PO}_4)_2$ , and  $\text{SiO}_2$ . The only chemicals of interest in the ponds are phosphates from the carlite coating line. The phosphate reacts to form  $\text{Ca}_3(\text{PO}_4)_2$  which settles in the ponds. All the water pumped by the pump station plus 140,000 G.P.D. well water returns to the ponds by means of 4 recycle lift stations.

Basically the water treatment consists of sedimentation of suspended solids. Sodium hypochlorite is applied at the pump station to kill any bacteria in the pipe system or equipment and also to Pond #3 and Pond #4 to control bacteria and algae. A phosphate solution known as AquaMag is also added at the pump station as a corrosion inhibitor. Suspension chemicals are

added by metering pumps at the pump station to clean out pipe deposits and keep these in suspension until the slower velocity waters of the ponds allows particles to settle out. The goal is to maintain a greater than 0.5 Cl<sub>2</sub> residual in the pipes. An antiscalant and an antifoulant are also added to disperse silt, mud, and sludge deposits and prevent and remove iron oxide and scale deposits. An aquatic herbicide known as Reward is also added to the ponds on an annual basis.

The Pond 4 overflow equals the well water pump rate (approximately 140,000 gpd) less evaporation plus precipitation and some storm water flows. This flows to Pond 5 for further treatment, evaporation, and percolation. Under dry weather conditions there is no perceivable surface discharge from the plant property.

RELEASEABLE

Normal pumping rate has historically been approximately 38,000 gallons per hour (g.p.h.) of the return recycle water at the Main and Auxiliary pump lift stations to Pond #1. During very heavy storms some water may overflow at the Main lift station when the pumping rate of 94,000 g.p.h. is exceeded. When additional quantities of storm water are received, the pond system will absorb a significant portion of any excess and it will discharge to the ditch leading to Pond #5 south of Building 11.

Daily maintenance on the recycle system includes adding necessary chemical additions, checking pressure and return pump operation, cleaning pump screen and filters as necessary, switch stand-by pumps on and changing temperature recording charts. Alarm systems warn maintenance when lift or pressure pumps are not operating or line pressure drops. Routine pump, meter and other equipment maintenance is performed as needed.

#### POTABLE WATER SYSTEM:

Our potable water supply consists of our 850-foot deep well with a submersible turbine pump which pumps on plant demand or to fill up the level in our water tower. The well water is chlorinated to a residual of greater than 0.5 ppm for disinfection. Provision is made to add well water to the ponds to make-up for evaporation losses. There is no connection to the Marengo water supply from our potable water supply. Our water supply is checked annually for coliform bacteria in accordance with regulatory requirements. Normal pump and tower maintenance are performed as needed.

# THE ARNOLD ENGINEERING WATER RECYCLE SYSTEM

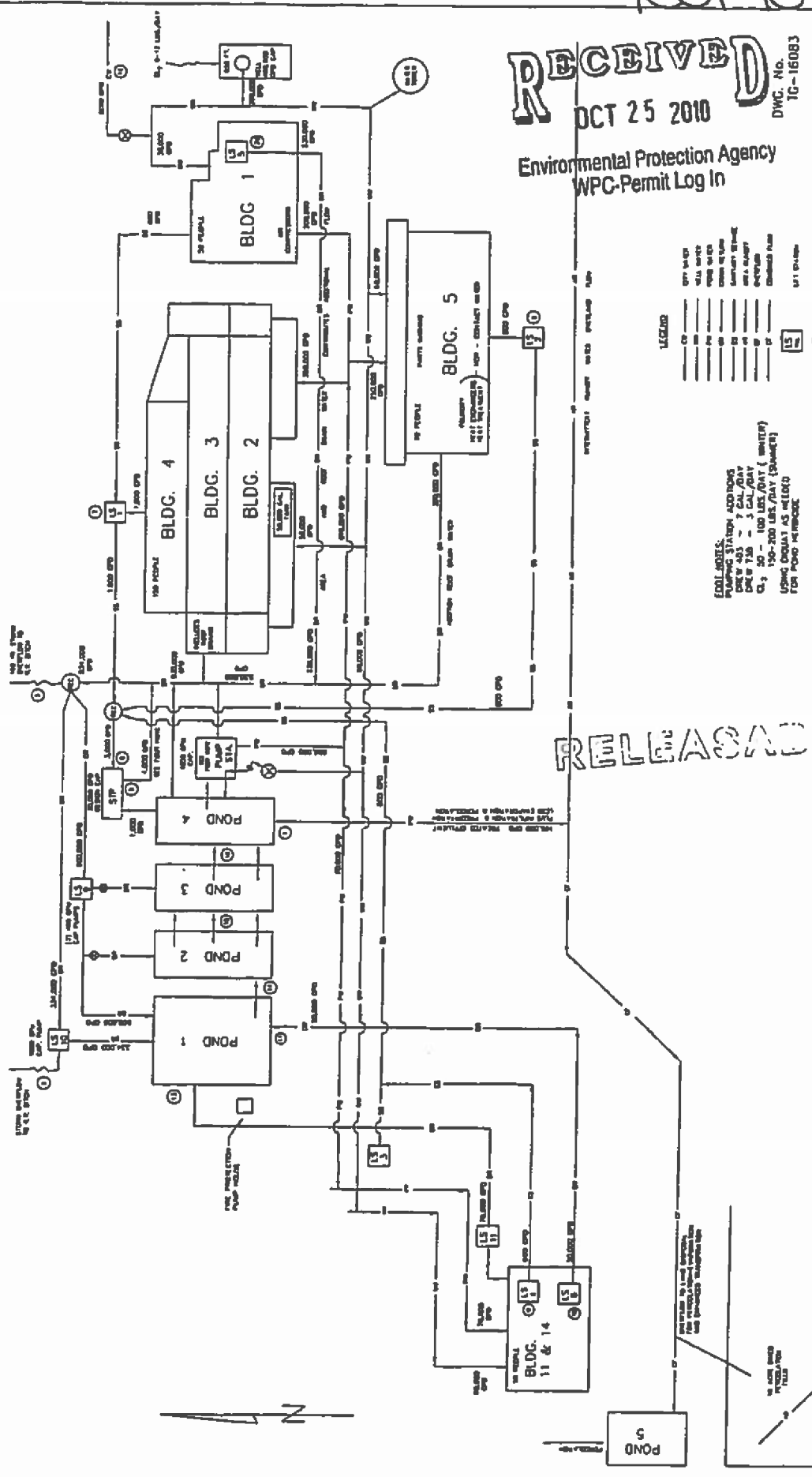
1001-10

**RECEIVED**  
 OCT 25 2010

DWC. NO. 7G-16083

Environmental Protection Agency  
 WPC-Permit Log In

THIS DRAWING IS THE PROPERTY OF THE ARNOLD ENGINEERING COMPANY  
 THIS DRAWING IS NOT TO BE REPRODUCED OR COPIED  
 WITHOUT THE WRITTEN PERMISSION OF THE ARNOLD ENGINEERING COMPANY  
 DATE: JULY 15 1988  
 BY: J. L. BROWN



LEGEND

1	PIPE
2	VALVE
3	PUMP
4	STRAINER
5	FLOW METER
6	CONTROL VALVE
7	MANUAL VALVE
8	WATER METER
9	WATER METER
10	WATER METER
11	WATER METER
12	WATER METER
13	WATER METER
14	WATER METER
15	WATER METER

FIELD NOTES:  
 THIS SYSTEM WAS DESIGNED  
 FOR A FLOW OF 100 GPM  
 WITH A HEAD OF 100 FT  
 USING EQUIPMENT AS NOTED  
 FOR FLOW MEASUREMENT

RELEASEABLE

**LeCrone, Darin**

---

**Subject:** Arnold Engineering  
**Location:** Ricks Office

**Start:** Wed 12/9/2015 8:00 AM  
**End:** Wed 12/9/2015 9:00 AM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Buscher, Bill  
**Required Attendees:** Cobb, Rick; LeCrone, Darin; Keller, Al

The Permit Section has received a renewal request from Arnold Engineering for onsite treatment impoundments and a percolation basin. The site has major groundwater issues. I believe it would be helpful to discuss these issues relative to the permit renewal request.

I don't expect this would take the hole hour.

## Tsai, Shu-Mei

---

**From:** LeCrone, Darin  
**Sent:** Tuesday, December 22, 2015 3:38 PM  
**To:** Tsai, Shu-Mei  
**Subject:** RE: Log#2015-60605 Arnold Engineering Company

Come and see me tomorrow morning and we'll talk about it. A denial may be our best option.

Darin E. LeCrone, P.E.  
Manager, Industrial Unit  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

217/782-0610

---

**From:** Tsai, Shu-Mei  
**Sent:** Tuesday, December 22, 2015 2:13 PM  
**To:** LeCrone, Darin  
**Subject:** Log#2015-60605 Arnold Engineering Company

Darin:

I just talked to Bill about Arnold Engineering Company. He believes the Agency should not issue (renew) the permit since they will have groundwater issue. Any advice? Should I prepare a denial letter?

*Shu-Mei Tsai,*  
Environmental Protection Engineer, Industrial Unit  
Permit Section  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

ph: 217-782-0610  
fax: 217-782-9891  
[Shu-Mei.Tsai@Illinois.gov](mailto:Shu-Mei.Tsai@Illinois.gov)

**LeCrone, Darin**

---

**From:** Tsai, Shu-Mei  
**Sent:** Monday, January 04, 2016 9:01 AM  
**To:** Keller, Al; LeCrone, Darin  
**Subject:** Log# 2015-60605 Arnold Engineering Company

I talked to Bill about Arnold Engineering Company on 12/22/2015. He believes the Agency should not issue (renew) the permit since they will have groundwater issue. Any suggestion? Should I prepare a denial letter? Thanks

Shu-Mei



## Tsai, Shu-Mei

---

**From:** LeCrone, Darin  
**Sent:** Thursday, February 18, 2016 12:57 PM  
**To:** Tsai, Shu-Mei  
**Subject:** Arnold Magnetic  
**Attachments:** 2014\_04\_14 Memo to Bud from Tim Unlined Drainage Ditches North of ponds.pdf; 2014\_11\_13 Summary Developed by Tim Zook to Greg Spencer.pdf; 2014\_08\_14 BOW VN.pdf

Here is some information I got from Rick Cobb for Arnold Magnetic

Darin E. LeCrone, P.E.  
Manager, Industrial Unit  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

217/782-0610

---

**From:** Cobb, Rick  
**Sent:** Thursday, February 18, 2016 12:36 PM  
**To:** LeCrone, Darin  
**Cc:** Zeivel, Christine; Ryan, Michelle; Kamp, Carl; Buscher, Bill; McMillan, Dave  
**Subject:**

Darin,

You need to take a look at these publically available Focused Site Investigation Report and Right-to-Know Response Report developed by EGSL for 300 West/Arnold. I will show you where you can find the documents. They cannot be e-mailed due to their size. I have attached some additional documents that may assist. Has the BOW VN been resolved?

Further, you may want to look at the following: <http://www.epa.illinois.gov/topics/community-relations/sites/arnold-magnetic-technologies/index>

Rick

*Richard P. Cobb, P. G.*

Deputy Division Manager  
Division of Public Water Supplies  
Illinois Environmental Protection Agency

(☎) Phone: 217/785-4787

Fax: 217/557-3182

(✉) E-mail: [rick.cobb@illinois.gov](mailto:rick.cobb@illinois.gov)

Website: <http://www.epa.illinois.gov/topics/water-quality/groundwater/index>

**From:** Zook, Tim  
**Sent:** Monday, April 14, 2014 10:44:43 AM  
**To:** Bridgewater, Bud  
**Cc:** Lowder, Neelu  
**Subject:** Arnold Magnetic Technologies Site in McHenry County (Marengo)  
**Importance:** Normal  
**Attachments:**  
img-410114229-0001.pdf;

---

Bud,

Per our discussion on April 10, it is requested that the BOW conduct an inspection of the Arnold wastewater treatment system in the very near future, to determine compliance with the Operating Permit and any other BOW Permits (such as stormwater) that may exist for the site. Any wastewater treatment system discharges other than to the seepage field would appear to violate Special Condition 2 of the Operating Permit, at a minimum.

The wastewater treatment system at the Arnold site includes a small activated sludge package plant, four ponds and a seepage field. Since there is not supposed to be a surface discharge, an Operating Permit rather than an NPDES Permit exists. The most recent Operating Permit is Supplemental Permit No. 2011-EO-1001-2, issued May 11, 2011, expires on December 31, 2015). Since it is a supplemental permit, it is basically used in conjunction with Operating Permits No. 2011-EO-1001, issued January 12, 2011, expires on December 31, 2015, and No. 2011-EO-1001-1, issued March 31, 2011, expires on December 31, 2015.

Special Condition 2 of Operating Permit 2011-EO-1001 includes the statement, "This Permit is issued with the expressed understanding that there shall be no surface discharge from these facilities."

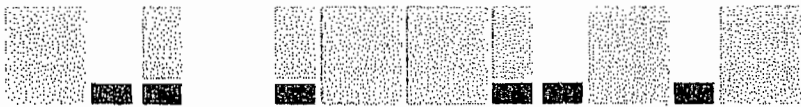
**CONCERN; possibility of wastewater treatment system discharges other than to seepage field** – In a February 20, 2014, response to SRP Comments, the consultant for the owner of the Arnold Site (Environmental Group Services Limited – EGSL) indicated that water from the "cooling ponds" (which is how EGSL refers to the wastewater treatment system ponds) flows to drainage ditches both north and south of the ponds. Water exiting the ponds to the south is described as going to a percolation field. However, "Water exiting the north end of the cooling ponds flows offsite toward the railroad right-of-way via an unlined drainage ditch. The final receptor of this water is unknown". Any discharges to the north would be towards the residences with private wells, some of which are very near the Arnold site. Copies of the first and fifth (which describes the ponds) pages of the February 20, 2014, letter are attached. *On April 9, 2014, I called Bill Lennon of EGSL and questioned him on his description of pond discharges. He stated that water definitely discharges offsite to the north.*

Thanks,

Tim

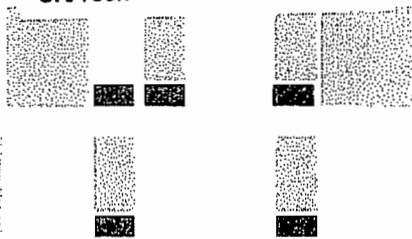
P 020803

R 003005



14-55981

1110650003  
Arnold Magnetic Technologies  
SR/Tech



**COPY**

February 20, 2014

Mr. Timothy D. Zook  
Project Manager  
Voluntary Site Remediation Program  
Remedial Project Management Section  
Bureau of Land  
Illinois Environmental Protection Agency 1021 North Grand Avenue East  
Springfield, Illinois 62794-9276

Re: LPC #1110650003 – McHenry County  
Focused Site Investigation Report  
Response to Comments  
Marengo – Arnold Magnetic Technologies  
300 West LLC  
Site Remediation Program/Technical Reports

Dear Mr. Zook:

At the request of the property owner, Environmental Group Services, Ltd. has prepared this response to the IEPA Comment Letter (dated January 21, 2014) regarding the submittal of EGSL's Focused Site Investigation Report dated November 18, 2013. This letter is intended to provide clarification and responses to the concerns raised by the IEPA. EGSL responses follow each IEPA comment.

**General Comment:**

Though the *Focused Site Investigation Report* is denied, the Illinois EPA agrees with EGSL conclusions that the extent of contamination – both vertically and horizontally – has not been defined for certain compounds. As a result, investigations of both soil and groundwater impacts should be expanded to include the residential area north of the Northern Portion of the Site, as well as the southern portion of the property. (Per the Agreed Preliminary Injunction Order Dated August 23, 2013, Northern Portion of the Site refers to the northern half of the subject property.) A proposal for additional sampling, to adequately define the extent of VOCs contamination, is requested at this time. The Illinois EPA notes that the Agreed Order only addresses VOCs. The Arnold Site has been utilized long-term for a variety of industrial activities, and substantial impacts by substances other than VOCs are likely.

ENVIRONMENTAL GROUP SERVICES  
LIMITED

557 West Polk Street  
Suite 201  
Chicago, IL 60607

312.447.1200 p  
312.447.0922 f  
www.egsl.com

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FEB 21 2014

**IEPA/BOL**  
P 020804

R 003006

February 20, 2014

EPA Response to Comments – Arnold Engineering

- ✓ Building 16: Constructed after 1987 and is approximately 3,200-square-feet in size. Currently and historically utilized as a hazardous and non-hazardous storage shed. This building is currently outside the scope of this investigation. The storage of hazardous waste in this building classifies it as a REC.
- ✓ Coolant Ponds: The coolant ponds are reportedly lined with polyethylene and rest on a bed of bentonite. Groundwater analysis from wells installed adjacent to the ponds has been reported to contain chlorinated solvents and volatile organic compounds used in the processing of wastewater. Water samples collected from the coolant ponds were analyzed for volatile organic compounds. The laboratory reported the presence of volatile organic compounds. As such, the coolant ponds are a REC.

The cooling ponds contain water discharged from all onsite operations. Water flows from the terminus of the cooling ponds to drainage ditches located north and south of the cooling ponds. Water exiting the cooling ponds to the south flows to a percolation field located southeast of building 11/14 via an unlined drainage ditch. Water exiting the north end of the cooling ponds flows offsite toward the railroad right-of-way via an unlined drainage ditch. The final receptor of this water is unknown. Based on the analytical results confirming the presence of volatile organic compounds present in the cooling pond water, the cooling ponds, overflow ditches, and percolation field are considered Areas of Concern.

Other buildings associated with the Subject Property include a security booth (outside the scope of this investigation) located by the main entrance, a pump house associated with the wastewater treatment system and pond system and a pump house associated with the fire suppression system. These areas are not considered RECs at this time.

Item 5. Appendix C of the *Focused Site Investigation Report* consists of three reports (dated December 2004, March 2006 and April 2008) prepared by ENVIRON International Corporation. Taken together, these reports contain substantially more historical information than anything previously submitted. For example, page V-3 of the 2004 document refers to a 1993 PRC report (which was not submitted) that indicates spent mineral spirits, TCE and 1,1,1-TCA were generated at former Building 1 (likely built in late 1800s or early 1900s, demolished in 2002) in the northeast portion of the site. The same page indicates that electrical transformers were built in Building 1 until the 1950s. Given the time, this obviously raises concerns regarding PCBs. As another example, page V-13 of the 2004 report describes a concrete pad underneath PCBs-containing transformers outside of Building 5.

Though the ENVIRON reports contain much useful information, portions are blacked out – including almost five of the total six pages of the 2006 report (practically everything under a heading “On-site Soil and Ground Water Conditions” is redacted.)

As normally required in the Site Remediation Program – and in this situation as further required in the Attachments of the Agreed Order – reasonably obtainable records relevant to recognized environmental conditions and areas of concern are to be reviewed. The Illinois EPA requests that all records in this regard be reviewed, with copies as appropriate submitted to the Illinois EPA; this includes the documents referred to the ENVIRON reports. It appears likely that there is much more information than has been provided thus far. There is a fairly unusual aspect to the Arnold Site, in that Arnold and predecessors conducted manufacturing operations for years, with a relatively new owner acting as the Remediation Applicant while Arnold continues operations. Even though Arnold is not the Remediation Applicant, its cooperation in allowing for an adequate site investigation is of paramount importance.



... response to comments re Marengo attorney reviewed and revised.docx

P 020805

R 003007

**From:** Zook, Tim  
**Sent:** Thursday, November 13, 2014 11:16:37 AM  
**To:** Spencer, Greg  
**Subject:** RE: Arnold Mag. Tech.  
**Importance:** Normal  
**Attachments:**  
Arnold Magnetic write up October 2014 (by Joyce).docx;

---

Greg,

It's hard to be brief on this site, but see the attachment, which was written about a month ago.

Tim

**From:** Spencer, Greg  
**Sent:** Thursday, November 13, 2014 11:08 AM  
**To:** Zook, Tim  
**Subject:** Arnold Mag. Tech.

Hello Tim,

You mentioned they had groundwater contamination but I forgot what the contaminants of concern are.  
Could you give me a brief history of BOL's involvement?

LPC# 1110650003 / Arnold Magnetic Technologies  
Marengo / McHenry County

The Arnold Magnetic Technologies site was enrolled in the SRP on May 12, 2008, the Remediation Applicant and owner of the property is MPR Management Inc., but the site name is 300 West LLC. Arnold Magnetic Technologies owned the site from the early 1900s until 2006, when the property was purchased by MPR Management Inc. Arnold Magnetic Technologies currently leases the property as part of the purchase agreement. Arnold Magnetic Technologies produces magnetic strips for a variety of applications. A long history of industrial use existed at the site, prior to the Arnold presence. A portion of the property was used for repair of railroad rolling stock as early as the late 1800s. A wastewater treatment system including lagoon-type cells and a percolation field existed since the mid-1960s is permitted by the Illinois EPA BOW and treats wastewater from the Arnold Magnetic Technologies operations. The BOW Permit requires permanent groundwater monitoring wells that are required to be sampled monthly since 1990.

Illinois EPA BOL issued Violation Notices in 2008 to Arnold as the operator and to the owner. The violations were related to detection of chemicals of concern in concentrations greater than groundwater standards. The Violation Notices were addressed by the submittal of a document from the owner which indicated that: (1) contamination was reportedly due to historical manufacturing operations in the northwest portion of the property, (2) the consultant would work with the Illinois EPA to sample private wells in the area, and (3) the property had recently been enrolled into the SRP. Illinois EPA responded to the submittal by letter which stated that the document could not be considered as a Compliance Commitment Agreement, because it had been received after the required 45-day deadline, but that no formal enforcement would be taken at the time. On August 15, 2014 Illinois EPA BOW issued a Violation Notice to Arnold for an unpermitted off-site surface discharge, in violation of the operating permit. The VN also included issues related to the storm water permit. A written response from Arnold is required by October 14, 2014.

The site is approximately one mile south of the Kishwaukee River. Surrounding properties are a mixture of residential and industrial/commercial entities, with several residences within a few hundred feet of the property boundaries. Three private wells were sampled in June 2008, with all results reported less than laboratory detection limits. Three private wells were sampled in March 2011 with all results reported less than detection limits. Two of the wells sampled in 2011 were different wells than those sampled in 2008.

In June 2013 an Agreed Immediate Injunction Order was entered to require bottled water be provided to residents and conduct water sampling of private wells. In August of 2013, an Agreed Preliminary Injunction Order was entered to require continued supply of bottled water to residents and all the steps necessary to obtain a No Further Remediation Determination.

Other than the collection of data and background information, no remedial actions have yet taken place. Documents Submitted for SRP:

- May 12, 2008 – Application to Site Remediation Program.
- September 30, 2009 - *Phase I Environmental Site Assessment* - conditionally approved contingent on eight comments or questions being adequately addressed.
- July 15, 2010 - *Phase II Subsurface Investigation Report* - document was not approved, with comments divided into two section – one regarding uncertainties concerning the overall site and one related specifically to the issue of groundwater contamination in the northwest portion of the property and the possibility of such contamination extending off-site.
- March 27, 2012 - *Site Investigation Report* - document not approved it did not provided sufficient information to identify and evaluate Recognized Environmental Conditions and Related Contaminants of Concern.
- November 20, 2013 - *Focused Site Investigation Report* - is denied, primarily because the extent of contamination has not been defined and due to the lack of detailed information concerning recognized environmental conditions and areas of concern. Letter dated *January 21, 2014*
- February 21, 2014 - Focused Site Investigation Report – *approved with conditions.*
- February 21, 2014 - *Response to Illinois EPA Comments Letter Dated January 21, 2014* – denied. Letter dated April 22, 2014.
- June 5, 2014 - Response to Comments dated April 22, 2014 to Site Investigation Report. - Conditionally approved.
- July 31, 2014 - *Procedures for the Installation of a Bedrock Aquifer Well at the Arnold Manufacturing Facility, Marengo, IL* - Approved

**From:** Spencer, Greg  
**Sent:** Thursday, August 14, 2014 2:38:05 PM  
**To:** Zook, Tim  
**Cc:** Callaway, Roger  
**Subject:** Arnold Magnetic Technologies  
**Importance:** Normal  
**Attachments:**  
Arnold Magnetic Technologies VN\_450138.docx;

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Tim,

Here is the VN that will be going out to Arnold. Let me know if you have any questions. Thanks.



**Gregory A. Spencer**  
Illinois Environmental Protection Agency  
Bureau of Water | Compliance Assurance Section  
1021 North Grand Avenue East  
Springfield, Illinois 62794-9278  
[Greg.Spencer@illinois.gov](mailto:Greg.Spencer@illinois.gov)  
Office: (217)782-9871 | Fax (217)557-1407



Please consider the environment before printing this email

P 020806

R 003011





# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829  
PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

August 12, 2014

CERTIFIED MAIL # 7011 1150 0001 0860 3321  
RETURN RECEIPT REQUESTED

Arnold Magnetic Technologies  
Attn: Mr. Rob Splitt  
300 N. West Street  
Marengo, Illinois 60152

**Re: Violation Notice: Arnold Magnetic Technologies, Marengo, Illinois**  
**Violation Notice No.: W-2014-50138**  
**ILR001065 Operating Permit No. 2011-EO-1001-2**

Dear Mr. Splitt:

This constitutes a Violation Notice pursuant to Section 31(a)(1) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(1), and is based upon a review of available information and an investigation by representatives of the Illinois Environmental Protection Agency ("Illinois EPA").

The Illinois EPA hereby provides notice of alleged violations of environmental laws, regulations, or permits as set forth in Attachment A to this notice. Attachment A includes an explanation of the activities that the Illinois EPA believes may resolve the specified alleged violations, including an estimate of a reasonable time period to complete the necessary activities. Due to the nature and seriousness of the alleged violations, please be advised that resolution of the violations may also require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

A written response, which may include a request for a meeting with representatives of the Illinois EPA, must be submitted via certified mail to the Illinois EPA within 45 days of receipt of this letter. If a meeting is requested, it shall be held within 60 days of receipt of this notice. The response must include information in rebuttal, explanation, or justification of each alleged violation and a statement indicating whether or not the facility wishes to enter into a Compliance Commitment Agreement ("CCA") pursuant to Section 31(a) of the Act. If the facility wishes to enter into a CCA, the written response must also include proposed terms for the CCA that includes dates for achieving each commitment and may include a statement that compliance has been achieved for some or all of the alleged violations. The proposed terms of the CCA should contain sufficient detail and must include steps to be taken to achieve compliance and the necessary dates by which compliance will be achieved.

4302 N. Main St., Rockford, IL 61103 (815)987-7760  
595 S. State, Elgin, IL 60123 (847)608-3131  
2125 S. First St., Champaign, IL 61820 (217)278-5800  
2009 Mall St., Collinsville, IL 62234 (618)346-5120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000  
5407 N. University St., Arbor 113, Peoria, IL 61614 (309)693-5462  
2309 W. Main St., Suite 116, Marlon, IL 62959 (618)993-7200  
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312)814-6026

P 020807

PLEASE PRINT ON RECYCLED PAPER

R 003012

Page 2 of 2  
Arnold Magnetic Technologies  
VN W-2014-50138

The Illinois EPA will review the proposed terms for a CCA provided by the facility and, within 30 days of receipt, will respond with either a proposed CCA or a notice that no CCA will be issued by the Illinois EPA. If the Illinois EPA sends a proposed CCA, the facility must respond in writing by either agreeing to and signing the proposed CCA or by notifying the Illinois EPA that the facility rejects the terms of the proposed CCA. When compliance is achieved, the owner of the facility must submit a completed statement of compliance form certifying that all Compliance Commitment Agreement measures/events have been successfully completed.

If a timely written response to this Violation Notice is not provided, it shall be considered a waiver of the opportunity to respond and meet, and the Illinois EPA may proceed with referral to a prosecutorial authority.

Written communications should be directed to:

Illinois EPA – Division of Water Pollution Control  
Attn: Mr. Greg Spencer / CAS#19  
P.O.BOX 19276  
Springfield, IL 62794-9276

All communications must include reference to this Violation Notice number, **W-2014-50138**.

Questions regarding this Violation Notice should be directed to Mr. Greg Spencer at 217/782-9871.

Sincerely,

Roger Callaway  
Compliance Assurance Section  
Division of Water Pollution Control  
Bureau of Water

Attachments

**ARNOLD MAGNETIC TECHNOLOGIES VIOLATION NOTICE W-2014-50138**

Questions regarding the violations identified in this attachment should be directed to Greg Spencer at (217) 782-9871.

On May 1, 2014, a Compliance Evaluation Inspection was conducted at Arnold Magnetic Technologies in Marengo, Illinois. Several violations of their permit were noted at the time of the inspection. An unpermitted off-site discharge occurred, the SWPPP did not indicate which areas of the site were paved and unpaved, the discharge point for the stormwater, the disposal methods for waste materials, or if any samples had been taken and the results.

This violation notice indicates regulations and statutes with which you are out of compliance. If you have corrected these violations and are currently in compliance, upon submission of the response to this violation notice, you must state that you are in compliance. If compliance will be achieved after completion of interim measures (a compliance schedule); and the Illinois EPA accepts those measures as a CCA, you must state that the measure(s) are completed and that you have returned to compliance at the conclusion of the schedule established in the CCA.

A review of information available to the Illinois EPA indicates the following violations of statutes, regulations, or permits. Included with each type of violation is an explanation of the activities that the Illinois EPA believes may resolve the violation including an estimated time period for resolution.

**Failure to comply with the conditions of NPDES Permit ILR001065**

<u>Violation Date</u>	<u>Violation Description</u>
5/1/2014	Failure to comply with NPDES Permit ILR001065.
Rule/Reg.:	Section 12(a), and (f) of the Act, 415 ILCS 5/12(a), and (f) (2012); 35 Ill. Adm. Code 309.102(a); NPDES Permit.

**Discharge of Contaminants**

<u>Violation Date</u>	<u>Violation Description</u>
5/1/2014	Waters of the state shall be free from sludge or bottom deposits, floating debris, visible oil, odor, plant or algal growth, color or turbidity of other than natural origin.
Rule/Reg.:	Section 12(a) and (f) of the Act, 415 ILCS 5/12(a) and (f) (2012); 35 Ill. Adm. Code 302.203

**Unpermitted/Unauthorized Discharge for Point Source Discharge**

Implement necessary actions to prevent any further unpermitted discharge. Compliance is expected immediately.

<b><u>Violation Date</u></b>	<b><u>Violation Description</u></b>
5/1/2014	Except as in compliance with provisions of the Act, Board Regulations, and the CWA (Clean Water Act), and the provisions and conditions of the NPDES (National Pollutant Discharge Elimination System) permit issued to the discharger, the discharge of any contaminant or pollutant by any person into the water of the State from a point source shall be unlawful.
Rule/Reg.:	Section 12(a) and (f) of the Act, 415 ILCS 5/12(a) and (f) (2012), 35 Ill. Adm. Code 309.102(a).

**LeCrone, Darin**

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**From:** Zeivel, Christine  
**Sent:** Thursday, February 18, 2016 2:22 PM  
**To:** Cobb, Rick; LeCrone, Darin  
**Cc:** Ryan, Michelle; Kamp, Carl; Buscher, Bill; McMillan, Dave  
**Subject:** RE:

Mike Roubitchek is the attorney assigned to the BOW VN. A draft Consent Order (penalty-only) has been sent to Arnold and they expect that case may be settled very soon. They're supposed to hear back this week about Arnold's counter-offer to the penalty.

Christine Zeivel  
Assistant Counsel, IEPA DLC  
217.524.1628

E-MAIL CONFIDENTIALITY NOTICE: This electronic mail message, including any attachments, is for the intended recipient(s) only. This e-mail and any attachments might contain information that is confidential, legally privileged or otherwise protected or exempt from disclosure under applicable law. If you are not the intended recipient, please be aware that any copying, distribution, dissemination, disclosure or other use of this e-mail and any attachments is unauthorized and prohibited. Your receipt of this message is not intended to waive any applicable privilege or claim of confidentiality, and any prohibited or unauthorized disclosure is not binding on the sender or the Illinois Environmental Protection Agency.

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**From:** Cobb, Rick  
**Sent:** Thursday, February 18, 2016 12:36 PM  
**To:** LeCrone, Darin  
**Cc:** Zeivel, Christine; Ryan, Michelle; Kamp, Carl; Buscher, Bill; McMillan, Dave  
**Subject:**

Darin,

You need to take a look at these publically available Focused Site Investigation Report and Right-to-Know Response Report developed by EGSL for 300 West/Arnold. I will show you where you can find the documents. They cannot be e-mailed due to their size. I have attached some additional documents that may assist. Has the BOW VN been resolved?

Further, you may want to look at the following: <http://www.epa.illinois.gov/topics/community-relations/sites/arnold-magnetic-technologies/index>

Rick

*Richard P. Cobb, P.G.*

Deputy Division Manager  
Division of Public Water Supplies  
Illinois Environmental Protection Agency

(☎) Phone: 217/785-4787

Fax: 217/557-3182

(✉) E-mail: [rick.cobb@illinois.gov](mailto:rick.cobb@illinois.gov)

Website: <http://www.epa.illinois.gov/topics/water-quality/groundwater/index>

**Tsai, Shu-Mei**

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**From:** LeCrone, Darin  
**Sent:** Thursday, February 18, 2016 1:10 PM  
**To:** Tsai, Shu-Mei  
**Subject:** RE: Arnold Magnetic

Go ahead and start putting together a simple denial. The info from Bill and Carl will just be the proof/basis of the decision. Based on the site investigation, there is groundwater contamination. We will be denying this application based on the site contamination, and that they need to demonstrate that any onsite contamination is not caused or made worse by the operations covered by this permit and outlined in their application.

Darin E. LeCrone, P.E.  
Manager, Industrial Unit  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

217/782-0610

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**From:** Tsai, Shu-Mei  
**Sent:** Thursday, February 18, 2016 12:58 PM  
**To:** LeCrone, Darin  
**Subject:** RE: Arnold Magnetic

Ok, so should I just wait for the memo from Bill??

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**From:** LeCrone, Darin  
**Sent:** Thursday, February 18, 2016 12:57 PM  
**To:** Tsai, Shu-Mei  
**Subject:** Arnold Magnetic

Here is some information I got from Rick Cobb for Arnold Magnetic

Darin E. LeCrone, P.E.  
Manager, Industrial Unit  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

217/782-0610

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**From:** Cobb, Rick  
**Sent:** Thursday, February 18, 2016 12:36 PM  
**To:** LeCrone, Darin  
**Cc:** Zeivel, Christine; Ryan, Michelle; Kamp, Carl; Buscher, Bill; McMillan, Dave  
**Subject:**

Darin,

You need to take a look at these publically available Focused Site Investigation Report and Right-to-Know Response Report developed by EGSL for 300 West/Arnold. I will show you where you can find the documents. They cannot be e-mailed due to their size. I have attached some additional documents that may assist. Has the BOW VN been resolved?

Further, you may want to look at the following: <http://www.epa.illinois.gov/topics/community-relations/sites/arnold-magnetic-technologies/index>

Rick

*Richard P. Cobb, P.G.*

Deputy Division Manager  
Division of Public Water Supplies  
Illinois Environmental Protection Agency

(☎) **Phone:** 217/785-4787

Fax: 217/557-3182

(✉) **E-mail:** [rick.cobb@illinois.gov](mailto:rick.cobb@illinois.gov)

**Website:** <http://www.epa.illinois.gov/topics/water-quality/groundwater/index>



## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

BRUCE RAUNER, GOVERNOR

LISA BONNETT, DIRECTOR

### MEMORANDUM

**DATE:** February 19, 2016

**TO:** Shu-Mei Tsai, BOW- Permits Section

**FROM:** *BB*  
Bill Buscher, Hydrogeologic Unit

**SUBJECT:** Arnold Engineering Corporation (Marengo Facility) Waste Water Treatment Plant Sludge Lagoon Permit Renewal Application - Permit Log #2015-60605, Permit # WPCP 2011-EO-1001-2, BOW ID W1110650002

This memorandum is in response to your request for the Hydrogeology and Compliance Unit (HCU) to review the Permit Application for compliance with the Environmental Protection Act [415 ILCS 5/1 et seq.]. The HCU completed its review of the permit information.

The permit application plan involves the continued use of five existing wastewater impoundments (impoundments). Historic groundwater monitoring indicates VOC exceedences at monitoring wells near the impoundments. The Focused Site Investigation Report (Report) prepared for the Marengo Facility, dated 11/18/2013, has identified a VOC contamination plume impacting groundwater downgradient of the Marengo Facility impoundments. The Report identifies VOC concentrations within the impoundments. The research identifies impacted groundwater onsite originating from the waste water stored in the Marengo facility impoundments. Groundwater contamination onsite has not been addressed. The HCU recommends denial of the permit.



**Subject:** Arnold Magnetic Technologies

**Data:** 2015-60604

**Reviewed By:** Shu-Mei Tsai

**Date:** Friday, February 19, 2016

### Names of Project

<b>Permittee:</b> Arnold Magnetic Technologies 770 Linden Avenue Rochester, New York 14625 Michael Stachura 585-385-9010 x 246
<b>Facility:</b> Arnold Magnetic Technologies 300 North West Street Marengo, Illinois 60152 (McHenry County) Nadine Marion 585-385-9010 x 211
<b>Engineer:</b>
<b>POTW/Intermediate Sewer Owner:</b>

### PROJECT:

The Agency received an application on November 20, 2015 to renew permit 2011-EO-1001, 2011-EO-1001-1, and 2011-EO-1001-2, which expired on August 31, 2015.

Permit 2011-EA-1217 was issued on March 4, 2011 to operate the wastewater treatment and recycle system consisting of a series of four ponds (ponds #1-4) of 3 million gallon total capacity, one extended aeration activated sludge treatment plant with a rated capacity of 30,000 gpd tributary to Pond#1, one diked percolation field and all pumps, piping and appurtenances necessary to treat sanitary wastewater, cooling water and process wastewater (an average of 163,030 gpd, and a maximum of 217,333 gpd). Treated wastewater from the four ponds (Ponds #1-4) will either be recycled back to plant operations or discharged to the percolation field via an industrial ditch.

In the renewal application, Arnold states that the series of four ponds provides up to 1.5 million gallons per day. An amcodyne extended aeration activated sludge treatment plant with a rated capacity of 30,000 gpd is loading to Pond 1.

Based on the site investigation, there is groundwater contamination. According to the data, the site has been contaminated by PCE, TCS, 11 DCE and some metals. The Agency decides to deny this application based on the site contamination. The permittee shall demonstrate a plan which

State of Illinois  
Environmental Protection Agency

Page 2 of 2

**Subject:** Arnold Magnetic Technologies

**Data:** 2015-60604

**Reviewed By:** Shu-Mei Tsai

**Date:** Friday, February 19, 2016

includes any onsite contamination is not caused or made worse by the operations covered and outlined in their application. Submit the plan to renew permit.

Received the memo from the Hydrogeologic Unit dated February 19, 2016, which indicates that it has identified a VOC's and some metal contamination plume impacting groundwater downgradient of the Marengo Facility. The HCU recommends denial of the permit. See the memo.