

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB _____
	)	(Variance – Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

NOTICE OF FILING

TO: Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 W. Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board the **ENTRY OF APPEARANCE OF KATHERINE D. HODGE, ENTRY OF APPEARANCE OF LAUREN C. LURKINS, PETITION FOR VARIANCE** with attached exhibits, **AFFIDAVIT OF MAHLON KALOUPEK** and **AFFIDAVIT OF TIMOTHY R. KLUGE**, copies of which is herewith served upon you.

Respectfully submitted,

SANITARY DISTRICT OF DECATUR

Dated: June 15, 2009

By: /s/Katherine D. Hodge
Katherine D. Hodge

Katherine D. Hodge
Lauren C. Lurkins
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB _____
	)	(Variance – Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

ENTRY OF APPEARANCE OF KATHERINE D. HODGE

NOW COMES Katherine D. Hodge, of the law firm HODGE DWYER & DRIVER, and hereby enters her appearance in this matter on behalf of Sanitary District of Decatur.

Respectfully submitted,

Dated: June 15, 2009

By: /s/Katherine D. Hodge
Katherine D. Hodge

Katherine D. Hodge
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB _____
	)	(Variance – Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

ENTRY OF APPEARANCE OF LAUREN C. LURKINS

NOW COMES Lauren C. Lurkins, of the law firm HODGE DWYER & DRIVER, and hereby enters her appearance in this matter on behalf of Sanitary District of Decatur.

Respectfully submitted,

Dated: June 15, 2009

By /s/Lauren C. Lurkins
Lauren C. Lurkins

Lauren C. Lurkins
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB _____
	)	(Variance – Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

PETITION FOR VARIANCE

NOW COMES the Sanitary District of Decatur (“District”), by and through its attorneys, HODGE DWYER & DRIVER, and, pursuant to Section 35(a) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/35(a), and Part 104 of Title 35 of the Illinois Administrative Code, 35 Ill. Admin. Code § 104.100 et seq., hereby petitions the Illinois Pollution Control Board (“Board”) for a variance authorizing continued discharges of nickel and zinc, from its wastewater treatment plant (“Main Plant”) into the Sangamon River, pursuant to the terms and conditions outlined in this Petition for Variance (“Petition”).

In summary, the District is requesting the Board to grant it a five-year variance to allow it more time to continue its evaluation of the issues and investigation of adequate solutions regarding its nickel and zinc discharges. The District’s variance request stems from the Board’s adoption of more stringent nickel and zinc water quality standards, which at the time, were not anticipated to adversely impact any Illinois dischargers. However, when the District’s National Pollutant Discharge Elimination System (“NPDES”) permit was renewed, the Illinois Environmental Protection Agency (“Illinois

EPA” or “Agency”) imposed new effluent limits for nickel and zinc to meet the more stringent standards. Since the District is located downstream of the dam that retains the water within Lake Decatur for the City of Decatur’s water supply, during dry weather, there are times when there may be no discharge downstream to the Sangamon River into which the District discharges. As a result, the District could not be granted a mixing zone, and the District’s effluent limits directly reflect the water quality standards.

Although the District undertook immediate action to identify the sources of the nickel and zinc in its discharge and to investigate compliance options, the District could not design, permit, purchase, construct and commence operation of any adequate treatment system in accordance with the compliance schedule set forth in its NPDES permit, as detailed herein. Similarly, Archer Daniels Midland Company (“ADM”), one of the District’s most significant industrial users (and a significant contributor to nickel and zinc loading), also could not design, permit, purchase, construct and commence operation of any adequate treatment system in accordance with the compliance schedule.

Further, human health and the existing aquatic life will not be adversely impacted through the granting of this variance since the amount of nickel and zinc to be discharged would not increase beyond historical levels. This variance is necessary for the District to continue its evaluation and investigation of compliance options.

I. REGULATIONS FROM WHICH VARIANCE IS SOUGHT

The District is seeking a five-year variance with respect to the general use water quality standards for nickel and zinc, which are set forth in Section 302.208(e) of the Board rules and from 35 Ill. Admin. Code § 304.105 as it applies to establishing water quality based effluent limits. The water quality standards for nickel and zinc are defined

in terms of conversion factor multipliers for dissolved metals. See 35 Ill. Admin. Code § 302.208(e).

The acute standard (“AS”) for nickel (measured as microgram per liter (“µg/L”)) is defined as follows:

$$e^{A+B\ln(H)} \times 0.998^*,$$

where: $A = 0.5173$
 $B = 0.8460$
 e^x = base of natural logarithms raised to the x-power
 $\ln(H)$ = natural logarithm of Hardness (STORET 00900)
 $*$ = conversion factor multiplier for dissolved metals

Id.

The chronic standard (“CS”) for nickel (measured as µg/L) is defined as follows:

$$e^{A+B\ln(H)} \times 0.997^*,$$

where: $A = -2.286$
 $B = 0.8460$
 e^x = base of natural logarithms raised to the x-power
 $\ln(H)$ = natural logarithm of Hardness (STORET 00900)
 $*$ = conversion factor multiplier for dissolved metals

Id.

The AS for zinc (measured as µg/L) is defined as follows:

$$e^{A+B\ln(H)} \times 0.978^*,$$

where: $A = 0.9035$
 $B = 0.8473$
 e^x = base of natural logarithms raised to the x-power
 $\ln(H)$ = natural logarithm of Hardness (STORET 00900)
 $*$ = conversion factor multiplier for dissolved metals

Id.

The CS for zinc (measured as $\mu\text{g/L}$) is defined as follows:

$$e^{A+B \ln(H)} \times 0.986^*$$

where: $A = -0.8165$
 $B = 0.8473$
 e^x = base of natural logarithms raised to the x-power
 $\ln(H)$ = natural logarithm of Hardness (STORET 00900)
* = conversion factor multiplier for dissolved metals

Id.

The AS for both nickel and zinc “shall not be exceeded at any time,” except as provided in Section 302.208(d). 35 Ill. Admin. Code § 302.208(a). The CS for both nickel and zinc “shall not be exceeded by the arithmetic average of at least four consecutive samples collected over any period of at least four days,” except as provided in Section 302.208(d). 35 Ill. Admin. Code § 302.208(b).

Section 302.208(d) provides as follows:

- (d) In waters where mixing is allowed pursuant to Section 302.102, the following apply:
- 1) The AS shall not be exceeded in any waters except for those waters for which the Agency has approved a zone of initial dilution (ZID) pursuant to Section 302.102.
 - 2) The CS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.
 - 3) The [human health standard] HHS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.

35 Ill. Admin. Code § 302.208(d).

The District is also seeking a variance from the rule establishing the methodology for developing water quality based effluent limits at Section 304.105 of the Board rules.

35 Ill. Admin. Code § 304.105.

Section 304.105 provides as follows:

In addition to the other requirements of this Part, no effluent shall, alone or in combination with other sources, cause a violation of any applicable water quality standard. When the Agency finds that a discharge which would comply with effluent standards contained in this Part would cause or is causing a violation of water quality standards, the Agency shall take appropriate action under Section 31 or Section 39 of the Act to require the discharge to meet whatever effluent limits are necessary to ensure compliance with the water quality standards. When such a violation is caused by the cumulative effect of more than one source, several sources may be joined in an enforcement or variance proceeding, and measures for necessary effluent reductions will be determined on the basis of technical feasibility, economic reasonableness and fairness to all dischargers.

35 Ill. Admin. Code § 304.105.

Finally, the District is requesting the Board to order Illinois EPA, pursuant to Section 309.184 of the Board rules, to modify the District's NPDES permit (No. IL0028321) consistent with the variance the District is seeking in this Petition.

Section 309.184 provides as follows:

To the extent authorized by the CWA and the Act, the Board may grant variances from standards, limitations, and requirements imposed by these NPDES Regulations upon a showing that compliance would impose an arbitrary and unreasonable hardship on the applicant or permittee. Any request for such relief shall be commenced in accordance with Section 104.101 and Part 104 shall govern the proceeding. If such a variance is granted the Board shall order the Agency to issue or modify an NPDES Permit consistent with the Board Order, the CWA, Federal NPDES Regulations and the Act.

(Note: Prior to codification, Rule 401 and Part IV of Procedural Rules)

35 Ill. Admin. Code § 309.184.

II. ACTIVITY OF THE DISTRICT

A. The District's Main Plant and Operations Description

The District, located in Macon County, Illinois, is engaged in the treatment of domestic and industrial wastewater for the City of Decatur, the Villages of Forsyth and Mt. Zion, and for industrial and commercial users in the Decatur, Illinois, metropolitan area. The District employs approximately 61 full time employees, and was formed in 1917. The original Main Plant, located at 501 Dipper Lane, Decatur, Illinois, was completed in 1924. Major expansions and plant upgrades were made in 1928, 1957, 1964 and 1976, and the current plant was completed in 1990. The District serves approximately 90,000 residents of the City of Decatur and the Villages of Forsyth and Mt. Zion, and 26 significant industrial users ("SIUs") and more than 1,000 other industrial and commercial users.

An average of approximately 35 million gallons per day ("MGD") are processed at the Main Plant and then discharged into the Sangamon River. The plant has a design average flow of 41.0 MGD and a design maximum flow of 125.0 MGD. Treatment at the Main Plant consists of screening, grit removal, primary clarification, two-stage activated sludge, secondary clarification, disinfection, dechlorination, discharge to surface water, anaerobic digestion, flotation thickening, and land application of sludge on area farmland. The District has an approved pretreatment program with 17 noncategorical SIUs and 9 categorical industrial users.

B. Receiving Waterway

The Main Plant's main discharge is via Outfall 001 to the Sangamon River at 39° 49' 56" North Latitude, 89° 0' 7" West Longitude. At the discharge point, the Sangamon

River is designated as a General Use Water under Section 303.201 of the Board's rules. As discussed above, the general use water quality standards for nickel and zinc are set forth in Section 302.208(e).

The segment of the Sangamon River that receives discharge from the Main Plant (Assessment Unit ID IL_E-09) is listed on Illinois' 303(d) list of impaired waters for 2008. See Partially Approved 2008 Illinois 303(d) List at 54, available at http://www.epa.gov/region5/water/wshednps/pdf/att_3_partial_approval_final.pdf. The uses impaired for this segment are aquatic life, fish consumption and primary contact recreation. Id. The potential causes of impairment given for the segment are manganese, dissolved oxygen, polychlorinated biphenyls and fecal coliform. Id. The potential sources associated with the impairment are combined sewer overflows, highway/road/bridge runoff (non-construction related), crop production (crop land or dry land), agriculture, urban runoff/storm sewers and source unknown. See Appendix B-2, Specific Assessment Information for Streams, 2008 at 1-2 and 87, available at <http://www.epa.state.il.us/water/tmdl/303-appendix/2008/appendix-b2-streams.pdf>.

C. The District's Current NPDES Permit

The District holds an NPDES permit issued by Illinois EPA on April 20, 2007, which became effective on July 1, 2007, and expires on June 30, 2012, a copy of which is attached hereto as Exhibit A. The permit contains effluent limits for nickel and zinc calculated in accordance with the formulae set forth in Section 302.208(e). The permitted effluent concentration limit for nickel is 0.011 milligrams per liter ("mg/L") as a monthly average with no daily maximum concentration limit. The permitted effluent

concentration limit for zinc is 0.046 mg/L as a monthly average and 0.258 mg/L as a daily maximum.

According to an Illinois EPA memorandum regarding the water quality based effluent limits in the District's permit, the nickel and zinc standards were "based on hardness data collected at AWQMN station E-05, Sangamon River, SE of Niantic, with a critical hardness value of 242 mg/L as CaCO₃." Illinois EPA Memorandum from S. Twait to R. Hahn regarding Water Quality Based Effluent Limits, Decatur Sanitary District, NPDES #IL0028321 (Macon County) (November 9, 2006), attached hereto as Exhibit B.

In addition, pursuant to Special Condition 17 of its NPDES permit, the District performed a Translator Study, the main reference for which was "The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion," United States Environmental Protection Agency ("USEPA"), EPA823-B-96-007, June 1996, to determine the acute and chronic metals translators for nickel and zinc in the discharge from the Main Plant final effluent. The District forwarded this Translator Study to Illinois EPA on December 20, 2007, as part of its First Interim Report, which is discussed in more detail below and which is attached hereto as Exhibit C. Subsequently, Illinois EPA advised the District that, based on the Translator Study, the permit limits could be adjusted to 0.015 mg/L (monthly average) for nickel and 0.075 mg/L (monthly average) and 0.416 mg/L (daily maximum) for zinc. See email from S. Twait at Illinois EPA to T. Kluge at the District (January 2, 2008), attached hereto as Exhibit D.

The NPDES permit also includes at Special Condition 18 the following schedule for achieving compliance with the above-mentioned effluent limits:

- | | |
|---|--|
| (1) Interim Report on effluent and stream sampling to date and what measures are necessary to comply with Final Nickel and Zinc Limitations | 6 months from the effective date of this Permit |
| (2) Interim Report | 12 months from the effective date of this Permit |
| (3) Interim Report | 18 months from the effective date of this Permit |
| (4) Permittee Achieves Compliance with Final Nickel and Zinc Effluent Limitations | 24 months from the effective date of this Permit |

The District timely submitted copies of the required Interim Reports to Illinois EPA. Copies are attached hereto as follows: The First Interim Report was submitted to Illinois EPA on December 20, 2007. See Exhibit C. The Second Interim Report was submitted to Illinois EPA on June 18, 2008, and is attached hereto as Exhibit E. The Third Interim Report was submitted to Illinois EPA on December 29, 2008, and is attached hereto as Exhibit F. Thus, the current deadline for compliance with the nickel and zinc limits in the District's NPDES permit is July 1, 2009.

The requested variance will affect the applicability of the water quality standards for both nickel and zinc in the segment of the Sangamon River to which the District discharges, the effectiveness of these water quality based effluent limits for nickel and zinc established in the District's NPDES permit, as well as the associated compliance schedule.

D. Prior Variance(s) Issued to the District or Any Predecessor Regarding Similar Relief

Neither the District, nor any of its predecessors, has been issued a prior variance regarding relief that is similar to what is requested in this Petition.

However, on January 22, 1987, the Board granted the District a Site-Specific Rule exempting it from 35 Ill. Admin. Code § 304.120(c), which, at that time, limited discharges from the District's Main Plant to 10 mg/L of five-day biochemical oxygen demand ("BOD₅") and 12 mg/L of suspended solids. Final Opinion and Order of the Board, In the Matter of: Site-Specific Rulemaking for the Sanitary District of Decatur, Illinois, R85-15 (January 22, 1987). The Site-Specific Rule is currently located at 35 Ill. Admin. Code § 304.212, and provides the following:

- a) This Section applies only to effluent discharges from the Sanitary District of Decatur's Sewage Treatment Plant into the Sangamon River, Macon County, Illinois.
- b) The provisions of Section 304.120(c) shall not apply to said discharges, provided that said discharges shall not exceed 20 mg/l of five day biochemical oxygen demand (BOD₅) (STORET number 00310) and 25 mg/l of total suspended solids (STORET number 00530).

35 Ill. Admin. Code § 304.212.

While this previously-granted Site-Specific Rule is not a variance and does not concern the parameters discussed in this Petition, it is relevant for demonstrating that the Board has previously granted the District regulatory relief for its Main Plant effluent discharge.

E. Nature and Amount of Materials Used In Activity for Which Variance Is Sought

The District provides treatment for wastewater received from domestic, commercial and industrial sources. During dry weather, two industrial users, ADM and Tate & Lyle Ingredients Americas, Inc. ("Tate & Lyle"), provide approximately 50 percent of the wastewater flow received by the District. The District conducts an extensive sampling and laboratory analysis program to monitor industrial sources, wastewater entering the treatment plant, the treated discharge to the Sangamon River and other locations. Based on its monitoring program, the District has identified sources of nickel and zinc in the incoming wastewater.

With regard to nickel, sampling at various locations in the collection system receiving only domestic and commercial wastewater has indicated concentrations below the laboratory detection limit. Average industrial loadings of nickel are as follows:

ADM	9.403 pounds per day (0.102 mg/L)
Tate & Lyle	0.351 pounds per day (0.010 mg/L)
All other industries	0.034 pounds per day (0.006 mg/L)

With regard to zinc, small amounts are present in domestic and commercial wastewater, although the majority of the District's incoming load is from industry.

Average loadings are as follows:

ADM	31.446 pounds per day (0.319 mg/L)
Tate & Lyle	4.487 pounds per day (0.124 mg/L)
All other industries	1.281 pounds per day (0.226 mg/L)
Domestic and commercial	7.507 pounds per day (0.052 mg/L)

The District's Main Plant, like other municipal wastewater treatment facilities, includes physical and biological treatment processes. While specific treatment processes for metals removal are not provided, significant incidental removal of metals from the

wastewater does occur. The District's removal efficiency is approximately 53 percent for nickel and 77 percent for zinc.

The District regulates incoming wastewater constituents by ordinance, including a pretreatment ordinance adopted pursuant to its NPDES permit requirement to implement an industrial pretreatment program. The ordinance limits are incorporated into discharge permits issued by the District to SIUs. Both ADM and Tate & Lyle are in compliance with their current discharge permit limits for nickel and zinc.

F. Nature and Amount of Discharges of Nickel and Zinc Currently Generated By the Activity

Beginning prior to the reissuance of the District's current NPDES permit, the District has monitored its treated discharge and the Sangamon River upstream and downstream of the discharge point for nickel and zinc. The District's discharge point is approximately three miles downstream from the Lake Decatur dam, and the flow available in the Sangamon River for mixing is highly variable. During very dry periods, no water is released from the dam, and little or no flow is present upstream of the District's discharge. Very dry conditions occurred in the fall of 2007, and the downstream nickel concentration ranged from 0.01 to 0.03 mg/L during that period. However, from December 2007 through March 2009, only one downstream sample exceeded the expected water quality standard of 0.015 mg/L. In addition, during the entire two-year sampling period, only one downstream sample exceeded the expected zinc average concentration and none exceeded the maximum concentration.

Monitoring results from March 2007 through March 2009 are summarized in the table below.

	Sangamon River approx. 2 miles upstream of discharge	SDD discharge	Sangamon River approx. 2 miles downstream of discharge	Proposed NPDES Permit limit
Nickel, mg/L, 2007 - 2009 minimum	<0.005	0.013	<0.005	-
Nickel, mg/L, 2007 - 2009 average	<0.005	0.024	0.012	-
Nickel, mg/L, 2007 - 2009 maximum	0.015	0.046	0.033	0.015
Zinc, mg/L, 2007 - 2009 minimum	<0.010	0.030	0.010	-
Zinc, mg/L, 2007 - 2009 average	<0.013	0.051	0.022	0.075
Zinc, mg/L, 2007 - 2009 maximum	0.087	0.099	0.087	0.416

III. COMPLIANCE WITH THE REGULATION CANNOT BE ACHIEVED BY THE COMPLIANCE DATE

Since the April 20, 2007 reissuance of the NPDES permit, the District has diligently pursued compliance with the nickel and zinc effluent limits contained therein, but it cannot achieve compliance by July 1, 2009. As soon as the permit became effective, the District began investigations of several alternatives including reduction of industrial contributions through the existing industrial pretreatment program, potential adjustments to the permit limits (including the Translator Study), and treatment

technology that could potentially be employed to improve removal at the District's Main Plant.

The District has calculated tentative pretreatment local limits that would enable its discharge to meet its current NPDES permit limits. These calculations were performed following USEPA, Region 5 guidance and have formed the basis for discussions with ADM and Tate & Lyle. The District considers these numbers to be tentative for several reasons. First, the calculations are based on limits in the District's April 20, 2007 NPDES permit and as discussed further below, revised permit limits based on the District's Translator Study have only recently been included in a proposed modified NPDES permit. In addition, the District has made a substantial effort to identify all issues that could arise concerning allocation of the nickel and zinc loads among all of its industrial users to assure equitable implementation of the limits. Finally, it has been the District's objective to ensure that local limits are technically feasible in order to assure compliance with the limits is achieved and to avoid implementation problems.

A. Compliance with the Nickel NPDES Permit Limit Cannot Be Achieved By the Compliance Date

The District cannot meet the compliance schedule for nickel contained in its NPDES permit without significant changes to treatment processes or operations. With regard to treatment at the District's Main Plant, any treatment process would need to be sized to handle at least the design average flow of 41 MGD, and potentially the design maximum flow of 125 MGD. While treatment technologies for removing relatively high concentrations of metals from such streams as electroplating wastewater are well-established, their applicability is limited by the very low concentrations in the District's

wastewater stream. For example, precipitation as nickel hydroxide is one technology for removing nickel from a solution. However, the solubility of nickel hydroxide at the high pH level required (pH 10 - 11) is approximately 0.12 mg/L, nearly an order of magnitude higher than the expected effluent limit. Even under ideal conditions, precipitation could not achieve the limit.

Another common metals removal technology, filtration, would not effectively treat the District's effluent. Mechanisms for improving the incidental removal of metals in municipal wastewater treatment plants vary depending on whether the metal species is particulate or dissolved (either as a metal ion or a metal complexed with another material). Removal of particulates or dissolved metals adsorbed onto particulates (for example, activated sludge floc) can potentially be improved by effluent filtration using sand or other filter media. Sampling of the District's effluent, however, shows that the majority of effluent nickel is in the dissolved form and would not be removed by filtration.

Add-on chemical treatment technologies, such as ion exchange and reverse osmosis, would be expected to remove dissolved nickel from the District's Main Plant effluent. Both treatment technologies remove metals from the bulk effluent flow stream and concentrate them into a smaller volume, high concentration stream that requires further management. Both also require significant operating costs for energy, labor, and membranes (reverse osmosis) or resin (ion exchange).

The consulting firm Black and Veatch has provided the District with a preliminary capital cost estimate of \$4 per gallon per day capacity for reverse osmosis treatment, not considering the cost of brine disposal and operating costs. At a minimum,

approximately 25 MGD of the District's flow would need to be treated to meet the proposed permit limit of 0.016 mg/L, resulting in a minimum capital cost of \$100 million, not considering brine disposal. A brine disposal system could double the capital cost. This exceeds the construction cost of the District's entire plant, to achieve a removal of approximately six pounds per day or less of nickel from the effluent.

In general, the capital cost of an ion exchange system would be expected to total less than that of a reverse osmosis treatment system, perhaps by half. However, a substantial amount of research would be required to find an ion exchange resin suitable for removing nickel that is likely to be in a complexed form in the District's effluent. Sizing of the system would also depend on the removal efficiency that could be achieved, but again, would be a minimum of 25 MGD of the District's flow and possibly substantially more.

Regardless of the treatment technology considered, removal of nickel at the industrial source would minimize the volume of water to be treated and, therefore, the capital cost. For this reason, the District has focused its activities toward achieving compliance with the nickel limit on working with industrial users and, in particular, ADM as the largest industrial discharger of nickel to its system. The District has calculated pretreatment local limits that would enable its discharge to meet its current NPDES permit limits. The tentative limit for total nickel from ADM is 3.588 pounds per day. ADM's current local limit is 0.17 mg/L dissolved nickel, corresponding to a loading of 15.6 pounds per day at a flow rate of 11 MGD. Based on sampling from January 2008 through April 2009, ADM discharged an average of 6.382 pounds per day of dissolved nickel and 9.403 pounds per day of total nickel. ADM would need to reduce its nickel

discharge to the District by nearly two-thirds in order for the District to meet its NPDES limit. ADM's investigations of nickel reduction alternatives are discussed further below.

B. Compliance with the Zinc NPDES Permit Limit Cannot Be Achieved By the Compliance Date

The District also cannot meet the compliance schedule for zinc contained in its NPDES permit without significant changes to treatment processes or operations.

Treatment options for zinc at the District's Main Plant are the same as described above for nickel. The District has also calculated pretreatment limits which would need to be imposed on industrial users to enable the District's discharge to meet permit limits.

However, the situation with industrial zinc sources and control is quite different from that with nickel. Through discussions with ADM and Tate & Lyle, the District found that zinc-containing cooling tower treatment chemicals were in use at both facilities and were the largest source of zinc in the District's wastewater. Both industrial users have substantially reduced or eliminated zinc from their cooling tower treatment programs.

Similar to nickel, tentative zinc local limits have been calculated by the District and allocated to industrial users. The proposed average zinc limit for ADM is 34.605 pounds per day and the proposed maximum is 88.97 pounds per day. Based on sampling from January 2008 through April 2009, ADM discharged an average of 34.351 pounds per day and a maximum of 81.908 pounds per day of zinc. Eight of 18 samples exceeded the average limit.

As noted above, effluent monitoring indicates that the District's discharge is currently in compliance with the proposed NPDES zinc average limit during the majority of sampling events. However, additional time is needed to address several concerns with

the ability to consistently achieve this limit. As discussed in detail below, ADM is reviewing operation of its wastewater treatment plant (“WWTP”) and in particular, solids management alternatives to determine whether it can meet the District’s tentative pretreatment local limit under all conditions. Also, two new industrial facilities that will discharge wastewater to the District’s Main Plant are currently in the design phase. A large portion of these proposed wastewater streams would consist of cooling tower blowdown streams and while the District would closely regulate any zinc-based cooling tower treatment additives, any background zinc concentrations would increase through the cooling process. Additionally, time is needed to verify the accuracy of assumptions required in the local limit development process, including allocation assumptions for various industrial users and, in the case of zinc, a very high (greater than 90 percent) projected removal rate by the District’s treatment process.

Based on samples taken by ADM since January 1, 2009, ADM would be able to meet the proposed limit (<0.35 parts per million (“ppm”)) approximately 25 percent of the time. ADM’s ability to meet the proposed limit is almost solely based on the amount of sludge wasted from ADM’s pretreatment system.

ADM could achieve compliance with its zinc allocation (at least much of the time) through reduced sludge wasting. However, this would be only a very short term solution. The reduction of sludge wasting would cause the sludge to build up within the pretreatment system and cause major disruptions in the aerobic portion of the system within a matter of weeks. At that point, significant and uncontrollable amounts of suspended solids would carry over with their effluent to the District. These solids would likely compromise the District’s ability to properly operate its Main Plant. To counteract

the solids “carry over,” the volume through ADM’s WWTP would have to be reduced. To that end, major portions of ADM’s Decatur Complex would have to be shut down and could not be restarted until a sludge removal and drying system could be installed. The design, permitting and construction of such a system would be very costly and would likely take more than a year.

C. The District’s Efforts to Identify Compliance Options

The District’s first effort toward compliance was to complete the Translator Study mentioned above. The work on the Translator Study started in March 2007, prior to the permit issuance in April 2007, and continued through November 2007. As the Translator Study progressed, the District determined that it would provide very little relief. The Translator Study, however, was provided to Illinois EPA on December 20, 2007, as part of the First Interim Report. Please see pages 4-5 of Exhibit C for the proposed nickel and zinc limits, as calculated in the Translator Study.

Also, within one to two months after the effective date of the permit, sample data, including industrial samples, the District’s effluent samples and stream sampling information, had been compiled, which showed that the source of nickel in the District’s wastewater was ADM’s pretreated industrial flow, and the most significant sources of zinc were industrial flow from both ADM and Tate & Lyle. Therefore, the District met with SIUs, including ADM and Tate & Lyle, in August and September 2007, to discuss nickel and zinc issues. Personnel from ADM and Tate & Lyle were made aware of the District’s new nickel and zinc limits at those meetings. The District then met with Illinois EPA on October 30, 2007, to discuss the situation. Please see the summary of sample data that was given to Illinois EPA personnel during the October 30, 2007,

meeting, attached hereto as Exhibit G. During that meeting, Illinois EPA advised the District that a request to extend the compliance schedule in the permit was premature, but could be considered at a later date.

Since the District's meeting with Illinois EPA, the District has made significant efforts to identify treatment options regarding its nickel and zinc discharges. As recommended by Illinois EPA, the District discussed options for reducing nickel and zinc loadings with ADM and Tate & Lyle. In early 2008, the District calculated new local pretreatment limits that would allow it to meet the upcoming effluent limits for nickel and zinc. These proposed limits were provided to ADM and Tate & Lyle and were the basis for numerous discussions with the industries during 2008.

Illinois EPA reviewed the First Interim Report and indicated that slightly higher permit limits could be justified based on the hardness data the District collected. See Exhibit D. However, the NPDES permit has not yet been modified to revise the permit limits for nickel and zinc. The District has increased its metals monitoring to twice per month at the major industrial users and the Main Plant.

Also in January 2008, the District again met with personnel from both ADM and Tate & Lyle and reviewed the data on their discharges and the pretreatment numbers. Both companies used zinc compounds in their cooling tower maintenance programs, as mentioned above, and had been discussing alternative cooling tower treatments with their suppliers. ADM had also been reviewing a better control and monitoring program that could help reduce its zinc discharge to meet the limit.

ADM was identified as the primary source of nickel; it was used as a catalyst in several of its production processes. ADM had begun reviewing treatment technology that

would enable it to concentrate and recover nickel from the wastewater stream for that process. ADM's efforts are continuing, including a recently completed trial of electrocoagulation as a nickel removal process. Unfortunately, it was found that the process actually increases the nickel concentration, possibly due to nickel in the electrode used in the process.

The District continues to work with ADM and Tate & Lyle to meet the nickel and zinc limits.

As discussed further below, during the December 4, 2008, meeting between the District, ADM and Illinois EPA, Illinois EPA recommended that the District submit an application to modify its NPDES permit to extend the compliance schedule contained therein. On January 12, 2009, the District submitted its NPDES permit modification request application to Illinois EPA, and, on April 3, 2009, the District forwarded supplemental information to Illinois EPA regarding the request. Please see the discussion in Section V below for further details regarding these submittals. On May 5, 2009, Illinois EPA posted for public notice on its website a draft modified NPDES permit for the District, which is attached hereto as Exhibit H. Therein, Illinois EPA proposed to extend the schedule of compliance for nickel and zinc from two years to three years. As of the date of the filing of this Petition, the modified NPDES permit has not been issued by Illinois EPA. Also during late 2008, discussions continued between Illinois EPA, the District and ADM regarding the best means to address the District's nickel and zinc issues. The District and ADM did not know that achieving compliance with the nickel limit in the District's NPDES permit, according to the schedule also contained in the permit, would be impossible while continuing to operate both facilities until ADM

discovered, in mid-2008, that incoming grain was responsible for significant amounts of nickel in the effluent sent to the District. Upon this discovery, the District and ADM provided Illinois EPA with available data and a summary of the issue as part of its Third Interim Report. See Exhibit F. In light of this information, Illinois EPA, the District and ADM agreed that seeking a variance would also be appropriate in this situation. Because of the complexity of the issues at hand, it has taken time for the District and ADM to coordinate with Illinois EPA and to prepare this Petition. On April 28, 2008, the District provided a draft of this Petition to Illinois EPA for its review. On May 14, 2009, the District, ADM and Illinois EPA met to discuss the same.

D. ADM's Efforts to Reduce Its Nickel and Zinc Discharges

As set forth above, in August 2007, the District notified ADM of tightened nickel and zinc water quality limits included in the District's reissued NPDES permit. Based on sampling conducted by the District, ADM was identified as a significant contributor of both nickel and zinc. In January 2008, the District met with ADM and shared proposed limits calculated from the sampling data, which ADM would be required to comply with by July 2009. It was not until this time that ADM first recognized the implications that these limits could have on its operations.

ADM's Decatur Complex consists of multiple, separate processing plants, which discharge their wastewater to the on-site WWTP operated by Corn Plant personnel. These processing plants consist of the Wet Corn Mill, BioProducts Plant, Cogeneration Plant, East Soybean Processing Plant, West Soybean Processing Plant, Vitamin E Plant, Corn Germ Processing Plant and the Polyols Plant. Each of these unique plants produces multiple products, using both batch and continuous processes, and creates wastewaters

which generally are reused multiple times prior to being discharged to the WWTP. The WWTP treats approximately 11 MGD through a newer anaerobic treatment system followed by aerobic treatment prior to discharge to the District.

Due to the high wastewater flow and very low concentration of nickel and zinc in the final effluent, ADM concluded that reductions in nickel and zinc would need to be accomplished at the source. Thus, in January 2008, ADM began identifying possible sources of the metals through complex-wide sampling and a preliminary inventory of chemicals and processes that contained the metals. Through testing, ADM was able to eliminate the incoming raw water as a source. Further, based on process knowledge, ADM initially believed that the only source of nickel was nickel catalyst (which is used both in the Corn Plant hydrogenation process from sorbitol and at the West Soybean Processing Plant), while the zinc was primarily from cooling tower water chemical additives.

During early 2008, a number of complications arose. First, sampling conducted through May was performed based on ADM's understanding that the final limits would be on a "soluble" basis. In May, however, the District, after consultation with Illinois EPA, informed ADM that the limits would be on a "total" rather than "soluble" basis. That change is significant since the insoluble portion of nickel and zinc in ADM's final effluent is approximately 25 percent and 75 percent, respectively. This change in measurement basis meant much of the sampling completed was inadequate to reach appropriate conclusions and could not be used for data comparisons with future data collections on a "total" basis.

Second, ADM encountered a problem with its sample analysis procedures. ADM became concerned that its zinc data was not making sense. Upon investigation, ADM's research laboratory ("ADM Research") determined that the lab syringe filters used in the zinc analysis contained zinc themselves, which was leaching into the filtrate. This issue took several weeks to identify and confirm the filters as the problem. It then took several additional weeks to find suitable filters to meet the testing requirements. Split samples for both nickel and zinc were sent to an Illinois EPA approved laboratory to confirm results.

Third, ADM was surprised to find nickel and zinc in several streams which were not subject to known chemical and processing aids that contained these metals. ADM determined that there must be major sources of nickel and zinc that had not initially been considered. ADM learned that soybeans contain approximately 4.1 ppm nickel and approximately 46 ppm zinc, while corn contains approximately 0.53 ppm nickel and approximately 32 ppm zinc. Given that the Decatur Complex processes approximately 550,000 bushels of corn and 200,000 bushels of soybeans per day, this means that 15 times more nickel and 25 times more zinc than ADM would be allowed to discharge into the Decatur Complex comes into the Decatur Complex just through its raw materials. Other "non-traditional" sources were also identified, such as the 50 percent sodium hydroxide which is used in various processes in the Decatur Complex. This material contains small concentrations of nickel, but since the Decatur Complex uses nearly six million pounds of sodium hydroxide per month, the contribution of additional nickel to the Decatur Complex wastewater system is also significant.

While ADM focused on the identification of nickel and zinc sources during the first half of 2008, during this time, it also began evaluating various means to reduce or eliminate sources of the metals. Over time, the emphasis began transitioning from sampling and source identification to identifying and trialing potential methods to reduce or eliminate the metals. Following are discussions of these activities to date for both zinc and nickel.

1. Zinc

As referenced above, the chemicals used in the cooling tower water treatment program were initially identified as the largest source of zinc in the Decatur Complex (although ADM later learned that the largest source was the corn and soybeans themselves). Beginning in May 2008, ADM worked with its chemical vendor to change the treatment program to eliminate the addition of zinc to the towers. It was successful in doing so. However, ADM learned that the zinc continues to leach from the system for months after the addition of zinc containing materials has ceased. Further, since one of the BioProducts Plant towers continued to show elevated zinc levels even after the others had improved, ADM initiated a higher pH program in August 2008, which reduced the amount of zinc leaching from the system. Even so, it was well into the fall before all the cooling water from the towers was generally below the zinc targets.

As a result of its efforts to date, ADM has reduced its zinc discharges to levels that are generally less than its allocation. Further, potential nickel reduction strategies discussed below should provide some additional reduction. However, there are still two issues which concern ADM regarding its ability to consistently achieve the zinc limits going forward. First, the product mixes produced in the Decatur Complex during the

recent sampling are ones which would be expected to result in lower zinc concentrations than other potential product mixes. Thus, as product mixes change (e.g., production of more fructose), the zinc concentration may again increase. Therefore, additional ongoing monitoring of the effluent will be necessary to determine the impact of these process variations. The second outstanding issue for zinc is the formation of metal sulfides in the anaerobic system, which is discussed in more detail later in this Petition.

2. Nickel

ADM readily identified the use of nickel catalysts in the Corn Plant's sorbitol process and in the West Soybean Processing Plant as significant nickel contributors. ADM had looked at nickel recovery from the sorbitol process by electroplating in 2006 through 2007, but that evaluation was dropped due to technical and economic issues. In March 2008, the Corn Plant hired a nickel consultant to look specifically at nickel recovery in the sorbitol process. He, too, focused primarily on electroplating. Unfortunately, a number of problems became apparent, including low nickel concentration, very high sodium and chloride levels, the need to use chelating resins which are non-food grade, and the presence of various other cations and anions. Once again, ADM concluded that electroplating was not a feasible option.

Next, the Corn Plant began investigating high pH precipitation for the sorbitol stream. However, ADM discovered that gluconic acid present in the process forms a complex with nickel, which prevents it from coming out of solution. While that problem could be solved by oxidizing the organic material with ozone and hydrogen peroxide prior to the precipitation, doing so would necessitate the use of extreme amounts of

additional chemicals which make it infeasible. ADM also opened a dialog with the catalyst supplier who was unable to provide any other options.

To learn more about the nickel losses in the sorbitol process, ADM continued its testing program throughout the year. One of the consultants ADM involved in this project identified a potential process change to reduce the nickel through a combination of water capture and redirection. A trial of this option was completed in November 2008 with positive results. ADM has begun making the necessary changes to implement the option, which involves considerable piping installations and modifications.

As noted previously, the sorbitol process is not the only nickel source in the Corn Plant: the incoming corn also contains significant amounts of nickel and zinc. Testing has shown that after the corn milling process, the resulting starch slurry contains nickel. This slurry is then used as a feed material for many of the downstream value-added products, including various sweeteners. After processing, much of the resulting sweetener is passed through an ion exchange system. As a result, nickel and zinc are present in the ion exchange acid waste.

Over half of this waste is routed directly to the WWTP and cannot be readily treated. However, testing has shown that raising the pH of the other half of the waste stream will cause about 50 percent of the nickel to precipitate and 85 percent of the zinc, which could then be removed from the waste stream. Unfortunately, since the Corn Plant uses approximately 3 million pounds of 35 percent hydrochloric acid a month in this stream, it would require millions of pounds of sodium hydroxide (which also contains nickel) or some other base to raise the pH of this waste material to 10 for the precipitation to occur. As a result, a precipitation option does not appear to be viable.

At the meeting in December 2008, Illinois EPA made two suggestions for further investigation. First, it directed ADM to a nickel-catalyzed hydrogenation facility in northern Illinois as a possible source of expertise regarding nickel removal. ADM contacted them and learned that their nickel removal technique is high pH precipitation. Further, because of their feedstock, they do not have a problem with nickel-gluconate complexing. As a result, their treatment system is not transferable to ADM's processes. Second, Illinois EPA suggested investigating electrocoagulation, which ADM had not done. Samples were sent to an Oregon company for electrocoagulation evaluation. This process proved effective for zinc removal but completely ineffective for nickel and chloride removal. In fact, nickel levels increased. This increase of nickel was confirmed after re-testing was done on the original and treated samples. Also, significant electrode loss occurred during treatment resulting in a ferrous precipitation. The Oregon company did not have an explanation for the nickel increase.

ADM's East and West Soybean Processing Plants are also significant nickel contributors. The West Soybean Processing Plant utilizes nickel catalyst in the hydrogenation process. ADM believes that a significant portion of the nickel losses are from catalyst handling. Housekeeping practices were implemented in the spring of 2008, but their effectiveness has been inconsistent, and ADM continues to investigate handling system modifications at the West Soybean Processing Plant. However, the West Soybean Processing Plant continues to work with outside contractors and vendors to identify any other potential solutions.

The East Soybean Processing Plant is the single largest contributor of nickel in ADM's effluent, and all the nickel is from the soybeans processed. Sampling at the East

Soybean Processing Plant has identified four primary streams containing nickel. One of the four streams, which is also the lowest flow, contains roughly half the nickel in the East Soybean Processing Plant's effluent. The East Soybean Processing Plant is attempting to locate a feed or fertilizer outlet for this wastewater stream. Further, ADM Research is assisting the East Soybean Processing Plant in investigating any process changes or unique nickel removal options that could be viable for the remaining three streams.

3. Metal Sulfide Formation in Anaerobic System

In the spring of 2007, ADM started up a new anaerobic wastewater treatment system to run in series with its existing aerobic system. In addition to improved treatment capabilities, the new plant was intended to allow for improved solids management through reduction of the solids and "wasting" excess solids through the effluent to the District. In the fall of 2008, sampling confirmed that the new anaerobic treatment system was contributing to the nickel and zinc found in the final effluent. Insoluble metal sulfides forming in this system had built up in the sludge. Some of the anaerobic sludge carries over into the aerobic system. This aerobic/anaerobic sludge is "wasted" into the effluent to control the solids in the system. Through sampling and testing, ADM has determined that the nickel contained in this sludge alone, even ignoring the soluble nickel component, is greater than ADM's proposed limit while the insoluble zinc from the sludge could cause the limit to be exceeded based on the current rate of solids "wasting."

ADM has made inquiries regarding the mechanics of metal sulfide formation in anaerobic systems and has sought assistance from ADM Research and GE Betz Company

to address this source of metals. ADM has learned that the nickel sulfide formation mechanism cannot be forced to a higher degree of precipitation without raising operating pH to a level which would negate chemical oxygen demand reduction and beneficial methane gas formation.

ADM continues to investigate various combinations of technologies and source reduction options that have shown the potential to help reduce the nickel and zinc. As part of this ongoing investigation, capital and operating costs associated with each technology are being developed. In addition to cost and technical feasibility, secondary impacts are also being considered. Many of the options that have a higher likelihood of success also entail significant costs and have secondary negative environmental impacts.

4. Technologies/Process Changes ADM Has Implemented or Determined Infeasible

In summary, to date, ADM has either implemented the following technologies/process changes or determined that they are not feasible:

1. Nickel – Alternative Catalysts – ADM reviewed if there were any viable alternatives to the nickel catalyst used in two processes. Due to processing and product quality issues, no other catalysts were determined to be viable.
2. Nickel – Ion Exchange Followed by Nickel Electroplating – ADM identified multiple technical issues during bench-top testing of samples, along with the fact that non-food grade chelating resins would be necessary. The option was determined to not be technically feasible. Use of non-food grade chelating resin on the non-food grade IX waste is acceptable, but would yield far too low a nickel concentration to make electroplating feasible.
3. Nickel – High pH Precipitation for Sorbitol Process – Tests conducted to determine feasibility of precipitating the nickel were ineffective due to a gluconate nickel complex which prevents precipitation.

4. Nickel – High pH Precipitation for Other Streams – Tests showed only moderate precipitation efficiency due to the already low nickel concentration. Additionally, significant quantities of chemicals would be required, which makes the technology infeasible.
5. Nickel – Operation Changes – ADM modified the Sorbitol ion exchange regeneration rinse sequence to reduce nickel discharged to the WWTP.
6. Zinc – Cooling Tower Water Treatment Program – In the summer of 2008, ADM implemented an alternative program at the Corn Plant and the BioProducts Plant that does not contain zinc in the chemicals. No other facilities at ADM's Decatur Complex were on a zinc-based treatment program.
7. Zinc – BioProducts Cooling Tower – In the fall of 2008, ADM implemented a higher pH program to stop zinc leaching from the tower.
8. Nickel and Zinc – Electrocoagulation – Samples were analyzed and it was determined that this technology was effective for zinc removal, but provided no nickel removal. The option was determined to be ineffective for nickel removal at the already low nickel concentration in ADM waste streams.

IV. EFFORTS NECESSARY TO ACHIEVE IMMEDIATE COMPLIANCE

As set forth above, immediate compliance is not possible without requiring ADM to shut down much of its Decatur Complex. Moreover, the District cannot cease operation at its Main Plant, which provides treatment of domestic and industrial wastewater for the City of Decatur, the Villages of Forsyth and Mt. Zion, and for industrial and commercial users in the Decatur metropolitan area. ADM also cannot cease operations at its Decatur Complex without serious disruption of the local economy.

The District is requesting that it be allowed additional time, i.e., from July 1, 2009, until June 30, 2014, to continue its study of all possible compliance alternatives,

which may include seeking permanent site specific relief. During this time, the District proposes the compliance plan set forth in Section VI below.

V. ARBITRARY OR UNREASONABLE HARDSHIP

Prior to reissuance of the District's NPDES permit in 2007, the District operated under a series of permits with no effluent limits for nickel or zinc. At the time of the prior NPDES permit reissuance in 2001, the water quality standard for both nickel and zinc was 1 mg/L. The District's discharge concentration was, and continues to be, well below that value. The 2007 reissuance incorporated water quality based limits based on the new water quality standards adopted by the Board.

Requiring the District to meet the current NPDES permit effluent limits for nickel and zinc, which were calculated in accordance with the general use water quality standards formulae provided in Section 302.208(e), according to the compliance schedule included in the NPDES permit, would impose an arbitrary and unreasonable hardship on the District.

First, the revised water quality standards for nickel and zinc, which resulted from the rulemaking discussed below and which are reflected in the District's permit, have had unanticipated consequences. Illinois EPA, in support of its proposed revised standards in 2001 through 2002, advised the Board that it was not aware of any dischargers that would have problems complying with the new water quality standards (which included new water quality standards for nickel and zinc). Thus, neither the District nor ADM knew at that time that it would have any concerns with the revised standards.

In the Board rulemaking entitled In the Matter of: Water Quality Triennial Review: Amendments to 35 Ill. Adm. Code 302.105, 302.208(e)-(g), 302.504(a), 302.575(d), 309.141(h); and Proposed 35 Ill. Adm. Code 301.267, 301.313, 301.413, 304.120, and 309.157, R02-11, Illinois EPA, in part, proposed to amend the Board's water quality standards for nickel and zinc as part of its "triennial water quality standards review." Illinois EPA Statement of Reasons, In the Matter of: Water Quality Triennial Review: Amendments to 35 Ill. Adm. Code 302.105, 302.208(e)-(g), 302.504(a), 302.575(d), 309.141(h); and Proposed 35 Ill. Adm. Code 301.267, 301.313, 301.413, 304.120, and 309.157, R02-11 (November 7, 2001). Illinois EPA's proposal revised the water quality standards for nickel and zinc to reflect the values that were considered protective of aquatic life. Id. at 8. Also, based on information provided by the USEPA, that only the dissolved fraction of metals is toxic to aquatic life, Illinois EPA proposed the metals water quality standards in dissolved form. Id. During the January 29, 2002 public hearing in the proceeding, Illinois EPA testified that it was not aware of any dischargers that would have problems complying with the new water quality standards (which included new water quality standards for nickel and zinc). Hearing Transcript, In the Matter of: Water Quality Triennial Review: Amendments to 35 Ill. Adm. Code 302.105, 302.208(e)-(g), 302.504(a), 302.575(d), 309.141(h); and Proposed 35 Ill. Adm. Code 301.267, 301.313, 301.413, 304.120, and 309.157, R02-11 at 99-100 (January 29, 2002).

Second, the District has had several meetings and numerous discussions with Illinois EPA regarding the best means to address the situation regarding the District's nickel and zinc limits. The District met with Illinois EPA on October 30, 2007, to

apprise Illinois EPA of the situation regarding the nickel and zinc limits. During that meeting, Illinois EPA advised the District that a request to extend the compliance schedule in the permit was premature, but could be considered at a later date. In addition, the District and ADM met with Illinois EPA on December 4, 2008. During that meeting, Illinois EPA also recommended that the District submit an application to modify its NPDES permit to extend the compliance schedule contained therein.

The District submitted its NPDES permit modification request application to Illinois EPA on January 12, 2009, a copy of which is attached hereto as Exhibit I. The District also submitted supplemental information to Illinois EPA on April 3, 2009. See Exhibit J. On May 5, 2009, Illinois EPA posted for public notice on its website a draft modified NPDES permit for the District. See Exhibit H. Therein, Illinois EPA proposed to extend the schedule of compliance for nickel and zinc from two years to three years. As of the date of the filing of this Petition, the modified NPDES permit has not been issued by Illinois EPA. While the District will not be able to achieve compliance by the new deadline of July 1, 2010, proposed in the modified NPDES permit, the extension should, however, at least allow sufficient time for a ruling on this request for variance.

Also during late 2008, discussions continued between Illinois EPA, the District and ADM regarding the best means to address the District's nickel and zinc issues. The District and ADM did not know that achieving compliance with the nickel limit in the District's NPDES permit, according to the schedule also contained in the permit, would be impossible while continuing to operate both facilities until ADM discovered, in mid-2008, that incoming grain was responsible for significant amounts of nickel in the effluent sent to the District. Upon this discovery, the District and ADM provided Illinois

EPA with available data and a summary of the issue as part of the District's Third Interim Report. See Exhibit F. In light of this information, Illinois EPA, the District and ADM agreed that seeking a variance would also be appropriate in this situation. Because of the complexity of the issues at hand, it has taken time for the District and ADM to coordinate with Illinois EPA and to prepare this Petition. On April 28, 2008, the District provided a draft of this Petition to Illinois EPA for its review. On May 14, 2009, the District, ADM and Illinois EPA met to discuss the same.

Further, the District and ADM have spent significant amounts of time and resources attempting to determine the source of the nickel and zinc discharges, and investigating methods to decrease and/or treat those discharge amounts. The District and ADM are continuing those efforts, but they need more time than is provided by the compliance schedule contained in the current NPDES permit (and even more than the time provided in the proposed modified NPDES permit). Therefore, the District is asking for such additional time.

The cost to the District of complying with the limits as currently included in the permit will be felt by rate payers, thus creating an unreasonable hardship. The District's current user fee is \$0.81 per 100 cubic feet of wastewater discharged, applicable to residential, commercial and industrial users. The estimated capital cost alone of \$100,000,000 for reverse osmosis treatment at the District would result in an additional \$0.53 per 100 cubic feet or a 69 percent increase in user charge without considering operating costs or brine disposal.

The cost to ADM of the District's having to comply also imposes an unreasonable hardship on ADM. While ADM continues to evaluate a combination of treatment

schemes (including rerouting a steam condensate, ion exchange, evaporation and sale as feed/fertilizer, ultra-filter/reverse osmosis and removal of filtered material to landfill), ADM has not yet been able to identify a treatment plan that is both technically feasible and economically reasonable. In any case, however, design, permitting, purchase, installation and start-up would take a minimum of two years and would entail very large capital and operating costs. Again, ADM also cannot cease operations at its Decatur Complex without serious disruption of the local economy.

When discussing arbitrary or unreasonable hardship in previous water variance cases, the Board has relied upon the following caselaw:

In determining whether any variance is to be granted, the Act requires the Board to determine whether a petitioner has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary or unreasonable hardship. (415 ILCS 5/35(a)) (1994.) Furthermore, the burden is upon the petitioner to show that its claimed hardship outweighs the public interest in attaining compliance with regulations designed to protect the public. (Willowbrook Motel v. IPCB, 135 Ill. App. 3d 343, 481 N.E.2d 1032, (1st Dist. 1977).) Only with such a showing can the claimed hardship rise to the level of arbitrary or unreasonable hardship.

A further feature of a variance is that it is, by its nature, a temporary reprieve from compliance with the Board's regulations and compliance is to be sought regardless of the hardship which the task of eventual compliance presents an individual polluter. (Monsanto Co. v. IPCB, 67 Ill.2d 276, 367 N.E.2d 684, (1977).) Accordingly, except in certain special circumstances, a variance petitioner is required, as a condition to grant of variance, to commit to a plan which is reasonably calculated to achieve compliance within the term of the variance.

See Central Illinois Public Service Company (Coffeen Power Station) v. Illinois EPA, PCB No. 97-131 at 4-5 (As Corrected June 23, 1997); see also City of Moline v. Illinois EPA, PCB No. 97-39 (December 19, 1996).

Therefore, as set forth above, requiring the District to meet the current NPDES permit effluent limits for nickel and zinc, which are based upon the general use water quality standards formulae provided for in Section 302.208(e), according to the compliance schedule contained in the current NPDES permit (or in the proposed modified NPDES permit), would impose an arbitrary and unreasonable hardship on the District, on ADM, and potentially on the local economy. Please see Section VII below for the discussion regarding the environmental impact of the variance sought herein.

VI. COMPLIANCE PLAN AND SUGGESTED CONDITIONS

The District is proposing the following plan to achieve compliance with nickel and zinc permit limits by the end of the requested five-year variance term, and suggests that this variance be granted subject to the following conditions:

1. The District requests a variance from 35 Ill. Admin. Code § 302.208(e) and 35 Ill. Admin. Code § 304.105 as those sections apply to nickel and zinc in the following portions of the Sangamon River: the segment of the Sangamon River that receives discharge from the Main Plant (Assessment Unit ID IL_E-09), and downstream segments potentially impacted by the District's nickel and zinc discharges.
2. The variance expires on July 1, 2014.
3. The District will continue plant influent and effluent monitoring for nickel and zinc, along with monitoring upstream and downstream of the discharge in the Sangamon River. Currently, monitoring for nickel and zinc are performed twice monthly. Downstream monitoring has recently been modified to include four locations in the Sangamon River rather than the one location monitored since 2007. The District has recently acquired an instrument to perform metals analyses in-house, making expanded monitoring more feasible.

4. Industrial monitoring for nickel and zinc, currently performed quarterly at ADM and Tate & Lyle and semi-annually at other industrial users that could discharge nickel and zinc, has been increased to twice monthly at ADM and Tate & Lyle.
5. The District will continue refinement of pretreatment local limits for nickel and zinc necessary to meet its permit limits, and will continue work with ADM and Tate & Lyle on options for achieving compliance with local limits. Ongoing verification monitoring will be conducted to confirm that cooling tower treatment programs are achieving the necessary zinc reductions. The District will remain in frequent contact with ADM personnel regarding their ongoing work with identifying nickel sources and control options and will continue to meet with ADM personnel at least semiannually and exchange information, and meet more frequently as needed.
6. The District will explore the possible development of stream flow-based compliance options. As noted above, the District's discharge does not result in exceedences of the water quality standard except very low flow conditions in the Sangamon River. A flow-based permit limit would not avoid the capital cost of equipment installed for nickel treatment, for example, but significant operating and energy cost savings could be possible if treatment equipment was only operated when justified by low river flows.
7. The District will continue investigation of updated toxicity information and possible alternatives for applying a nickel water quality standard. The District has done some preliminary investigations of possible options including a Water Effect Ratio calculation and application of a Biotic Ligand Model. Exploration of other possibilities such as a site-specific water quality standard will continue.
8. Over the course of the first two years of the variance, the District and ADM will be undertaking several parallel paths to review additional technologies and compliance strategies. The technologies ultimately used for compliance may be closely tied to the compliance strategy to ensure the most practical solution is employed. That is, technologies will be evaluated based on compliance strategies involving both individual process streams and total effluent flows. Thus, even if the treatment of an individual stream appears economically reasonable, if it will not be sufficient to achieve overall compliance, expenditures on such

treatment could be wasted if ADM were required to provide treatment of the effluent flows. Thus, neither the District nor ADM will be in a position to properly evaluate the cost-effectiveness of an overall compliance strategy until all potential treatment options have been evaluated individually.

9. The following schedule is a general guide to the key tasks that must be completed to determine the compliance strategy to be implemented. The Board should note that the technologies set forth below for evaluation are all of the technologies of which the District and ADM are currently aware. Both the District and ADM will continue to explore the potential for other technologies and developments in technologies already evaluated throughout the first three years of the requested variance.

- a. 2009 - 2010

- i. ADM will complete technical and economic feasibility reviews for the following control technologies. The reviews will include determination of technical feasibility, capital and operating costs, reliability, and pilot testing as appropriate.
 1. Nickel – Proprietary Precipitation Process – A wastewater treatment chemical company has evaluated process streams and has reported positive results for a metals precipitation process. Work is ongoing to determine feasibility and confirm results.
 2. Nickel – Chemical Precipitation Process Using Carbamates or Organic Sulfides – Discussions with wastewater experts for metals have identified chemicals suited for low concentration precipitation of metals. Work is underway to complete confidentiality agreements and contracts to further evaluate. Concurrently, ADM has begun evaluation of these chemicals as provided by GE Betz Company.
 3. Nickel – Reuse of Ion Exchange Resin – ADM currently disposes of resins from the fructose process that are no longer suitable

from a quality perspective. Initial tests have indicated there is suitable capacity to provide effective nickel reductions. The difference between use of spent ion exchange resin and the ion exchange process reviewed and determined to be infeasible is that the spent resin would not be regenerated which saves significant chemical and energy costs.

4. Nickel and Zinc – Soybean Process Stream Alternative – ADM is considering installation of a thickening system necessary for sale of this product as a feed or fertilizer additive. Installation is dependent on funding and procurement of customers.
5. Nickel and Zinc – BioProducts Process Stream Alternative – ADM is reviewing options to install equipment to thicken a process stream for use as a fertilizer additive.
6. Nickel and Zinc – WWTP Sludge Removal System – Evaluation of options for sludge removal and management for the WWTP.
7. Nickel and Zinc – Reverse Osmosis – ADM has completed preliminary technical and cost evaluation for treating a portion of the effluent with reverse osmosis. Review has concluded that the technology will work to reduce both nickel and zinc. However, capital and operating costs are prohibitive based on the volume of wastewater to be treated. Continued evaluation of this option will occur in combination with other potential treatment options.
8. Nickel and Zinc – Sludge - Discussions are scheduled concerning a device which breaks apart WWTP organisms. The purpose would be to change the characteristics of the anaerobic sludge, stop its carryover and thus

lower nickel and zinc content in the sludge to the District.

9. Nickel and Zinc – Sludge – ADM has been contacted by a company which has the potential to purchase all of ADM's sludge. Testing of the sludge is scheduled at the company's site. This would bring ADM into zinc compliance and close the gap on nickel compliance.

- ii. The District will complete the following tasks on a parallel track to ADM's technology reviews. The outcome of these tasks may impact the feasibility of the various options being considered and will be valuable in reviewing the ultimate feasibility of various control combinations.

1. Review of soluble/insoluble ratio of SIU dischargers versus the District's total discharge numbers, and determine if pretreatment limits need to be adjusted. Determine how much of the insoluble nickel and zinc entering the District's Main Plant is removed in the sludge and whether or not the pretreatment limits should be expressed as total or soluble limits.
2. The District will pursue variable limits based on flow with Illinois EPA and will seek permit modifications as necessary.

b. First Half of 2011

- i. Compile various control strategies based on one or more of the feasible technologies. Develop flow diagrams depicting removal options, pros and cons, capital expenditures and operating costs.
- ii. Present findings to ADM division managers.

10. The District proposes the following time schedule for achieving compliance with permit limits for nickel and zinc:

January 1, 2010	-	Submit an interim report to Illinois EPA describing progress on each of the elements of the compliance plan above.
July 1, 2010	-	Submit interim report, as above.
January 1, 2011	-	Submit interim report, as above.
July 1, 2011	-	Submit interim report, as above.
January 1, 2012	-	Submit interim report, as above.
July 1, 2012	-	Submit a final compliance plan to Illinois EPA containing nickel and zinc controls, treatment technologies, proposed permit modifications, or proposed site-specific water quality standards that will achieve compliance with permit limits.
January 1, 2013	-	Submit interim report, as above.
July 1, 2013	-	Submit interim report, as above.
January 1, 2014	-	Submit interim report, as above.
July 1, 2014	-	Achieve compliance with nickel and zinc permit limits.

VII. ENVIRONMENTAL IMPACT

Granting the requested variance would not change any existing environmental or human health impact of the District's discharge to the Sangamon River as it has existed for many years. The District is not requesting that it be allowed to increase its discharges of nickel and zinc into the Sangamon River. Instead, the District is asking that it be

allowed to continue its existing discharges of these parameters while it investigates and identifies compliance options.

The overall impact of the discharge on water quality has been studied by researchers from Eastern Illinois University from 1998 to the present. These biological studies continue to document slightly improved water quality conditions downstream of the District's discharge point, as compared to upstream, based on calculations of the Macroinvertebrate Biotic Index and the Fish Index of Biotic Integrity. The segment of the Sangamon River to which the District discharges is impaired for pollutants other than nickel and zinc; however, based on the fish community metrics, there has been no reduction in the quality of the Sangamon River segment in the last 20 years. See R. Fischer and C. Pederson, Eastern Illinois University, Biotic Assessment of Water Quality in a Reach of the Sangamon River Receiving Effluent from the Sanitary District of Decatur (June 2007), attached hereto as Exhibit K. See also, R. Fischer and C. Pederson, Eastern Illinois University, Biotic Assessment of Water Quality in a Reach of the Sangamon River Receiving Effluent from the Sanitary District of Decatur (July 2008), attached hereto as Exhibit L.

Additionally, as noted above, the actual stream concentration of nickel and zinc is highly dependent on rainfall and upstream flows. In the absence of very dry weather, the water quality standard is regularly achieved as demonstrated by downstream river monitoring.

When discussing environmental impact in recent water variance cases, the Board has relied upon the following caselaw:

When deciding to grant or deny a variance petition, the Board is required to balance the petitioner's hardship in complying with Board regulations against the impact that the requested variance will have on the environment. See Monsanto Co. v. PCB, 67 Ill. 2d 276, 292, 367 N.E.2d 684, 691 (1977). Petitioner must establish that the hardship it would face from denial of its variance request would outweigh any injury to the public or the environment from granting the relief, and "[o]nly if the hardship outweighs the injury does the evidence rise to the level of an arbitrary or unreasonable hardship." Marathon Oil Co. v. EPA, 242 Ill. App. 3d 200, 206, 610 N.E. 2d 789, 793 (5th Dist. 1993).

See Citgo Petroleum Corporation and PDV Midwest Refining, L.L.C. v. Illinois EPA, PCB No. 08-33 at 54 (May 15, 2008); see also, Citgo Petroleum Corporation and PDV Midwest Refining, L.L.C. v. Illinois EPA, PCB No. 05-85 at 31 (April 21, 2005).

Therefore, as set forth above, granting the requested variance would not change any existing environmental or human health impact of the District's discharge to the Sangamon River as it has existed for many years.

VIII. RETROACTIVITY OF THE VARIANCE

The District is seeking a variance that will begin on July 1, 2009, and end on July 1, 2014. The District, however, does not expect the Board to make its decision in this matter before the July 1, 2009 date. Therefore, the District is seeking a partially retroactive variance. However, if Illinois EPA issues the modified NPDES permit with the extended compliance date, the District will seek a variance that will begin on July 1, 2010, and end on July 1, 2014. If that is the case, the District would not need the variance to apply retroactively.

The Board has previously considered numerous requests for retroactive variances, and has stated the following with regard to the same:

The Board will not apply retroactive starting dates for variances where the petitioner has filed late and the delay was the petitioner's fault. . . . Another reason for not applying a retroactive starting date is if the petitioner's hardship is self-imposed as a result of the petitioner's inactivity or faulty decision-making. . . . The Board may grant a retroactive variance if the petitioner has diligently sought relief and has made a good faith effort toward achieving compliance with Board regulations. . . . The Board has also provided retroactive variances where there was a procedural delay that was not the petitioner's fault or was the result of confusion over federal regulations. . . .

City of Canton v. Illinois EPA, PCB 02-42 (April 4, 2002). (Citations omitted.)

In this matter, the Board should grant the District a partially retroactive variance because the delay in filing this Petition is not the District's fault, nor is the District's hardship self-imposed due to its inactivity or faulty decision-making. In fact, since even prior to the April 20, 2007 reissuance of the current NPDES permit, the District has diligently pursued compliance with the nickel and zinc effluent limits. The District first performed the Translator Study mentioned above. The work on the Translator Study started in March of 2007, and continued through November 2007. The District discovered, however, that the nickel and zinc limit issues were much more complex than it had initially thought. The District has spent significant amounts of time and resources attempting to determine the source of the nickel and zinc discharges, and investigating methods to decrease those discharge amounts. The District is requesting more time to fully evaluate the issues and find adequate solutions.

Finally, the District has had several meetings and numerous discussions with Illinois EPA regarding the best means to address the situation regarding the District's

nickel and zinc limits. The District met with Illinois EPA on October 30, 2007, to apprise Illinois EPA of the situation regarding the nickel and zinc limits. During that meeting, Illinois EPA advised the District that a request to extend the permit compliance schedule was premature, but could be considered at a later date. In addition, the District and ADM met with Illinois EPA on December 4, 2008. During that meeting, Illinois EPA also recommended that the District submit an application to modify its NPDES permit to extend the compliance schedule contained therein. The District submitted its NPDES permit modification request application to Illinois EPA on January 12, 2009. See Exhibit I. The District also submitted supplemental information to Illinois EPA on April 3, 2009. See Exhibit J. On May 5, 2009, Illinois EPA posted for public notice on its website a draft modified NPDES permit for the District. See Exhibit H. Therein, Illinois EPA proposed to extend the schedule of compliance for nickel and zinc from two years to three years. As of the date of filing this Petition, the modified NPDES permit has not been issued by Illinois EPA.

Also during late 2008, discussions continued between Illinois EPA, the District and ADM regarding the best means to address the District's nickel and zinc issues. The District and ADM did not know that achieving compliance with the nickel limit in the District's NPDES permit, according to the schedule also contained in the permit, would be impossible while continuing to operate both facilities until ADM discovered, in mid-2008, that incoming grain was responsible for significant amounts of nickel in the effluent sent to the District. Upon this discovery, the District and ADM provided Illinois EPA with available data and a summary of the issue as part of its Third Interim Report. See Exhibit F. In light of this information, Illinois EPA, the District and ADM agreed

that seeking a variance would also be appropriate in this situation. Because of the complexity of the issues at hand, it has taken time for the District and ADM to coordinate with Illinois EPA and to prepare this Petition. In addition, Illinois EPA has recently been using a significant portion of its resources on the distribution of the federal stimulus funds, and as a result, has not been able to commit as many resources as needed for this project. On April 28, 2008, the District provided a draft of this Petition to Illinois EPA for its review. On May 14, 2009, the District, ADM and Illinois EPA met to discuss the same.

Therefore, the Board should grant the District a partially retroactive variance in this matter.

IX. CONSISTENCY WITH FEDERAL LAW

Under Title IX of the Act, 415 ILCS 5/35-38, the Board is responsible for granting variances when a petitioner demonstrates that immediate compliance with the Board regulation(s) would impose an “arbitrary or unreasonable hardship” on the petitioner. 415 ILCS 5/35(a). The Board may grant a variance, however, only to the extent consistent with applicable federal law. See 415 ILCS 5/35(a).

Section 104.208(b) of the Board rules states the following with regard to consistency with federal law for all petitions for variances from the Board’s water pollution regulations:

- (b) All petitions for variances from Title III of the Act, from 35 Ill. Adm. Code.Subtitle C, Ch. I “Water Pollution”, or from water pollution related requirements of any other Title of the Act or Chapter of the Board’s regulations, must indicate whether the

Board may grant the relief consistent with the Clean Water Act (CWA) (33 USC 1251 et seq.), USEPA effluent guidelines and standards, any other federal regulations, or any area-wide waste treatment management plan approved by the Administrator of USEPA pursuant to Section 208 of the CWA (33 USC 1288).

35 Ill. Admin. Code § 104.208(b).

The Board has previously granted variances from State water quality standards in a number of cases, pursuant to its authority and discretion, consistent with federal law, to take such action. See e.g., Citgo Petroleum Corporation and PDV Midwest Refining, L.L.C. v. Illinois EPA, PCB 05-85 (April 21, 2005) (which granted a variance from the Board's general use and secondary contact water quality standards for total dissolved solids, 35 Ill. Admin. Code §§ 302.208(g) and 302.407); Citgo Petroleum Corporation and PDV Midwest Refining, L.L.C. v. Illinois EPA, PCB 08-33 (May 15, 2008) (which extended the variance issued in PCB 05-85); and City of Springfield, Illinois v. Illinois EPA, PCB 06-137 (September 7, 2006) (which granted a variance from the Board's general use water quality standard for dissolved oxygen, 35 Ill. Admin. Code § 302.206).

In this situation, there are no applicable federal laws or regulations that preclude granting the instant variance request. Therefore, the variance is consistent with federal law.

X. WAIVER OF REQUEST FOR HEARING

Pursuant to 35 Ill. Admin. Code § 104.204(n), the District waives its right to a hearing on this Petition.

XI. AFFIDAVITS IN SUPPORT

In support of this Petition, the District and ADM are filing affidavits simultaneously herewith. Please see the Affidavit of Timothy R. Kluge, which is filed on

behalf of the District, and the Affidavit of Mahlon Kaloupek, which is filed on behalf of ADM.

XII. CONCLUSION

This Petition satisfies the requirements of Part 104 of the Board rules, in that it: describes the regulations from which the variance is sought; describes the nature of the District's activity that is the subject of the proposed variance; describes why compliance with the regulations cannot be achieved by the compliance date; describes the efforts that would be necessary for the District to achieve immediate compliance with the regulations; describes why immediate compliance with the regulation would impose an arbitrary or unreasonable hardship; includes a detailed description of a compliance plan; describes the conditions the District suggests for the requested variance; describes the environmental impact of the District's activity; proposes a beginning and ending date for the variance; discusses consistency with federal law; includes affidavits verifying any facts submitted in this Petition; and includes a statement waiving a hearing in this matter.

In summary, the District is requesting the Board to grant it a five-year variance to allow it more time to continue its evaluation of the issues and investigation of adequate solutions regarding its nickel and zinc discharges. The District's variance request stems from the Board's adoption of more stringent nickel and zinc water quality standards, which at the time, were not anticipated to adversely impact any Illinois dischargers. However, when the District's NPDES permit was renewed, Illinois EPA imposed new effluent limits for nickel and zinc to meet the more stringent standards. Since the District is located downstream of the dam that retains the water within Lake Decatur for the City of Decatur's water supply, during dry weather, there are times when there may be no

discharge downstream to the Sangamon River into which the District discharges. As a result, the District could not be granted a mixing zone, and the District's effluent limits directly reflect the water quality standards.

Even so, given that the only intentional uses of nickel and zinc at ADM, one of the District's most significant industrial users (and a significant contributor to nickel and zinc loading), were as zinc-containing cooling tower treatment chemicals and nickel catalysts, the District and ADM initially believed that the limits could be met by finding substitutes for those chemicals. However, while ADM's use of zinc has been eliminated, ADM has been unable to find a substitute for its nickel catalyst, and it has had limited success in reducing nickel discharges through operational and housekeeping measures. More importantly, however, ADM has learned that most of the nickel and zinc come into its Decatur Complex through the corn and soybeans it processes, such that the presence of nickel and zinc is not limited to a few wastewater streams, thereby greatly increasing the complexity and cost of control.

Although the District undertook immediate action to identify the sources of the nickel and zinc in its discharge and to investigate compliance options, the District could not design, permit, purchase, construct and commence operation of any adequate treatment system in accordance with the compliance schedule set forth in its NPDES permit, as detailed herein. Similarly, ADM also could not design, permit, purchase, construct and commence operation of any adequate treatment system in accordance with the compliance schedule.

Further, human health and the existing aquatic life will not be adversely impacted through the granting of this variance since the amount of nickel and zinc to be discharged

would not increase beyond historical levels. This variance is necessary for the District to continue its evaluation and investigation of compliance options.

WHEREFORE, Petitioner, the Sanitary District of Decatur, respectfully requests that the Board grant a variance from the water quality standards for nickel and zinc, as set forth in Section 302.208(e), and from the effluent limits that could otherwise be imposed through Section 304.105. In addition, the Sanitary District of Decatur respectfully requests the Board to order the Illinois EPA, pursuant to Section 309.184, to modify the Sanitary District of Decatur's NPDES consistent with the variance requested in this Petition.

Respectfully submitted,

SANITARY DISTRICT OF DECATUR,
Petitioner,

DATE: June 15, 2009

By: /s/Katherine D. Hodge
One of Its Attorneys

Katherine D. Hodge
Lauren C. Lurkins
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705
(217) 523-4900

SDOD:001/Fil/Petition for Variance -- nickel and zinc (6.15.09)

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB
	)	(Variance - Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

AFFIDAVIT OF MAHLON KALOUPEK

I, Mahlon Kaloupek, being first duly sworn on oath, depose and state as follows:

1. I am currently employed as the Plant Advisor at Archer Daniels Midland Company ("ADM") in Decatur, Illinois, a position which I have held since May 2001. Prior to my employment as Plant Advisor, I held the following positions at ADM: Production Support Chemist from July 1974 to July 1975; Assistant Quality Control Laboratory Manager from July 1975 to March 1977; and Plant Technical Superintendent from March 1977 to May 2001. I received a Bachelor of Science in Chemistry from Coe College in Cedar Rapids, Iowa.

2. I participated in the preparation of the Petition for Variance dated June 15, 2009, to the extent it discusses ADM.

3. I have read the Petition for Variance dated June 15, 2009, and based upon my personal knowledge and belief, the facts stated therein with regard to ADM are true and correct.

FURTHER AFFIANT SAYETH NOT.

Mahlon Kaloupek
Mahlon Kaloupek

Subscribed and sworn to before me
this 15 day of June, 2009.

[Signature]
Notary Public

SDOD 001 Fil Affidavit of Mahlon Kaloupek



BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SANITARY DISTRICT OF)	
DECATUR,)	
)	
Petitioner,)	
)	
v.	)	PCB _____
	)	(Variance - Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

AFFIDAVIT OF TIMOTHY R. KLUGE


I, Timothy R. Kluge, being first duly sworn on oath, depose and state as follows:

1. I am currently employed as the Technical Director for the Sanitary District of Decatur ("District") in Decatur, Illinois, a position which I have held since July 2007. Prior to July 2007, I was employed by the Illinois Environmental Protection Agency for approximately 31 ½ years, where I held various positions, including Field Operations Section Manager, Industrial Permit Unit Manager and field engineer, all within the Division of Water Pollution Control. I received a Bachelor of Science in Chemical Engineering from the University of Illinois, Champaign-Urbana and a Masters of Science in Thermal and Environmental Engineering from Southern Illinois University at Carbondale.

2. I participated in the preparation of the Petition for Variance dated June 15, 2009, to the extent it discusses the District.

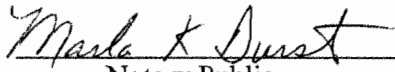
3. I have read the Petition for Variance dated June 15, 2009, and based upon my personal knowledge and belief, the facts stated therein with regard to the District are true and correct.

FURTHER AFFIANT SAYETH NOT.



 Timothy R. Kluge

Subscribed and sworn to before me
this 15th day of June, 2009.



 Notary Public



CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached ENTRY OF APPEARANCE OF KATHERINE D. HODGE, ENTRY OF APPEARANCE OF LAUREN C. LURKINS, PETITION FOR VARIANCE with attached exhibits, AFFIDAVIT OF MAHLON KALOUPEK and AFFIDAVIT OF TIMOTHY R. KLUGE, upon:

Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601

via electronic mail on June 15, 2009; and upon:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois, on June 15, 2009.

/s/Katherine D. Hodge
Katherine D. Hodge