BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY	)	R03-11
OF EFFINGHAM TREATMENT	)	(Site-Specific Rulemaking - Water)
PLANT FLUORIDE DISCHARGE,	)	
35 ILL. ADM. CODE 304.233	)	

NOTICE OF FILING

TO: Ms. Dorothy M. Gunn
Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA FIRST CLASS MAIL)

John C. Knittle, Esq.
Hearing Officer
Illinois Pollution Control Board
1717 Philo Road
Suite 25
Urbana, Illinois 61826
(VIA FIRST CLASS MAIL)

(SEE PERSONS ON ATTACHED LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Illinois Pollution Control Board an original and nine copies of the **PETITIONERS' POST-HEARING PUBLIC COMMENTS**, attached herewith, copies of which are hereby served upon you.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: May 19, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
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CERTIFICATE OF SERVICE

I, David M. Walter, the undersigned, hereby certify that I have served the attached PETITIONERS' POST-HEARING PUBLIC COMMENTS, upon:

Ms. Dorothy M. Gunn
Clerk of the Board
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100 West Randolph Street
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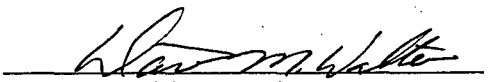
by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on May 19, 2003.



David M. Walter

BLUE:001/Filings/NOF-COS - Public comments

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11 (Site-Specific Rulemaking - Water)

PETITIONERS' POST-HEARING PUBLIC COMMENTS

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC. ("BBI"), and TRUCKOMAT CORPORATION ("Truckomat") (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN ("HDZ"), and hereby provide the Illinois Pollution Control Board ("Board") with post-hearing public comments, including responses to questions and requests for additional information by the Board's technical staff at the hearing.

I. SUMMARY OF RELIEF REQUESTED

As explained more fully in the Petition and at the April 11, 2003, hearing ("Hearing"), the Petitioners are seeking a site-specific effluent limit for fluoride for discharges from the City's Publicly Owned Treatment Works ("POTW"), including wastewater from BBI and Truckomat's Effingham facilities. The Board's effluent regulations require, at Section 304.105, that effluent from the City not cause an applicable water quality standard to be exceeded. 35 Ill. Admin. Code § 304.105. The general numeric water quality standard for fluoride, which is set forth in Section 302.208(g), is 1.4 mg/L. 35 Ill. Admin. Code § 302.208(g).

II. WHAT THE EVIDENCE HAS SHOWN

The City is a transportation hub located at the intersection of Interstate 57 and Interstate 70. Pre-filed Testimony of Steve Miller ("Miller") at 2. The City has numerous industries, motels, hotels and restaurants. Miller at 2. The City has a population of 12,022. Miller at 2.

The City's POTW utilizes an oxidation ditch treatment system with tertiary rapid sand filtration. Miller at 3. This treatment system is designed to address biological oxygen demand, and to remove suspended solids and carbonaceous biological oxygen demand. Miller at 3. Like most municipal treatment plants, however, it is not designed to remove soluble inorganic anions such as fluoride. Miller at 3.

The City's POTW discharges its wastewater to an unnamed tributary of Salt Creek, pursuant to a National Pollutant Discharge Elimination System ("NPDES") permit issued by the Illinois Environmental Protection Agency ("IEPA" or "Agency"). Miller at 3. A modified NPDES permit (No. IL0028622) was issued to the City on March 30, 2000. Miller at 3.

The 2000 Permit established a daily maximum fluoride discharge limit for the City's POTW of 8.6 mg/L "from the effective date of the modified permit [i.e., November 1, 1998] until the attainment of operational level of the new sewage treatment plant." Miller at 3. Once the City's new sewage treatment plant became operational, the permit specified that the daily maximum fluoride discharge limit would become 1.4 mg/L. Miller at 3. This 1.4 mg/L daily maximum fluoride discharge limit in the Permit is based on the water quality standards set forth in Section 302.208(g) of the Board's regulations.

Miller at 3-4. This limit was apparently established based on a 7-day, 10-year ("7Q10") low flow value of zero for the unnamed tributary of Salt Creek. Miller at 4. In other words, for the case of no flow in the receiving water (i.e., 7Q10 of zero), the discharge itself would be required to meet the water quality standard for fluoride. Miller at 4. In June 2001, the City's new sewage treatment plant became operational, and the 1.4 mg/L daily maximum fluoride discharge limit went into effect. Miller at 4.

The background concentration of fluoride in the City's wastewater is 1.0 mg/L, since fluoride is added to the City water supply for dental health purposes. Miller at 4. As a result, only a small amount of fluoride for industrial loading can be allowed, and the industrial discharge limit must be extremely stringent, in order for the City to comply with the general water quality standard of 1.4 mg/L. Mille at 4.

Following the issuance of the NPDES permit, with the fluoride discharge limit of 1.4 mg/L, the City attempted to determine the sources of the fluoride in its wastewater and to develop local limits for fluoride for those sources. Miller at 4. Industry sampling identified four Effingham industries as the primary sources of fluoride in the City's POTW. Miller at 4. These four industries consist of two BBI truck washes, a Truckomat truck wash, and another industry named Fedders. Miller at 4. Fedders has discontinued its activities and is no longer a source of fluoride. Miller at 5.

BBI and Truckomat wash the exteriors of over-the-road trucks, using chemicals (soap and brightener) applied with high-pressure wands. Prefiled Testimony of Mike Rose ("Rose") at 2-3. The brightener used to wash the trucks contains hydrofluoric acid ("HF"), which is the source of the fluoride in the wastewater from the subject facilities.

Rose at 2-3. The HF chemically removes the aluminum oxide coating, which forms on the exposed aluminum surface of over-the-road trucks. Rose at 3. In addition, HF removes film from a truck's paint by the simple process of spraying on and washing off. Rose at 3. This allows trucks to be cleaned without the use of a brush, which virtually eliminates the possibility of scratching a vehicle and decreases the waiting time for drivers. Rose at 3.

In order to meet its new NPDES discharge limit of 1.4 mg/L, the City calculated a preliminary pretreatment discharge limit of 2.54 mg/L for each of the four industrial sources of fluoride in the City. Miller at 4. This preliminary pretreatment discharge limit was never adopted by the City, because it did not appear to be obtainable by the industrial sources. Miller at 4. The average and maximum fluoride concentrations from the City's sampling event were 44 mg/L and 120 mg/L, respectively, at one BBI truck wash and 87 mg/L and 130 mg/L, respectively, at the other BBI truck wash. Miller at 4-5. The average and maximum fluoride concentrations for the City's sampling event at Truckomat were 39 mg/L and 100 mg/L, respectively. Miller at 5.

Wastewater pretreatment at the truck wash facilities is accomplished by providing retention in a settling pit, which is designed to remove heavy solids by gravity settling. Rose at 2. Soluble parameters such as fluoride are not removed in the settling pit and are, therefore, discharged to the City's municipal sewer system.[1] Rose at 2. There is no feasible treatment option for the fluoride in the discharge from BBI and Truckomat.

[1] As discussed in response to Board Question Nos. 23 and 24, this solubility prevents use of fluoride re-use or recycle systems.

Rose at 4. BBI and its consultants, Shepard Engineering, Incorporated, completed bench tests using untreated truck wash wastewater samples. Rose at 4. During the bench tests, 27 jar tests were completed, which revealed that the lowest practicable fluoride removal level for the truck wash facilities was in the range of 10 mg/L. Rose at 4. This is a significantly greater level than the pretreatment discharge limit of 2.54 mg/L proposed by the City. Rose at 4. Accordingly, it is not technically feasible for BBI or Truckomat to achieve the fluoride limit proposed by the City.[2] Rose at 4.

In turn, it will not be possible for the City to comply with the water quality standard for fluoride. Pre-filed Testimony of Max Shepard ("Shepard") at 7. Pretreatment by the City is also not technically practicable, due to the same limitations as were found with treatment at the truck washes. Shepard at 7. Despite the addition of wastewater from other sources, at the City's POTW, the lowest practicable fluoride removal level that could be achieved by the City still greatly exceeds the current fluoride effluent limit. Shepard at 7.

After determining the sources of the fluoride in its discharge, and reviewing the sampling data against the preliminary discharge limit, the City worked with BBI,

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[2] Though the bench tests did not achieve fluoride reduction that would be required to comply with the discharge limits at issue, cost estimates were developed for wastewater treatment systems for the three truck wash operations in the City. Rose at 4. The estimated total capital cost for this equipment (i.e., for separate systems at each of the three locations) is $1.5 million, based on a design wastewater flow rate of 30,000 gallons per day at each location. Rose at 4. Moreover, it is estimated that the chemicals, operating labor, sludge disposal, maintenance and depreciation associated with such a wastewater treatment system would cost $600,000 annually. Rose at 4-5. If an attempt were made to recoup this annual operating cost by increasing prices, the price of a wash would increase approximately 13 percent, i.e., an additional $5.00 every time a truck is washed. Rose at 5. Such drastic increases would cripple the truck wash operations in the City, particularly since there are a number of truck wash competitors within driving range of the trucks utilizing these services. Rose at 5. Thus, even if it was technically feasible using the available technology to achieve the fluoride standard currently imposed, which it is not, the costs of such technology would be prohibitively expensive. Rose at 5.

Truckomat, Shepard Engineering Incorporated and the Agency to determine an acceptable fluoride discharge level, which has been determined to be 4.5 mg/L. Miller at 5; Shepard at 2. This level is consistent with the historical discharge from the City. Shepard at 5. Indeed, the effluent fluoride concentration in the City's wastewater discharge ranged from 1.4 mg/L to 4.8 mg/L from January 1999 through December 2001. Shepard at 5. The average discharge fluoride concentration during that time period was 2.73 mg/L for 45 sampling events. Shepard at 3.

The proposed site-specific fluoride effluent standard of 4.5 mg/L will be protective of the waters of the State located downstream. Shepard at 9. Based on empirical data, the fluoride levels in the City's discharge are not having an adverse impact on the City of Flora water supply fluoride levels downstream. Shepard at 3. During the years 1999 and 2001, the effluent discharged from the City's POTW exhibited a fluoride concentration ranging between 1.5 mg/L to 4.8 mg/L. Shepard at 3. Nevertheless, 0.51 mg/L was the highest concentration of fluoride detected downstream on the Little Wabash River in the City of Flora's raw water supply intake during those same years. Shepard at 5. Thus, the historic levels of fluoride discharged in the effluent from the City's POTW have clearly not affected downstream use of the water by the City of Flora. Shepard at 5.

During discussions with technical staff from the IEPA prior to the submittal of the Petition, the IEPA requested a more comprehensive evaluation of the impact of evaporation on the expected fluoride levels in the affected stream segments during low flow periods. Shepard at 5. On behalf of the Petitioners, and at the request of the IEPA, Shepard Engineering, Incorporated conducted water balance and fluoride balance

calculations on the stream segments in question. Shepard at 5. These calculations by Petitioners demonstrate that using the standards proposed herein, the City of Flora's water supply will not exceed 2.0 mg/L fluoride, even under 7Q10 low flow conditions and taking evaporation into consideration.[3] Shepard at 5-6.

Commonwealth Biomonitoring, Inc. ("CBI"), Indianapolis, Indiana, conducted a detailed scientific assessment of the effects of fluoride on the water downstream from the City's POTW. Shepard at 10. To determine a site-specific effluent limit for fluoride that would be protective of aquatic life downstream from Effingham, Illinois, fluoride toxicity data, as well as water quality and bioassessment data from the receiving stream, were collected and analyzed. Shepard at 10.

Bioassessments from CBI and the IEPA demonstrate that fluoride from the City's POTW discharge is not causing any harm to aquatic life.[4] Shepard at 10. In addition, studies published in the scientific literature demonstrate that sensitive aquatic species can exist in waters with higher fluoride concentrations than those proposed by Petitioners for the site-specific water quality and effluent standards. Shepard at 10. Finally, because of the hardness of the water for which site-specific relief is sought, higher concentrations of fluoride are acceptable and will not be detrimental to the environment.[5] Shepard at 10.

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[3] To further insure that fluoride levels at Flora never exceed 2.0 mg/L, Petitioners will conduct sampling during times of low flow. Tr. at 45, 53-69.

[4] This includes, but is not limited to, threatened and endangered species. Tr. at 82.

[5] As set forth further below, even using the lower hardness values preferred by the IEPA, the proposed effluent limit is still protective of aquatic life.

Thus, site-specific relief requested can be granted without any harm to either aquatic life or the environment. Shepard at 10.

As the testimony at hearing demonstrated, and as stated in the response to the Board's questions prior to hearing, BBI has made extensive efforts to find an alternative brightener, but has not found one that provides suitable results. Tr. at 95-103; Petitioners Response to Question 23. The negative economic impact that would occur, if the truck washes in the City were forced to abandon the HF brightener and use an inferior product, would be severe. Rose at 5. Specifically, BBI projects that the loss of HF brightener would result in annual revenue loss of $300,000 per double bay location. Rose at 5. This correlates to a total economic loss of $900,000 in the City, based on the decrease of truck wash revenue alone. These economic losses would be compounded by the lost revenue for other associated businesses (e.g., restaurants, truck stops, motels, etc.), as well as loss of employment. Rose at 5. It is also projected that the loss of HF brightener would result in the loss of seven to eight employees per truck wash location – a total of 21 to 24 lost jobs in the City. Rose at 5.

Given the industrial and transportation presence in the Effingham area, truck washes are an important industry in, and source of income for, the City. Rose at 6. Indeed, the Average Daily Traffic Report for 2001 indicates that 47 percent of the approximately 33,100 vehicles travelling on Interstate 57 and Interstate 70 are semi-trucks. Rose at 6. The drivers of these 15,557 trucks make a substantial contribution to the Effingham community each day. Rose at 6. It is estimated that, on a daily basis, an average of 1,000 truck drivers purchase fuel in the City. Rose at 6. The drivers of these

trucks spend an average of $71.00 per person in the City, i.e., $71,000 contributed to the local economy on a daily basis. Rose at 6. Statistical research has shown that truck drivers generally stop for a truck wash, fuel, and food at the same time. Rose at 6. An average of 26 percent of the 1,000 truck drivers stopping daily for fuel in the City will also obtain a truck wash, at an average cost of $37.50. Rose at 6. This does not even take into consideration the dollars spent by these truck drivers at local restaurants or hotels. Rose at 6. If these truck drivers travel through or around the City to obtain a truck wash elsewhere, these restaurants and hotels will be impacted, as well as the truck washes and filling stations. Rose at 6.

Thus, in order for the City to meet its fluoride limit, these businesses would be severely hampered, if not eliminated. Miller at 5. The continued operation of industries like BBI and Truckomat is important to the City. Miller at 5. Indeed, the loss of these industries could have a severe negative impact on the City, as well as the surrounding areas. Miller at 5. Adoption of the proposed site-specific effluent standard will allow socially and economically valuable services located in Effingham, Illinois, to continue. Rose at 1.

In their pre-filed testimony and at the Hearing, Petitioners have demonstrated that treatment to a general fluoride water quality standard of 1.4 mg/L is neither technically feasible nor economically reasonable for the unnamed tributary of Salt Creek from the point of the City's discharge to a point approximately 44 miles downstream. Petitioners also demonstrated that the elimination of fluoride-based chemicals from BBI and Truckomat's facilities would have a severe negative economic impact on the industries, as

well as the City. Moreover, Petitioners demonstrated that the fluoride effluent standard requested will not harm the aquatic life in the waters downstream of the City's discharge or have a negative impact on the current use of surface waters as a public water supply.

III. ADDITIONAL INFORMATION PROVIDED TO THE BOARD

No members of the public attended the hearing. Hearing Transcript ("Tr.") at 6, 115. Moreover, the Agency indicated its support for the technical foundation of the relief requested and recommended that regulatory relief in the form of a site-specific rule making be granted to the Petitioners. Tr. at 17.

At the Hearing, the Board's technical staff raised some further questions, and requested that Petitioners provide the Board with some further specific information along with Petitioners public comments. In response to these questions and in accordance with these requests, the following additional information is being provided for the Board's consideration.

1. At the Hearing, in response to a question from Board Chairman Johnson, Petitioners indicated that the Village of Louisville has a forty-year contract to receive its water from E J Water Corporation. Tr. at 61. Petitioners are providing the Board with a copy of that forty-year contract between the Village of Louisville and E J Water Corporation, for the purchase and sale of water. See Water Sales Contract attached as Exhibit A, hereto.

2. At the Hearing, Chairman Johnson also inquired as to whether the City of Flora had been notified of this rule making, and whether there was any intent to notify the City of Flora other than through the notification by publication. Tr. at 59. N. LaDonna

Driver, of HDZ, contacted the City Administrator of the City of Flora on May 31, 2002 and left a voicemail message notifying the City of Flora of Petitioner's intent to file this Petition with the Board. See Affidavit of N. LaDonna Driver, attached as Exhibit B, hereto.

3. As requested by Board technical staff member, Alisa Liu, during the Hearing (Tr. at 76), Mr. Greg Bright performed some recalculations of the final chronic value for fluoride, utilizing the Agency's preferred hardness values of 130-143 mg/L for the receiving stream. These recalculations resulted in final chronic values for fluoride of 4.7 mg/L and 5.2 mg/L respectively. Thus, utilizing the Agency's preferred hardness values, Mr. Bright, like the Agency, still concluded that the proposed effluent limit for fluoride would be protective of the freshwater aquatic life in the receiving stream. See correspondence from Greg Bright regarding recalculations, attached as Exhibit C, hereto.

4. The Board's technical staff asked Petitioners to describe any worker or user safety hazards associated with BBI's current truck wash chemicals. Tr. at 113-114. Accordingly, a Material Safety Data Sheet ("MSDS") for the brightener used by BBI is attached as Exhibit D, hereto.

5. As noted at Hearing, the relief requested by Petitioners will be protective of all aquatic species, and not just those that are threatened or protected. See Tr. at 82. Nevertheless, in response to the Board technical staff's request (Tr. at 81-83), the Petitioners also specifically investigated with the Agency the issue of threatened and endangered species. On April 14, 2003, the Petitioners were notified by the Agency that, based upon the Agency's discussions with the Illinois Department of Natural Resources,

there are no threatened or endangered species in the receiving waters affected by the proposed site-specific rule. It is Petitioners' understanding, based upon communications with the Agency, that the Agency will be providing the Board with this information, in the Agency's pubic comments.

6. The Board's technical staff asked BBI to contact the Illinois Waste Management and Research Center ("WMRC") regarding possible alternatives to the HF brightener that is currently used by BBI. Tr. at 111. In addition, the Board's technical staff asked BBI to examine some information about alternate brighteners that the Board's technical staff had obtained from the internet. Tr. at 106-109. As requested, BBI contacted the WMRC and examined the information regarding alternate brighteners. Nevertheless, neither effort produced a viable alternative to the relief requested herein. The results of this additional exploration by BBI are attached as Exhibit E hereto. A memorandum regarding other recent test results by BBI, in its search for an alternative to the HF brightener is attached as Exhibit F, hereto.

IV. WHY RELIEF FROM SECTION 304.105 IS PROPER

The testimony at the hearing demonstrated that the Petitioners have worked closely with the Agency on this issue over the course of the last several months. And, on page one of its Pre-filed Testimony, the Agency notes that it is in substantial agreement that the rulemaking change proposed by the Petitioners is necessary. Nevertheless, in its Pre-filed Testimony and again at hearing, the Agency suggests that the water quality standard for the receiving stream should be modified, instead of the Board simply granting

relief from Section 304.105. The relief sought, however, is consistent with this Board's precedent.

A. The Relief Sought By Petitioners Is Consistent With Board Precedent.

As the Agency recognizes on page 5 of its pre-filed testimony, the Petitioners' approach in not requesting a change in the water quality standard is consistent with several recent Board decisions. As noted at hearing, as recently as June 6, 2002, the Board denied a petitioner's request for relief from the water quality standards of Section 302.208 of the Board's regulations and granted relief from Section 304.105 instead. In the Matter of: Material Service Corp. Petition for an Adjusted Standard, AS 02-1, 2002 Ill. Env. Lexis 335 at *2 (IPCB, June 6, 2002). The Board reasoned that granting relief from the water quality standard would be too expansive and could have the effect of giving other dischargers located on the stream the same relief as the petitioners, even though the other discharges had not made (and may not have been able to make) the same demonstrations. Id. at *16-*19.

Similarly, In the Matter of: Petition of Rhodia, Inc., AS 01-9 (IPCB, January 10, 2002), the Board denied a petitioner's request for relief from the water quality standards of Section 302.208, as unnecessary, and granted relief from Section 304.105 instead. The Board stated that relief from Section 302.208 was unnecessary, since the petitioner would be exempt from causing or contributing to water quality violations up to the concentration limits the petitioners had proposed. Id. at 10.

The Board has explained that, by granting relief in such circumstances from Section 304.105, instead of from the water quality standards, the relief is limited to the

petitioners seeking relief and other dischargers are still required to meet the generally applicable water quality standards. In the Matter of: Petition of the Rhone-Poulenc Basin Chemical Co., AS 94-7, 1994 WL 449082 at 1 (IPCB, August 11, 1994). Moreover, in such cases where the general water quality standard is not changed, the Board has specifically directed the Agency to revise the petitioners' NPDES permit consistent with the relief granted by the Board from Section 304.105. In the Matter of: Petition of the Rhone-Poulenc Basin Chemical Co., AS 94-7, 1994 WL 449082 at *17 (IPCB, June 23, 1994).

Thus, there is ample precedent for the Board to grant the Petitioners the relief from Section 304.105 that has been requested. Moreover, such relief is not inconsistent with federal law.

B. Contrary To The Agency's Claims, Consistent With Federal Law, The Board Can Grant Permanent Relief From Water Quality Standards.

In its Pre-filed Testimony, the Agency indicates that for the Board to grant a discharger indefinite or permanent permission to violate a water quality standard is inconsistent with federal law. Pre-filed Testimony at 8. The Agency provides no citations in support of this argument, however. Moreover, 40 C.F.R. § 131.13 specifically grants States the authorization to, in their discretion, include in their standards policies generally affecting their application and implementation, including as to how the standard applies during low flows.

The Board has long recognized that it has the authority to grant permanent relief in the form of a site-specific rule, pursuant to Section 27 of the Act (415 ILCS 5/27). See, e.g., Midwest Rubber Reclaiming Div. v. IEPA, No 89-85, 1989 Ill. ENV LEXIS 627 at

*1, (IPCB, May 25, 1989); In the Matter of Marathon Oil Co.'s Petition for Site-Specific Rule Change to 35 Ill. Admin Code 303.323, No. R91-23, 1993 Ill. ENV LEXIS 1021 (IPCB Oct. 7, 1993). In the past, the Agency and the USEPA have also recognized that the Board may grant specific facilities permanent relief from the general use water quality standards. LTV Steel Co. v. IEPA, No. 91-49, 1995 Ill. ENV LEXIS 593 at *1 (IPCB, June 1, 1995).

In its Pre-filed Testimony, the Agency contends that Section 402 of the Clean Water Act ("CWA") (33 U.S.C. § 1342) and Section 39 of the Illinois Environmental Protection Act ("Act") (42 ILCS 5/39) prohibits the Agency from issuing an NPDES permit that will violate the water quality standard. Pre-Filed Testimony at 8. Nevertheless, Section 402 of the CWA and Section 39 of the Act do not prohibit issuance of an NPDES permit, here, because the site-specific relief prevents the City's discharge from violating the water quality standard. Indeed, pursuant to 40 C.F.R. § 131.13 the Board has discretion regarding the application and implementation of its water quality standards, including how a standard applies during low flows.

In support of its Pre-filed Testimony, the Agency also relies on correspondence, dated August 26, 1985, that it received from the USEPA's Region V (Pre-filed Testimony at 8, Exhibit A) regarding the site specific relief from Section 304.105 that was granted to the John Deere Foundry and codified at 35 Ill. Admin. Code § 304.205, stating as follows:

> Historically, U.S. EPA indicated to the Illinois EPA that by granting relief solely from 35 Ill. Admin. Code § 304.105, the Agency was attempting to make an end run around its requirement to gain U.S. EPA approval to changes in water quality standards.

Pre-Filed Testimony at 8.

Nevertheless, contrary to the Agency suggestion, this rather dated letter from the USEPA does not object to the form of the relief requested. In its August 26, 1985 letter, the USEPA's Region V did express concern that, among other things, the site specific rule for the John Deere Foundry would not be protective of the designated general use of the receiving stream. See Pre-hearing Testimony, Exhibit A at 1. Notably, however, the letter also provides in pertinent part as follows:

> We would like to avoid disapproval of the water quality standards exemption for John Deere Foundry as currently adopted.

Id.

Rather than prohibit relief from Section 304.105 of the Board's regulations, this letter from the USEPA's Region V appears to simply indicate that such water quality standard exemptions must be consistent with the use designation for the receiving stream. This conclusion is further reinforced by the fact that the exemption to the John Deere Foundry is still set forth in Section 304.205 of the Board's regulations. Moreover, an internal Agency Memorandum obtained pursuant to the Freedom of Information Act indicates that the USEPA subsequently withdrew its objection to the site-specific rule for the Deere Foundry. See Memorandum of Toby Frevert to Rick Pinneo, dated July 23, 1986, attached as Exhibit G hereto.

The Memorandum of Toby Frevert indicates that the USEPA withdrew their objection to the site-specific rule with the understanding that use attainability will be addressed. And, in this case, of course, use attainability was addressed. Tr. at 45. At the Hearing, Scott Twait of the Agency, testified in pertinent part, as follows:

> The Agency does not believe that a use attainability analysis is necessary. A UAA is done to a general use water body when there is a downgrading of a use.
>
> The uses: Protection of wildlife, agriculture use, secondary contact, industrial use, and the portion of the receiving stream that is protected as primary contact were eliminated from review in early consultations since the fluoride levels do not affect the use.
>
> The petition has demonstrated that the aquatic life use and the public and food processing use will be protected. Therefore, all existing uses will be maintained and protected.

Tr. at 45.

Thus, relief may be granted from Section 304.105 as requested pursuant to both this Board's precedent and the CWA.

C. Contrary To The Agency's Claims, The Relief Sought Does Not Result In Two Different Water Quality Standards for the Receiving Stream.

The Agency provides no citations in support of its argument that a new water quality based effluent limit ("WQBEL") requires there to have first been a change in the water quality standard. Moreover, the Board's precedent clearly demonstrates that, when relief is from Section 304.105 alone, the water quality standard for the receiving stream remains the same. In the Matter of: Petition of the Rhone-Poulenc Basin Chemical Co., AS 94-7, 1994 WL 449082 at 1 (IPCB, August 11, 1994).

All that the Board's relief will do here is exempt the Petitioners from compliance with the general water quality standard for the receiving streams during periods of low flow, so long as the site specific effluent standard is met. As the Board's precedent makes clear, other dischargers must comply with the water quality standard for the receiving stream of 1.4 mg/L fluoride, which remains unchanged. See, e.g., Id.

D. Contrary To The Agency's Claims, The Averaging Rule Applies to Regulatory Effluent Limits; It Is Not Limited to Effluents Established Pursuant to NPDES Permits.

In its Pre-filed Testimony, the Agency also incorrectly suggests that "the averaging rule in Part 304 merely addresses how compliance with the effluent ultimately placed in [an] NPDES permit is determined." Pre-filed Testimony at 13. This statement is simply incorrect. Section 304.104 sets forth a method for interpreting the numerical effluent standards in Part 304. 35 Ill. Admin. Code § 304.104(c). The method for interpreting the effluent standards provides, in pertinent part, as follows:

> Section 304.104 Averaging
>
> a) Except as otherwise specifically provided, proof of violation of the numerical standards of this Part shall be on the basis of one or more of the following averaging rules:
>
> 1) No monthly average shall exceed the prescribed numerical standard.
>
> 2) No daily composite shall exceed two times the prescribed numerical standard.
>
> 3) No grab sample shall exceed five times the prescribed numerical standard.

35 Ill. Admin. Code § 304.104(a) (emphasis added).

As a general rule, however, proof of compliance with the effluent limits set forth in Part 304 pursuant to the averaging rule, does not necessarily mean that the limits of an NPDES permit have not been violated, if the permit specifically provides other limitations.

> d) Proof of violation of effluent limitations contained in permits shall be based on the language of the permit.

35 Ill. Admin. Code § 304.104(d).

Thus, the averaging rule of Section 304.104 is clearly not limited to "how compliance with the effluent ultimately placed in [an] NPDES permit is determined." The Agency's arguments to the contrary are simply without merit.

III. CONCLUSION

Based upon the applicable law, and the undisputed evidence in the Record, the Board may grant Petitioners relief from Section 304.105 as requested. Such relief is supported by the evidence in the record, it is in accord with recent decisions of the Board, it is consistent with federal law, and it maintains the generally applicable water quality standard of the receiving stream while simply granting the Petitioners limited and specific relief from that standard.

WHEREFORE, based upon all of the evidence that has been presented to the Illinois Pollution Control Board in this proceeding, the Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION, respectfully request that the Illinois Pollution Control Board promulgate the site-specific effluent standard for fluoride requested, and/or grant such other relief as is appropriate and just.

Respectfully submitted:

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: May 19, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BLUE:001/Fil/Petition – Public Comments

Technical Data Sheet

KO # 208

ECONO BRITE™

#1 Hydrofluoric

General Description:

208 is a liquid, dual-purpose product formulated for the truck washing industry. This formula is a fast acting combination cleaner and aluminum brightener. 208 penetrates quickly to remove oxide film, road film and diesel smoke effectively from aluminum trailer bodies. It also brightens and enhances the natural luster of the aluminum.

Application and Use Concentrations:

Dilute 208 with 20 to 30 parts water. Spray trailer from the bottom to the top. Allow product to penetrate 2-3 minutes. Rinse well with water.

Customer Benefits:

Biodegradable.
Excellent wetting ability.
Fast acting cleaner and aluminum brightener.
Highly efficient.
Quickly removes oxide film, road film and diesel smoke.

Types of Companies Using the Product:

Farms
Food Service Companies
Mobile Washers

Attention:

Refer to our Material Safety Data Sheet regarding hazards, personal protection and disposal of this product.

Revised 9/18/2000

KO MANUFACTURING, INC. 2720 E. DIVISION SPRINGFIELD, MO 65803
(417) 866-8000 FAX: (417) 866-2662

KO MANUFACTURING, INC.
MATERIAL SAFETY DATA SHEET

KO MANUFACTURING, INC. 2720 E. DIVISION P.O. BOX 3574 SPRINGFIELD, MO 65808-3574
(417) 866-8000 FAX: (417) 866-2662

#208

SECTION 1: GENERAL INFORMATION

PRODUCT NAME	ECONO BRITE	**DATE PREPARED**	7-5-2000
CHEMICAL NAME & SYNONYMS	BLEND	**SUPERSEDES**	2-15-99
CHEMICAL FAMILY	ACID	24 HOUR EMERGENCY ASSISTANCE	CHEMTREC 1-800-424-9300
FORMULA	PROPRIETARY BLEND		

SECTION II: PHYSICAL DATA

pH (1% SOLUTION)	1.0-2.0	**SOLUBILITY IN WATER**	COMPLETE
BOILING RANGE	212F AND ABOVE	**EVAPORATION RATE (WATER = 1)**	<1
% VOLATILE BY VOLUME	80%		
SPECIFIC GRAVITY	1.06		
APPEARANCE & ODOR	CLEAR, COLORLESS LIQUID WITH PENETRATING ODOR		

SECTION III: HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPOUNDS	%	THRESHOLD LIMIT VALUE (UNITS)
SULFURIC ACID	<5	1MG/CUBIC METER
HYDROFLUORIC ACID	<15	3PPM (VAPOR)
ALKYL ARYL POLYETHOXY ALCOHOL	<1	NOT ESTABLISHED

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)	DOES NOT FLASH
FLAMMABILITY LIMITS	NA
EXTINGUISHING MEDIA	NA
SPECIAL FIRE FIGHTING PROCEDURES	WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS.
FIRE AND EXPLOSION HAZARDS	MAY GENERATE HYDROGEN GAS IN CONTA WITH SOME METALS. VAPORS ARE VERY CORROSIVE.

SECTION V: HEALTH HAZARD DATA

ACGIH THRESHOLD LIMIT VALUE	NOT ESTABLISHED FOR MIXTURE
CARCINOGEN - NTP PROGRAM	NO
CARCINOGEN - IARC PROGRAM	NO
PRIMARY ROUTES OF ENTRY	CAUSES SEVERE EYE AND SKIN BURNS UPON CONTACT. VAPORS AND MISTS ARE EXTREMELY CORROSIVE TO NOSE, THROAT, AND MUCOUS MEMBRANES. INGESTION MAY CAUSE SEVERE BURNS TO MOUTH AND THROAT. LARGE AMOUNTS MAY CAUSE DEATH.
CHRONIC HEALTH HAZARDS	NONE KNOWN
EMERGENCY FIRST AID	EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: FLUSH WITH COLD WATER FOR 15 MINUTES AND THEN SOAK IN .13% ICED ZEPHIRAN CHLORIDE SOLUTION FOR 1 HOUR. INHALATION: REMOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. INGESTION: DO NOT INDUCE VOMITING. GIVE MILK OR WATER. GET MEDICAL ATTENTION IMMEDIATELY. SEE NOTE TO PHYSICIAN ON PAGE 3.

MATERIAL SAFETY DATA SHEET
FORMULA #208

SECTION V: HEALTH HAZARD DATA (Cont'd)

SECTION 313 SUPPLIER NOTIFICATION

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND 40CFR372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7664-39-3	HYDROGEN FLUORIDE	12.6
7664-93-9	SULFURIC ACID	4.9

SECTION VI: REACTIVITY DATA

STABILITY	STABLE	**CONDITIONS TO AVOID**	NA
MATERIALS TO AVOID	CORRODES MOST MATERIALS	**HAZARDOUS POLYMERIZATION**	WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS	HYDROGEN GAS FROM CONTACT WITH SOME METALS		

SECTION VII: ENVIRONMENTAL PROTECTION

SPILL RESPONSE	USE PROTECTIVE EQUIPMENT AND AVOID CONTACT WITH SKIN AND EYES. NEUTRALIZE SPILL WITH SODA ASH. FLUSH WITH PLENTY OF WATER APPLIED QUICKLY TO ENTIRE SPILL AREA.
WASTE DISPOSAL METHOD	FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS REGARDING HEALTH AND POLLUTION.

SECTION VIII: SPECIAL PROTECTION INFORMATION

EYE PROTECTION	FULL FACE SHIELD	**SKIN PROTECTION**	RUBBER, PVC, OR NEOPRENE
RESPIRATORY PROTECTION	APPROVED RESPIRATOR FOR ACID VAPOR.	**VENTILATION RECOMMENDED**	NEEDED TO MAINTAIN BELOW THRESHOLD.
OTHER PROTECTION	ACID RESISTANT APRON, RUBBERIZED BOOTS AND HAT.		

SECTION IX: SPECIAL PRECAUTIONS

HANDLING & STORAGE PRECAUTIONS	DANGER!! CORROSIVE!! CONTAINS HYDROFLUORIC AND SULFURIC ACID. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. AVOID BREATHING VAPORS. MAY CAUSE SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY VISIBLE. IN CASE OF CONTACT, FLUSH WITH LARGE QUANTITIES OF COOL WATER UP TO 3-4 HOURS OR UNTIL MEDICAL ATTENTION IS MAINTAINED.
OTHER PRECAUTIONS	CONTAINERS SHOULD BE STORED IN COOL PLACE WITH CLOSURES UP.. AVOID PHYSICAL DAMAGES TO CONTAINERS. DO NOT STORE FOR PROLONGED PERIODS OF TIME.

MATERIAL SAFETY DATA SHEET

NAME: 208 209 PAGE 3

NOTE TO PHYSICIAN: THE MEDICAL TREATMENT PROCEDURES FOR HF BURN TREATMENT AS OUTLINED BELOW HAVE BEEN APPROVED BY PHYSICIANS FOR HF PRODUCTION FACILITIES.

1. SKIN BURNS: BEFORE PROCEEDING WITH THE MEDICAL TREATMENT OUTLINED BELOW, IT IS SUGGESTED THAT THE ZEPHIRAN CHLORIDE TREATMENT UNDER THE ABOVE FIRST AID PROCEDURE BE REPEATED. IT HAS BEEN FOUND IN MOST CASES THAT CONTINUED FIRST AID TREATMENT WILL OBVIATE THE CALCIUM GLUCONATE INJECTIONS OUTLINED BELOW. TREATMENT CONSISTS OF INJECTION IN THE BURNED AREA WITH 10% CALCIUM GLUCONATE SOLUTION (STANDARD AMPOULE OF 10% INTRAVENOUS SOLUTION).

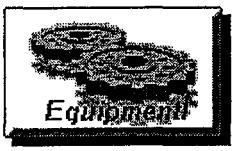
THE CALCIUM GLUCONATE SOLUTION SHOULD BE INJECTED BY A PHYSICIAN BY INFILTRATING THE SKIN AND SUBCUTANEOUS TISSUE IN THE SAME MANNER AS USED IN THE INJECTION OF A LOCAL ANESTHETIC. ALL THE SKIN WHICH HAS BEEN EXPOSED TO THE ACID SHOULD BE INFILTRATED, INCLUDING AT LEAST 1/4 TO 1/2 INCH AROUND THE AREA. EXTREME CAUTION SHOULD BE USED WHEN INJECTING CALCIUM GLUCONATE INTO FINGERS - IT COULD PRODUCE SUFFICIENT PRESSURE TO ENDANGER CIRCULATION AND CONTRIBUTE TISSUE NECROSIS. APPLY CALCIUM GLUCONATE DRESSING CREAM TO AFFECTED AREA BEFORE APPLYING DRESSING. USE DRESSING THAT WILL NOT SOAK UP CREAM.

2. EYE BURNS: EYE EXPOSURE SHOULD BE FOLLOWED IMMEDIATELY BY PROLONGED GENTLY IRRIGATING WITH COPIOUS AMOUNTS OF COOL TAP WATER. FURTHER TREATMENT TO THE EYE CONSISTS OF ANAESTHETIZING WITH DROPS OF PONTOCAINE SOLUTION, 0.5%. THEN IRRIGATE WITH DISTILLED WATER. PERSISTANT PAIN USUALLY INDICATES A NEED FOR ADDITIONAL GENTLE IRRIGATION. FLUORESCEIN SHOULD BE INSTILLED IN THE EYE AND, IF STAINING OCCURS, INTERMITTENT IRRIGATION SHOULD BE PROMPTLY SOUGHT BUT IRRIGATION MUST NOT BE DELAYED.

3. FINGER NAILS: FINGER NAILS AFFECTED SHOULD BE CUT BACK OR SPLIT AND IT MAY BE NECESSARY TO DRILL THE NAILS OR REMOVE FOR DRAINAGE. WASH AND SOAK IN ZEPHIRAN CHLORIDE SOLUTION AS DIRECTED UNDER FIRST AID. IT MAY BE NECESSARY TO INJECT UNDER THE NAIL WITH 10% CALCIUM GLUCONATE SOLUTION. DRESS WITH THE 10% CALCIUM GLUCONATE CREAM.

4. INGESTION: LAVAGE WITH LIME WATER SHOULD BE DONE PROMPTLY BY A PHYSICIAN ONLY. SOLUBLE CALCIUM INACTIVATES THE FLUORIDE ION. IN ADDITION TO LAVAGE, 10CC OF A 10% SOLUTION OF CALCIUM GLUCONATE SHOULD BE INJECTED INTRAVENOUSLY. RESPIRATORY DEPRESSION SHOULD BE COMBATTED WITH OXYGEN AND STIMULANTS IF NECESSARY, AND ARTIFICIAL RESPIRATION SHOULD BE USED IF NEEDED.

Brightener F



PRECAUTIONS

Avoid contact with glass. **BRIGHTENER F** will etch glass surfaces if it comes in When using, do not allow mist or spray to drift onto glass surfaces n **BRIGHTENER F** solutions. Do not use **BRIGHTENER F** on "mirror finished" alu

DANGER: POISON - CORROSIVE

HARMFUL OR FATAL IF SWALLOWED, CAUSES BURNS, VAPOR

HAZARDOUS LIQUID AND VAPOR CAN CAUSE BURNS WHICH MAY NO PAINFUL OR VISIBLE. Contains hydrofluoric acid and phosphoric acid. Avoid contact. Mist may be irritating. Use with adequate ventilation. Keep container clo Wash thoroughly after handling. Safety glasses with side shields and recommended when handling. Always add acid compounds to water and splattering. Eyewash fountains in the workplace are strongly recommended. St caustic compounds and metals, and away from direct heat. **IN CASE OF CONT OF CONTACT, PROMPT MEDICAL ATTENTION IS ABSOLUTELY NECESSA**

FIRST AID

EYE CONTACT: Immediately flush with plenty of cool water for at least 15 mi within 1 minute is essential to achieve maximum effectiveness. **SEEK ME IMMEDIATELY.**

SKIN CONTACT: Immediately wash contaminated areas with soap and large qu while removing contaminated clothing and shoes. **SEEK MEDICAL ATTENTI** Discard non-rubber shoes and wash clothing before reuse.

INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS INDUCE VOMITING. Give large quantities of water or milk. If vomiting occurs airway clear. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

INHALATION: Remove to fresh air. **SEEK MEDICAL ATTENTION IMMEDIATE**

Consult MSDS for more detailed information on the safe handling of th

FOR COMMERCIAL OR INDUSTRIAL USE ONLY!

KEEP OUT OF THE REACH OF CHILDREN!

Warranty and Liability Disclaimer

The above information and recommendations concerning this product are based upon laboratory tests a
however, since conditions of actual use are beyond our control, any recommendations are made witho u
implied. Manufacturer's and seller's sole obligation shall be to replace the portion of the product shown to b
liable for any loss, damage or injury, direct or consequential, arising out of the use of this pr

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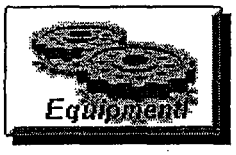
Sales Opportunities!

Brightener F



DESCRIPTION

BRIGHTENER F is a clear liquid with a slight solvent odor. It is composed of ino agents, and a solvent for soil removal. A 1% solution has a pH of 2.0.

PURPOSE

BRIGHTENER F is designed especially as an aluminum brightener and cle effective in removing light road films and oxidation from aluminum surfaces. It coatings in a quick, easy operation.

DIRECTIONS FOR USE

BRIGHTENER F is used in concentrations ranging from undiluted to one part twenty parts of water.

Spray, brush or mop applications may be used. Simply apply **BRIGHTEN** concentration (heavily oxidized areas require a higher concentration; lightly oxi lower concentration). Allow it to stand and penetrate. Then, rinse with plain t necessary to agitate areas where oxidation is extremely heavy.

BRIGHTENER F contains a powerful cleaning agent in concentrated for successfully for most brightening applications when diluted one to ten with water.

BRIGHTENER F, at a concentration of one to five, removes dyed anodic coating matter of minutes. No heat is necessary. The resulting finish is a uniform reflectiv

For precautionary information, click here.

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Sales Opportunities!

PRODUCT DATA SHEET

PANTHER INDUSTRIES, INC.

Established 1922

CHEMICAL ETCHING ACTION

BRIGHTENER F

DESCRIPTION:

BRIGHTENER F is a clear liquid with a slight solvent odor. It is composed of inorganic acids, wetting agents, and a solvent for soil removal. A 1% solution has a pH of 2.0.

PURPOSE:

BRIGHTENER F is designed especially as an aluminum brightener and cleaner. It is extremely effective in removing light road films and oxidation from aluminum surfaces. It also removes anodic coatings in a quick, easy operation.

DIRECTIONS FOR USE:

BRIGHTENER F is used in concentrations ranging from undiluted to one part **BRIGHTENER F** to twenty parts of water.

Spray, brush or mop applications may be used. Simply apply **BRIGHTENER F** in the desired concentration (heavily oxidized areas require a higher concentration; lightly oxidized areas require a lower concentration). Allow it to stand and penetrate. Then, rinse with plain tap water. It may be necessary to agitate areas where oxidation is extremely heavy.

BRIGHTENER F contains a powerful cleaning agent in concentrated form. Thus, it is used successfully for most brightening applications when diluted one to ten with water.

BRIGHTENER F, at a concentration of one to five, removes dyed anodic coatings from aluminum in a matter of minutes. No heat is necessary. The resulting finish is a uniform reflective surface.

PRECAUTIONS:

Avoid contact with glass. **BRIGHTENER F** will etch glass surfaces if it comes into contact with them. When using, do not allow mist or spray to drift onto glass surfaces nearby. Do not heat **BRIGHTENER F** solutions. Do not use **BRIGHTENER F** on "mirror finished" aluminum.

DANGER: POISON - CORROSIVE
HARMFUL OR FATAL IF SWALLOWED, CAUSES BURNS, VAPOR HARMFUL

HAZARDOUS LIQUID AND VAPOR CAN CAUSE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE. Contains hydrofluoric acid and phosphoric acid. Avoid skin, eye, or clothing contact. Mist may be irritating. Use with adequate ventilation. Keep container closed when not in use. Wash thoroughly after handling. Safety glasses with side shields and rubber gloves are recommended when handling. Always add

(continued on reverse)

acid compounds to water and pour slowly to avoid splattering. Eyewash fountains in the workplace are strongly recommended. Store away from strong caustic compounds and metals, and away from direct heat. IN CASE OF CONTACT OR SUSPICION OF CONTACT, PROMPT MEDICAL ATTENTION IS ABSOLUTELY NECESSARY.

FIRST AID

EYE CONTACT: Immediately flush with plenty of cool water for at least 15 minutes. Washing eyes within 1 minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT: Immediately wash contaminated areas with soap and large quantities of cool water while removing contaminated clothing and shoes. SEEK MEDICAL ATTENTION IMMEDIATELY. Discard nonrubber shoes and wash clothing before reuse.

INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. Give large quantities of water or milk. If vomiting occurs spontaneously, keep airway clear. SEEK MEDICAL ATTENTION IMMEDIATELY.

INHALATION: Remove to fresh air. SEEK MEDICAL ATTENTION IMMEDIATELY.

Consult MSDS for more detailed information on the safe handling of this product.

FOR COMMERCIAL OR INDUSTRIAL USE ONLY!
KEEP OUT OF THE REACH OF CHILDREN!

Nu-Calgon Wholesaler, Inc.

MATERIAL SAFETY DATA SHEET
Nu-Brite

4291.pdf
PDF Version of MSDS

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nu-Brite
Synonyms: Alkaline Coil Cleaner
Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4291

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide (Caustic Soda)	1310-73-2	>20	2mg/M3 Ceiling	

CAN ETCH ALUMINUM

VOC Content: 2.8%
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Not Determined
Evaporation Rate: (ether=1) Same as H_2O
Solubility in H_2O: Complete
Freezing Point °F: N/A
Boiling Point °F: 212°F
Specific Gravity H_2O=1 @25°C: 1.252 +/- 0.005
Vapor Density (Air=1) 60-90°F: Unknown
VOC Content (% by wt.): N/A
pH @ 10% Solution: 13.2
pH as Distributed: 14.0
Appearance: Clear, Colored Liquid
Odor: No Distict Odor

IV - FIRE AND EXPLOSION

Flash Point F: None to Boiling **Flammable Limits:** N/A
Extinguishing Media: Water spray (Fog): Dry chemical; CO_2; Foam

Special Fire Fighting Procedures: Do not enter confined fire-spaces without protective clothing and self-contained air supply.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach)
Hazardous Decomposition Products: Burning may produce carbon monoxide and/or carbon dioxide.
Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure) EYE, SKIN, ORAL: Corrosive material. Will cause burns of skin and eyes with prolonged contact. Eye damage likely if contact is prolonged. Generated mists may be seriously irritating and cause damage to respiratory tract if swallowed. Harmful or fatal if swallowed. May cause severe burns of mucous membranes, stomach, nausea, vomiting - possible internal damage.
B. SUBCHRONIC, CHRONIC, OTHER: Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be

administered. Call a physician.
EYES: &
SKIN: Flush eyes with water for at least 15 minutes and call a physician immediately. Skin: Wash affected area with large amounts of soap and water. If irritation persists call physician.
INGESTION: Do not induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by diking with soil or other inert material and CAREFULLY neutralize with dilute acid. Mop, pump or absorb with inert material and reclaim into sound containers for proper disposal.
Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. Keep non-neutralized material out of sewers, storm drains, surface water and soil.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH approved respirator where mists or sprays may be generated. (Caustic mist cartridge type)
Eye Protection: Chemical goggles, face shield **Glove:** Rubber Gloves
Other Clothing and Equipment: Protective clothing to minimize contact (boots, apron, faceshield)
Ventilation: Product is intended for outdoor use.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Corrosive Material - Handle All Containers Carefully. Wash thoroughly after handling. Keep containers closed when not in use. Avoid contact with leather or wool.
Additional Information: None

NFPA HMIS RATING

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Health Hazard.....: 2 Health Hazard.........: 2
Fire Hazard.......: 0 Fire Hazard...........: 0
Reactivity........: 0 Reactivity............: 0
Specific Hazard...: Personal Protection...: X (Sec. 9)
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Revision Date: 12/05/2002

Category: ↵**COIL CLEANER**

MATERIAL SAFETY DATA SHEET

SECTION I

Product: BRIGHTENER B Product Number: 1050
Date: August 20, 1996
Supersedes: November 1, 1993
Manufacturer: PANTHER INDUSTRIES, INC.
Address: 600 N. Beach, P.O. Box 961001, Ft. Worth, TX 76161
Emergency Telephone: 817/834-7164 (8am-5pm CDT) or CHEMTREC: 1-800-424-9300 (24 hrs.)
Preparer: P. Fields

NFPA Codes: Health-3; Flammability-0; Reactivity-0; Spec. Hazard-Corrosive

SECTION II - HAZARDOUS INGREDIENTS

	TLV	%
Phosphoric Acid; Orthophosphoric Acid; CAS# 7664-38-2 *	1mg/m³	< 35
2-Butoxyethanol; CAS# 111-76-2 *	25 ppm (skin)	< 7

* This chemical is subject to the reporting requirements of Section 313 of SARA Title III.
--This product contains no IARC, NTP, or OSHA carcinogens subject to the reporting requirements of 29 CFR 1910.1200--

SECTION III - PHYSICAL DATA

Boiling Point (°F): >212
Vapor Pressure (mm Hg): N/D
Vapor Density (air=1): N/D
Solubility in Water: complete
Spec. Grav. (H_2O=1): 1.20-1.25
% Vol. by Volume: 68
Evap. Rate (n-BuAc=1): <1
pH (1% sol'n.): 1.9-2.2
Appearance and Odor: Clear, red liquid with a mild butyl odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F, method used): None to boiling point
Flammable Limits: (LEL) N/A (UEL) N/A
Extinguishing Media: Water fog, dry chemical, foam, CO_2
Special Firefighting Procedures: Always wear self-contained breathing apparatus (SCBA) when fighting chemical fires.
Unusual Fire Hazards: May liberate flammable hydrogen gas upon contact with many common metals.

MATERIAL SAFETY DATA SHEET

Product: **BRIGHTENER B**
Product Number: 1050

SECTION V-HEALTH HAZARD DATA

Primary Route(s) of Exposure: Eye and Skin Contact, Ingestion, Inhalation
Effects of Overexposure: Strongly irritating and corrosive to the eyes, skin, respiratory tract, and digestive tract. Prompt treatment is important to minimize effects of exposure.
Emergency and First Aid Procedures: In case of contact, flush skin and/or eyes with cool water for at least 15 minutes. SEEK MEDICAL ATTENTION IMMEDIATELY. If swallowed, give plenty of water or milk. Do NOT induce vomiting. SEEK MEDICAL ATTENTION IMMEDIATELY. If inhaled, remove affected person to fresh air. SEEK MEDICAL ATTENTION IMMEDIATELY.

SECTION VI - REACTIVITY DATA

Stability: Stable
Incompatibility: Strong alkalies and some metals
Hazardous Decomposition Products: Toxic fumes of phosphorus pentoxide may be liberated upon heating.
Polymerization: Will not occur

SECTION VII - SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Leaked Or Spilled: Wear protective equipment. Dike spill area or spread absorbent, inert clay material over spill. Scoop up contaminated material and place in approved waste container for disposal. Neutralize residue with soda ash or lime and flush with large amounts of water.
Waste Disposal Method: Incineration is preferable. Consult with Federal, State, or local authorities for approved methods of disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved respirator for vapor or mist when exposure limits (TLV) are exceeded
Protection: Splash-proof goggles
Protective Clothing: Rubber boots, apron, and chemical resistant gloves
Ventilation: Local or mechanical exhaust

MATERIAL SAFETY DATA SHEET

Product: **BRIGHTENER B**
Product Number: 1050

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing: Keep from freezing. Store at temperatures between 40°-120°F. Store in dry, cool, well-ventilated area. Keep container closed when not in use.

Other Precautions: Wash hands and garments thoroughly after use or exposure. Keep out of the reach of children. Wear protective equipment when handling.

Note: Eyewash fountains and safety showers in the workplace are strongly recommended.

This information is being supplied to you under OSHA "Right To Know" regulation 29 CFR 1910.1200 and is offered in good faith.

Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information.

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, expressed or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the customer. No suggestions are intended as, and should not be construed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

April 24, 2003

Mr. Max Shepard
Shepard Engineering Inc.
719 E Crawford
Salina KS 67401

Dear Mr. Shepard:

Below is a summary of the aluminum brighteners that were tested as possible replacements for our current ABL-43 brightener. None of these were nearly as effective as our current brightener, which allows us to satisfy our customers with a high quality wash and a good speed of service.

1. Niagara National CS-500 Concentrate - MSDS attached
   Tested at 30:1 and 20:1
   This product removed very little film and dirt from aluminum.

2. Niagara National Fylm Fyter 344 Concentrate – MSDS attached
   Tested at 40:1, 30:1, and 20:1.
   This product did nothing to aluminum.

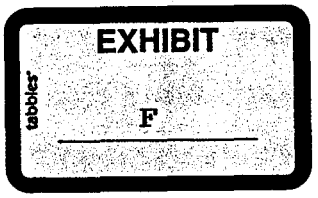
3. Blue Ribbon Horsepower – MSDS attached
   Tested at 33:1 and 15:1
   This product produced poor results on paint and aluminum.

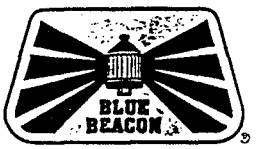
4. Niagara National Regal LQ-60 Concentrate – MSDS attached
   Tested at 40:1, 30:1, and 20:1
   This product did not remove film from paint, did not clean aluminum, and left a rainbow looking type of film on aluminum.

5. Simoniz USA Inc. Liquid Acid Cleaner – MSDS attached
   Tested at 50:1 and 25:1
   This product produced poor results on aluminum and had a strong odor.

These possible replacements for our brightener were tested between November 1999 and March 2000. They were all tested at our Salina location with the general manager conducting the tests. When we test any possible brightener replacement, we spray the test brightener on two to three times and wash it off, then apply our brightener to the same section to see if it cleans the aluminum surface better than the test brightener. Or, we will apply both solutions side by side and then wash both off to compare the results. If any of the testing is successful, then the director will conduct further testing. If the director is pleased with the results, then the president and vice president will observe further testing.

BLUE BEACON
P.O. BOX 856
SALINA, KANSAS 67402-0856
(785) 825-2221 / FAX (785) 825-0801
www.bluebeacon.com
DELIVERIES TO: 500 GRAVES BOULEVARD / SALINA, KANSAS 67401





TRUCK WASHES

From 1990-2000 we tested approximately 18-20 potential replacements for ABL-43 brightener. They delivered poor results and were not considered further.

Sincerely,

Robert Kruse
-by AKL

Robert Kruse
Director of Operations

RK:al

Attachments

READ AND UNDERSTAND THIS DOCUMENT PRIOR TO USE.

CS-500

NIAGARA NATIONAL CORPORATION
2160-C HILLS AVE. N.W.
ATLANTA, GEORGIA 30318
404/350/2600

prepared 07/13/98

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME	CS-500 CONCENTRATE	OIC
CHEMICAL FAMILY	ACID CLEANER - LIQUID	
EMERGENCY CONTACT NUMBER	CHEMTREC 1-800-424-9300	

SECTION II - HAZARDOUS COMPONENTS

INGREDIENT	CAS#	PEL	TLV
SULFAMIC ACID	5329-14-6	ND	ND

SECTION III - HEALTH HAZARD DATA

EYES:	CAN CAUSE BURNS AND IRRITATION. WILL CAUSE DAMAGE IF UNTREATED.
SKIN:	CAN CAUSE SEVERE IRRITATION AND/OR BURNS.
BREATHING:	MAY CAUSE COUGHING, SNEEZING, OR OTHER SYMPTOMS OF UPPER RESPIRATORY TRACT IRRITATION.
SWALLOWING:	CAN CAUSE SEVERE IRRITATION AND/OR CHEMICAL BURNS TO INGESTION SYSTEM

FIRST AID:

ON SKIN:	FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING. IF IRRITATION PERSISTS, SEE PHYSICIAN.
IN EYES:	IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES, LIFTING UPPER AND LOWER EYELIDS. GET MEDICAL ATTENTION IMMEDIATELY.
IF SWALLOWED:	DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER, MILK OR MILK OF MAGNESIA. GET MEDICAL ATTENTION IMMEDIATELY.
IF BREATHED:	REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GET MEDICAL ATTENTION IMMEDIATELY.

NONE OF THE HAZARDOUS INGREDIENTS ARE LISTED AS CARCINOGENS BY IARC, NTP, & OSHA

SECTION IV - SPECIAL PROTECTION INFORMATION

NEOPRENE GLOVES AND EYE PROTECTION (GOGGLES OR FACE SHIELD) REQUIRED.
WEAR IMPERVIOUS CLOTHING AND WASH BEFORE REUSE.
USE ONLY WITH ADEQUATE VENTILATION.

SECTION V - PHYSICAL DATA

BOILING POINT	221 °F
VAPOR PRESSURE	SAME AS WATER
SPECIFIC GRAVITY	1.07
PERCENT VOLATILE	92.3
SOLUBILITY IN WATER	COMPLETE
EVAPORATION RATE	SAME AS WATER
APPEARANCE AND ODOR	REDDISH LIQUID - NO ODOR

#1

SECTION VI - FIRE AND EXPLOSION HAZARD

FLASH POINT	NONE
EXTINGUISHING MEDIA	N/A
FLAMMABILITY LIMITS	NONE
SPECIAL FIRE FIGHTING PROCEDURES	COOL CONTAINER WITH WATER STREAM. USE SELF-CONTAINED BREATHING EQUIPMENT

SECTION VII - REACTIVITY DATA

HAZARDOUS POLYMERIZATION	WILL NOT OCCUR
STABILITY	STABLE
INCOMPATABILITY	ALKALIS AND OXIDIZERS

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

SMALL SPILL	FLUSH AWAY OR MOP UP.
LARGE SPILL	CONTAIN AND PUMP INTO SALVAGE DRUM OR ABSORB ONTO SUITABLE MEDIA AND SHOVEL INTO SALVAGE CONTAINER

AVOID CONTACT WITH SKIN AND EYES.

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION IX - SPECIAL PRECAUTIONS

AVOID CONTACT WITH SKIN AND EYES. USE RUBBER GLOVES AND SAFETY GLASSES OR FACE SHIELD.
AVOID BREATHING OF MISTS
NOT FOR HOME USE
FOR PROFESSIONAL AND INDUSTRIAL USE ONLY.
KEEP OUT OF REACH OF CHILDREN.
DO NOT TAKE INTERNALLY.

SECTION X - TRANSPORTATION DATA

DOT SHIPPING NAME	COMPOUND, CLEANING LIQUID
DOT HAZARD CLASS	CORROSIVE LIQUID
DOT I.D. NUMBER	NA-1760
PACKING GROUP	II

DISCLAIMER

THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET IS PROVIDED PURSUANT TO 29 CFR 1910.1200 TO CONVEY INFORMATION CONCERNING THE HAZARDOUS NATURE OF THE NAMED PRODUCT.

THE INFORMATION SUPPLIED WAS COMPILED FROM THE MOST RELIABLE SOURCES AVAILABLE AT THE TIME OF PREPARATION AND IN LIGHT OF THE MOST REASONABLE FORSEEABLE EXPOSURE SITUATIONS EXPECTED FROM THE INTENDED USE OF THIS PRODUCT. THE MATERIALS(S) MAY PRESENT GREATER OR LESSER HAZARD EXPOSURE UNDER CIRCUMSTANCES THAT ARE BEYOND THE CONTROL OF THE MANUFACTURER.

READ AND UNDERSTAND THIS DOCUMENT PRIOR TO USE.

344

NIAGARA NATIONAL CORPORATION
2160-C HILLS AVE. N.W.
ATLANTA , GEORGIA 30318
404/350/2600

prepared 12/20/99

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME	FYLM FYTER 344 CONCENTRATE
CHEMICAL FAMILY	ALKALINE CLEANER - LIQUID
EMERGENCY CONTACT NUMBER	CHEMTREC 1-800-424-9300

SECTION II - HAZARDOUS COMPONENTS

INGREDIENT	CAS#	PSL	TLV
NONE			

SECTION III - HEALTH HAZARD DATA

EYES:	MAY CAUSE BURNS. COULD CAUSE DAMAGE IF UNTREATED.
SKIN:	MAY CAUSE IRRITATION AND CHEMICAL BURNS.
BREATHING:	MAY CAUSE COUGHING. SNEEZING. OR OTHER SYMPTOMS OF UPPER RESPIRATORY TRACT IRRITATION.
SWALLOWING:	CAN CAUSE GASTROINTESTINAL IRRITATION AND POSSIBLE DAMAGE TO MUCOUS TISSUE.

FIRST AID:

ON SKIN:	FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING. IF IRRITATION PERSISTS, SEE PHYSICIAN.
IN EYES:	IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES, LIFTING UPPER AND LOWER EYELIDS. GET MEDICAL ATTENTION IMMEDIATELY.
IF SWALLOWED:	DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER, MILK, OR MILK OF MAGNESIA. GET MEDICAL ATTENTION IMMEDIATELY.
IF BREATHED:	REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT - GET MEDICAL ATTENTION IMMEDIATELY.

NONE OF THE HAZARDOUS INGREDIENTS ARE LISTED AS CARCINOGENS BY IARC, NTP, & OSHA

SECTION IV - SPECIAL PROTECTION INFORMATION

RUBBER GLOVES AND EYE PROTECTION (GOGGLES OR FACE SHIELD) REQUIRED.
WEAR IMPERVIOUS CLOTHING AND WASH BEFORE REUSE.
USE ONLY WITH ADEQUATE VENTILATION TO MAINTAIN CONCENTRATION BELOW TLV.

SECTION V - PHYSICAL DATA

BOILING POINT	212 °F
VAPOR PRESSURE	SAME AS WATER
SPECIFIC GRAVITY	1.07
PERCENT VOLATILE	87.4
SOLUBILITY IN WATER	COMPLETE
EVAPORATION RATE	SAME AS WATER
APPEARANCE AND ODOR	AMBER LIQUID, MILD ODOR

#2

SECTION VI - FIRE AND EXPLOSION HAZARD

FLASH POINT	NONE
EXTINGUISHING MEDIA	N/A
FLAMMABILITY LIMITS	NONE
SPECIAL FIRE FIGHTING PROCEDURES	COOL CONTAINER WITH WATER STREAM. USE SELF-CONTAINED BREATHING EQUIPMENT

SECTION VII - REACTIVITY DATA

HAZARDOUS POLYMERIZATION	WILL NOT OCCUR
STABILITY	STABLE
INCOMPATABILITY	STRONG ACIDS AND OXIDIZERS

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

SMALL SPILL	FLUSH AWAY OR MOP UP.
LARGE SPILL	CONTAIN AND PUMP INTO SALVAGE DRUM OR ABSORB ONTO SUITABLE MEDIA AND SHOVEL INTO SALVAGE CONTAINER

AVOID CONTACT WITH SKIN AND EYES.

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION IX - SPECIAL PRECAUTIONS

AVOID CONTACT WITH SKIN AND EYES. USE RUBBER GLOVES AND SAFETY GLASSES OR FACE SHIELD.
AVOID BREATHING OF MISTS
NOT FOR HOME USE
FOR PROFESSIONAL AND INDUSTRIAL USE ONLY.
KEEP OUT OF REACH OF CHILDREN.
DO NOT TAKE INTERNALLY.

SECTION X - TRANSPORTATION DATA

DOT SHIPPING NAME	CLEANING COMPOUND, LIQUID MATERIAL
DOT HAZARD CLASS	NA
DOT I.D. NUMBER	NA

DISCLAIMER

THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET IS PROVIDED PURSUANT TO 29CFR 1910.1200 TO CONVEY INFORMATION CONCERNING THE HAZARDOUS NATURE OF THE NAMED PRODUCT

THE INFORMATION SUPPLIED WAS COMPILED FROM THE MOST RELIABLE SOURCES AVAILABLE AT THE TIME OF PREPARATION AND IN LIGHT OF THE MOST REASONABLE FORSEEABLE EXPOSURE SITUATIONS EXPECTED FROM THE INTENDED USE OF THIS PRODUCT. THE MATERIALS(S) MAY PRESENT GREATER OR LESSER HAZARD EXPOSURE UNDER CIRCUMSTANCES THAT ARE BEYOND THE CONTROL OF THE MANUFACTURER.

MATERIAL SAFETY DATA SHEET

Prepared According to 29 CFR 1910.1200

N/A (Not Applicable) N/E (Not Established)

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: Horsepower
GENERIC NAME: Aluminum & Stainless Steel Cleaner
CHEMICAL FAMILY: Liquid Mixture
PROPER SHIPPING NAME: *Not Regulated*

HMIS HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HEALTH	1
FLAMMABILITY	0
REACTIVITY	1
PERSONAL PROTECTION	B

HAZARD RATING

4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS#	TLV	% WT (OPT)
Organic Salt	Proprietary	N/E	<50%

SECTION III - PHYSICAL DATA

PHYSICAL DESCRIPTION: Pink liquid with mild odor
BOILING RANGE (°F): >200°
VAPOR PRESSURE: N/E
% VOLATILE: N/E
SOLUBILITY IN WATER: Soluble
SPECIFIC GRAVITY: 1.21
EVAPORATION RATE: *N/E*
pH: 0.7

SECTION IV - SPECIAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: None normally needed
PROTECTIVE GLOVES: Rubber , nitrile
EYE PROTECTION: Safety goggles recommended
VENTILATION: Local exhaust
OTHER PROTECTIVE EQUIPMENT: Sufficient to prevent skin contact. Eyewash and shower located near the workplace.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): Non flammable
UPPER EXPLOSIVE LIMIT: N/A LOWER EXPLOSIVE LIMIT: N/A
EXTINGUISHING MEDIA: Use appropriate extinguishing media for the surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: *Self contained breathing apparatus and full protective clothing should be worn when fighting fires involving chemicals*
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SECTION VI - REACTIVITY

STABILITY: Stable
INCOMPATIBILITY (Materials to Avoid): *Hypochlorites and oxidizing agents, elevated temperatures*

HAZARDOUS DECOMPOSITION PRODUCTS: COX, NOX, CL2

HAZARDOUS POLYMERIZATION: *Will not occur*

SECTION VII - HEALTH HAZARD

EFFECTS OF OVEREXPOSURE (Primary Route of Entry)
SKIN: *Irritant*
EYES: Irritant
INHALATION: Irritant

CARCINOGENS: None suspected
NTP: OSHA:
IARC: ACGIH:
OTHER:

SECTION VIII - EMERGENCY AND FIRST AID

EYES: Immediately flush with large amounts of water for at least 15 minutes, be sure to keep eyelids opened. Washing eyes within one minute is essential. Get immediate medical attention.
SKIN: Wash with *plenty of water for 15 minutes.* Remove contaminated clothing. Get medical attention if irritation persists.
INGESTION: Give large quantities of water. DO NOT INDUCE VOMITING. If *vomiting occurs spontaneously, keep head lower than lungs to prevent aspiration of* chemical into lungs. Get immediate medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
INHALATION: Remove victim to fresh air.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Use common sense and sound industrial hygiene practices when handling this material as well as any other materials. Keep container closed when not in use. Wash hands after handling. Wear appropriate personal protective equipment to prevent skin and eye contact.

SECTION X - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear necessary personal protective equipment when cleaning up spilled material. Dike area to prevent spreading of the spilled material. Cover with an inert absorbent (sand, clay, etc.), shovel into appropriate containers, and dispose of in accordance with *federal, state,* and local regulations.
EMPTY CONTAINERS DISPOSAL: Any disposal practices must be in compliance with *federal, state and local* laws. Any questions regarding disposal should be directed to the proper government agency.

MANUFACTURED BY: Blue Ribbon Products, Inc.
951 West Morris Street
Indianapolis, IN 46206
317-972-7970
Fax 317-972-7931

#3

MATERIAL SAFETY DATA SHEET

Simoniz USA Inc.
201 Boston Turnpike
Bolton, Connecticut 06043
(860) 646-0172

REVISION DATE:..... 01/12/00
DATE PRINTED:..... 02/14/00

PRODUCT NUMBER:..... L2130XXX
CONTROL NUMBER:..... L2130XXX

For chemical emergency information regarding this product, call Chem-Tel at 1-800-255-3924 anytime.

SECTION I - IDENTIFICATION

PRODUCT NAME: **Liquid Acid Cleaner**

PRODUCT TYPE:..... Acidic Liquid Cleaning Compound

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PEL	PERCENT
Phosphoric Acid	7664-38-2	1mg/m3TLV,3mg/m3 STEL	Not Listed
Water	7732-18-5	No limits established	
Nonylphenoxypolyethyleneoxyethanol	9016-45-9	No limits established	

SECTION III - PHYSICAL DATA

APPEARANCE: Transparent Liquid. No significant odor.
BOILING POINT: 210 degrees F.
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A
SPECIFIC GRAVITY: 1.1
PH: 1.5
SOLUBILITY IN WATER: Completely soluble.

SECTION IV - FIRE AND EXPLOSION DATA

FLASHPOINT:..... This product is non-flammable.
EXTINGUISHING MEDIA:..... This product is non-flammable. Use extinguishing media suitable for materials already burning.
SPECIAL FIRE FIGHTING PROCEDURES:..... Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA.
UNUSUAL FIRE AND EXPLOSION HAZARDS:..... None known.

SECTION V - REACTIVITY DATA

STABILITY:..... Stable under normal conditions.
HAZARDOUS POLYMERIZATION:..... This product not known to polymerize.
INCOMPATIBILITY:..... Ferrous metals, aluminum, zinc, magnesium and any other acid sensitive materials.
HAZARDOUS BYPRODUCTS:..... Reaction with metals may liberate hydrogen gas. May produce carbon monoxide, carbon dioxide and/or phosphorus oxides.

SECTION VI - HEALTH DATA

ROUTE(S) OF ENTRY:..... Inhalation, skin absorption, or ingestion.
LISTED CARCINOGEN:..... Not listed by IARC, NTP or OSHA.
MEDICAL CONDITION AGGRAVATED:..... None known.
INHALATION:..... Not likely to be inhaled in hazardous amounts. Avoid exposure to mists or vapors. Maintain adequate ventilation in the work area.
INGESTION:..... This material can cause burns and serious damage to throat, esophagus and stomach.
EYES:..... Can cause serious burns and/or blindness.
SKIN (DERMAL):..... This product may cause burns or irritation if not removed from the skin.

SECTION VII FIRST AID

BREATHING (INHALATION):..... If victim shows signs of discomfort or irritation, remove to fresh air. If symptoms persist, get immediate medical attention.
SWALLOWING (INGESTION):..... DO NOT INDUCE VOMITING! Drink a large quantity of water, followed by either milk or a minimum of 2 teaspoons of milk of magnesia. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!
EYES:..... Flush eyes with a large quantity of fresh water for at least 15 minutes. Apply ice compresses and GET IMMEDIATE EMERGENCY MEDICAL ATTENTION by an eye specialist. It may be necessary to take victim to a hospital emergency room.
SKIN (DERMAL):..... Immediately flush from skin and clothing with large amounts of fresh water. Get immediate medical attention. Rewash contaminated clothing before wearing.

SECTION VIII EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:..... If necessary, use an OSHA approved respirator for acid gases.
PROTECTIVE CLOTHING:..... Nitrile, vinyl or neoprene gloves. Splash goggles and face shield. Protective outerwear and boots.
ADDITIONAL MEASURES:..... Do not place this product in an unmarked container! Keep away from children! Spilled material is slippery.

SECTION IX - SPILL AND DISPOSAL DATA

SPILL:..... Dike to prevent spillage into streams or sewer systems. Consult local, state and federal authorities.
WASTE DISPOSAL:..... As recommended by local, state and federal authorities.
HANDLING & STORAGE PRECAUTIONS..... Do not store in metal containers. Store at ambient temperatures. Keep from freezing. DO NOT TRANSFER TO UNMARKED CONTAINERS. KEEP AWAY FROM CHILDREN.

SECTION X –OTHER REGULATORY INFORMATION

PROPER SHIPPING NAME: Compounds, Cleaning, Liquid
CONSTITUENT: Phosphoric Acid
HAZARD CLASS AND LABEL: 8 Corrosive
ID NUMBER: NA 1760
PACKING GROUP: III
NFPA HEALTH: 2
NFPA FLAMMABILITY: 0
NFPA REACTIVITY: 0
NFPA OTHER: Acid

SECTION XI - PRECAUTIONARY STATEMENTS

WARNING:..... The information contained in this MSDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be safe- read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it.

#5

READ AND UNDERSTAND THIS DOCUMENT PRIOR TO USE.

LQ-50 CONCENTRATE

321

NIAGARA NATIONAL CORPORATION
2160-C HILLS AVE. N.W.
ATLANTA, GEORGIA 30318
404/350/2600

prepared 07/01/98

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME	REGAL LQ-50 CONCENTRATE
CHEMICAL FAMILY	ALKALINE CLEANER - LIQUID
EMERGENCY CONTACT NUMBER	CHEMTREC 1-800-424-9300

SECTION II - HAZARDOUS COMPONENTS

INGREDIENT	CAS#	PEL	TLV
NONE			

SECTION III - HEALTH HAZARD DATA

EYES:	MAY CAUSE BURNS. WILL CAUSE DAMAGE IF UNTREATED.
SKIN:	CAN CAUSE IRRITATION.
BREATHING:	MAY CAUSE COUGHING, SNEEZING, OR OTHER SYMPTOMS OF UPPER RESPIRATORY TRACT IRRITATION.
SWALLOWING:	CAN CAUSE GASTROINTESTINAL IRRITATION AND POSSIBLE DAMAGE TO MUCOUS TISSUE.

FIRST AID:

ON SKIN:	FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING. IF IRRITATION PERSISTS, SEE PHYSICIAN.
IN EYES:	IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES, LIFTING UPPER AND LOWER EYELIDS. GET MEDICAL ATTENTION IMMEDIATELY.
IF SWALLOWED:	DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER, MILK, OR MILK OF MAGNESIA. GET MEDICAL ATTENTION IMMEDIATELY.
IF BREATHED:	REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT- GET MEDICAL ATTENTION IMMEDIATELY.

NONE OF THE HAZARDOUS INGREDIENTS ARE LISTED AS CARCINOGENS BY IARC, NTP, & OSHA

SECTION IV - SPECIAL PROTECTION INFORMATION

RUBBER GLOVES AND EYE PROTECTION (GOGGLES OR FACE SHIELD) RECOMMENDED
WEAR IMPERVIOUS CLOTHING AND WASH BEFORE REUSE.
USE ONLY WITH ADEQUATE VENTILATION.

SECTION V - PHYSICAL DATA

BOILING POINT	216 °F
VAPOR PRESSURE	SAME AS WATER
SPECIFIC GRAVITY	1.12
PERCENT VOLATILE	93.9
SOLUBILITY IN WATER	COMPLETE
EVAPORATION RATE	SAME AS WATER
Ph CONCENTRATE	11.5 - 11.7
APPEARANCE AND ODOR	ODORLESS, GREEN LIQUID

#4

SECTION VI - FIRE AND EXPLOSION HAZARD

FLASH POINT	NONE
EXTINGUISHING MEDIA	N/A
FLAMMABILITY LIMITS	NONE
SPECIAL FIRE FIGHTING PROCEDURES	COOL CONTAINER WITH WATER STREAM. USE SELF-CONTAINED BREATHING EQUIPMENT

SECTION VII - REACTIVITY DATA

HAZARDOUS POLYMERIZATION	WILL NOT OCCUR
STABILITY	STABLE
INCOMPATABILITY	STRONG ACIDS AND OXIDIZERS

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

SMALL SPILL	FLUSH AWAY OR MOP UP.
LARGE SPILL	CONTAIN AND PUMP INTO SALVAGE DRUM OR ABSORB ONTO SUITABLE MEDIA AND SHOVEL INTO SALVAGE CONTAINER

AVOID CONTACT WITH SKIN AND EYES.

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION IX - SPECIAL PRECAUTIONS

AVOID CONTACT WITH SKIN AND EYES. USE RUBBER GLOVES AND SAFETY GLASSES OR FACE SHIELD.
AVOID BREATHING OF MISTS
NOT FOR HOME USE
FOR PROFESSIONAL AND INDUSTRIAL USE ONLY.
KEEP OUT OF REACH OF CHILDREN.
DO NOT TAKE INTERNALLY.

SECTION X - TRANSPORTATION DATA

DOT SHIPPING NAME	COMPOUND, CLEANING LIQUID MATERIAL
DOT HAZARD CLASS	NONE
DOT I.D. NUMBER	N/A

DISCLAIMER

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THE INFORMATION SUPPLIED WAS COMPILED FROM THE MOST RELIABLE SOURCES AVAILABLE AT THE TIME OF PREPARATION AND IN LIGHT OF THE MOST REASONABLE FORSEEABLE EXPOSURE SITUATIONS EXPECTED FROM THE INTENDED USE OF THIS PRODUCT. THE MATERIALS(S) MAY PRESENT GREATER OR LESSER HAZARD EXPOSURE UNDER CIRCUMSTANCES THAT ARE BEYOND THE CONTROL OF THE MANUFACTURER.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: July 23, 1986

TO: Rick Pinneo

FROM: Toby Frevert

SUBJECT: Deere Foundry

I checked our records on Deere Foundry and also asked Jim Luey (USEPA, Region V) to check their records for follow-up and resolution of the August 20, 1985 review letter of the Deere Foundry draft NPDES. There is no record in either our files or Region V's, but my recollection is that USEPA withdrew their objection to the site-specific ruling on this case (R81-26) with the understanding that future cases will address USEPA use attainability criteria and that the Deere ruling will be reassessed as part of the normal tri-annual water quality standards review effort.

TF:kls

COPY

WATER SALES CONTRACT

THIS CONTRACT for the sale and purchase of water is entered into this 11th day of April, 1996 between **E J WATER CORPORATION,** an Illinois not-for-profit corporation, of P.O. Box 8, Dieterich, Illinois 62424, hereinafter referred to as the "**Seller**", and the **VILLAGE OF LOUISVILLE**, an Illinois municipal corporation, P. O. Box 306, Louisville, Illinois 62858, hereinafter referred to as the "**Purchaser**".

WITNESSETH:

WHEREAS, the Purchaser is duly organized and established under the Illinois Municipal Code and has authority to construct and operate a water supply distribution system for the citizens of the Village of Louisville, and to accomplish this purpose, the Purchaser will require a supply of treated water; and

WHEREAS, the Seller contemplates constructing an addition to its water supply distribution system which will have a capacity capable of serving the customers of the Seller's system and an estimated 620 water users to be served by Purchaser; and

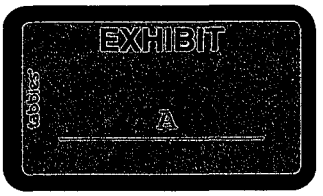
WHEREAS, the Seller has been authorized by its Board of Directors, pursuant to a resolution adopted at a meeting of said Board on the 16 day of April, 1996, to enter into this Water Sales Contract with Purchaser; and

WHEREAS, by Ordinance No. 447 enacted by Purchaser on the 11th day of April, 1996, the purchase of water from Seller in accordance with the terms set forth in this Water Sales Contract was approved, and the execution of this Water Sales Contract by the officials of Purchaser is duly authorized.

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth, it is agreed as follows:

A. **The Seller agrees:**

1. To construct a water line from the Village of Bible Grove to the Village of Louisville (the Louisville Project) in accordance with attached Exhibit A and to furnish the Purchaser at the point of delivery, hereinafter specified, during the term of this Water Sales Contract or any renewal or extension thereof, potable, treated water meeting applicable purity standards of the Illinois Environmental Protection Agency in such quantity as may be required by the Purchaser not to exceed four million (4,000,000) gallons per month and at the price determined in accordance with Paragraph B.1. and B.2. of this Contract. The maximum



agreed purchase amount shall be increased by 1-1/2% per year to allow for growth within the Village.

2. That water will be furnished at a reasonably constant pressure calculated at 60 p.s.i. from an existing six (6) inch main supply at a point located adjacent to the existing water treatment plant of the Village of Louisville, Clay County, Illinois. It is further understood and agreed that, upon the completion of such line to the water treatment plant, the Purchaser will assume said line from said water treatment plant to the location of the master meter of E J Water Corporation on Village of Louisville property adjacent to the water plant, the same being the location of the master meter of Seller. The parties further agree that if a greater pressure than that normally available at the point of delivery, being the master meter, is required by the Purchaser, the cost of providing such greater pressure shall be borne by the Purchaser. Emergency failures of pressure or supply due to main supply line breaks, power failure, flood, fire, earthquake or other catastrophe shall excuse the Seller from this provision for such reasonable period of time as may be necessary to restore service.

3. To furnish, install, operate and maintain at its own expense at the point of delivery the necessary metering equipment, including a meter house or pit, and required devices of standard type for properly measuring the quantity of water delivered to the Purchaser.

4. To install a rechlorination system to be located at the master meter, the operation of such system to be the responsibility of the Purchaser.

5. To install telemetry to be located at the master meter to provide positive control of tank fill at the 50,000 gallon elevated storage tank.

6. To furnish the Purchaser at the above address not later than the 10th day of each month with an itemized statement of the amount of water furnished to the Purchaser during the preceding month.

B. **The Purchaser agrees:**

1. To purchase from Seller a minimum of 37 million gallons of water per year at an initial rate of $1.50 per thousand gallons. Such rate shall be in effect until such time as Seller has received its audit for the first full calendar year after the initial delivery of water by Seller to Purchaser, at which time, the rate to be used for billing

purposes shall be determined in accordance with the following formula:

$$\frac{C + D + A + S - U + R}{X/1000} = L$$

C = Annual cost to produce water for Village of Louisville, to be determined as follows:

Step 1) Determine estimated annual amount of water sold to Louisville - For the first year of this Contract, such amount shall be 37 million gallons. For subsequent years, such amount shall be the actual amount sold to Louisville in the previous year less one million gallons, but in no event shall such amount be less than 37 million gallons.

Step 2) During the first five years of this Contract, proceed to Step 3 from Step 1. After the first five years of this Contract, multiply amount obtained in Step 1 by 1.03 to account for loss factor.

Step 3) Divide the amount obtained in Step 1 or Step 2 by 1,000.

Step 4) Multiply amount obtained in Step 3 by Seller's Production Cost as determined in accordance with Seller's most recent audit and the definition of Production Cost set forth at Page 4 in this Contract.

D = Distribution Cost for EJ to sell water to Louisville, it being agreed that this cost shall be $4,000 for the first five years with such cost to be adjusted after five years and each five years thereafter to reflect increases or decreases in the Consumer Price Index of the U. S. Department of Labor (1984 = 100). Such adjustments shall be calculated by multiplying the amount in effect for the previous five year period by a fraction whose numerator shall be the Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of Labor Statistics of the U. S. Department of Labor, for the month of December of the fifth full year after the initial delivery of water pursuant to this Contract, or the month of December of the fifth full year after the previous adjustment, and whose denominator shall be said Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of

Labor Statistics of the U. S. Department of Labor Statistics of the U. S. Department of Labor, for the month of January in the first year following the initial delivery of water pursuant to this Contract or the month of January in the year immediately following the previous adjustment.

A = Administrative Cost for EJ to sell water to Louisville, it being agreed that this cost shall be $1,000 for the first five years with such cost to be adjusted after five years and each five years thereafter to reflect increases or decreases in the Consumer Price Index of the U. S. Department of Labor (1984 = 100). Such adjustments shall be calculated by multiplying the amount in effect for the previous five year period by a fraction whose numerator shall be the Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of Labor Statistics of the U. S. Department of Labor, for the month of December of the fifth full year after the initial delivery of water pursuant to this Contract, or the month of December of the fifth full year after the previous adjustment, and whose denominator shall be said Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of Labor Statistics of the U. S. Department of Labor Statistics of the U. S. Department of Labor, for the month of January in the first year following the initial delivery of water pursuant to this Contract or the month of January in the year immediately after the previous adjustment.

S = Annual Debt Service on funds borrowed by Seller to finance the Louisville project, it being agreed that this amount shall be the annual amount necessary to amortize the funds actually borrowed by Seller on a 30 year basis at an interest rate of 7% per annum.

U = Anticipated annual revenue to be received by Seller from customer of Seller on the line to Louisville, it being agreed by the parties that such figure shall be the amount of $79,560 unless and until modified in accordance with the provisions of sub-paragraph d below.

R = Estimated annual cost to Seller to produce water for the use of Seller's customer's along the Louisville line. It is agreed for purposes of this formula that the annual amount of water to be produced for the use of Seller's customers along the Louisville line shall be the product of 4500 gallons times 12 months times

195 users plus a loss factor of 3% (4500 X 12 X 195 X 1.03 = 10,530,000 gallons) (By way of example, if Seller's cost to produce water is $0.81 per 1,000 gallons, this figure would be $8,785 (10,530,000 ÷ 1,000 X $0.81).

X = Annual estimated amount of water sold to Village of Louisville - For purposes of this Contract, such amount is assumed to be the sum of 37 million gallons in the first year of the Contract. For subsequent years, such amount shall be the actual amount sold to Louisville in the previous year minus one million gallons, but in no event shall such amount be less than 37 million gallons.

L = Cost per 1,000 gallons (rounded to the nearest penny) to be charged to the Village of Louisville for an amount of gallons equal to X as defined above to be purchased annually by the Village of Louisville.

For the purpose of the above formula, Production Cost is defined as Seller's cost to produce 1,000 gallons of water as determined by Seller's most recent audit. Production Cost shall be determined as follows:

i) Obtain the sum of the following annual items of expenditure by Seller:

1. 100% cost of chemicals
2. 100% of utilities used for the production of water
3. 100% of the cost of repairs directly attributable to production
4. 100% of cost of water testing associated with production
5. 100% of payroll cost directly attributable to production
6. 100% of cost of all supplies directly attributable to production
7. One third (1/3) of all telephone charges shall be allocated to the cost of production
8. All insurance costs directly attributable to the cost of production

9. 100% of all mileage costs directly attributable to production

10. 100% of the cost of plant operators

11. 100% of the cost of training plant operators

12. 50% of the costs related to Seller's truck

ii) Divide the sum obtained in Subparagraph i above by the total number of gallons produced by Seller in the year in which such expenditures were made.

iii) Multiply the result obtained in Subparagraph ii above by 1,000 to obtain Production Cost per 1,000 gallons.

iv) The parties specifically agree that new capital expenditures of Seller shall not be included in production costs except for such capital expenditures in the nature of repairs or required upgrades to the existing supply or production facilities as required by the U. S. EPA, Illinois EPA or other regulatory agency.

The cost determined from the above formula shall be adjusted as follows:

a) Annual adjustments to reflect increase or decrease in actual cost of production per annual audit of Seller, provided however, that in the event of a dispute as to the actual cost of production, Purchaser shall have the rights as set forth in paragraph C.5. below. After Seller has received its annual audit and determined its actual production cost for the year of such audit, a determination will be made to ascertain the cost per thousand Buyer should have paid in the year of such audit. This new cost will be multiplied by the amount of water actually purchased in such year, and the figure so obtained will be compared to the actual amount paid by Buyer to determine if Buyer overpaid or underpaid in the previous year. In the event Buyer underpaid, Buyer will promptly pay Seller the amount of such underpayment, provided that if the amount of such underpayment is greater than $1,000, Buyer may elect to pay such amount in monthly increments of $1,000 until paid in full. In the event Buyer overpaid, Buyer will receive a credit for the amount of such overpayment on its next regular monthly bill, provided, however, that if the amount of such overpayment is greater than $1,000, Seller may elect to credit such amount in monthly installments of $1,000

until Buyer has received the full credit to which it is entitled.

b) Parties will agree to negotiate in good faith adjustments to rates in the event of a catastrophic event (e.g. earthquake) which seriously damages a significant portion of Seller's system serving Purchaser.

c) The amount attributable to annual Revenue from Customers of Seller (U) shall be increased proportionately to any increase in rates charged to Seller's retail customers. If the actual revenue collected by the Seller is less than $79,560 in the most recent audited year, the increase in revenue credited to Purchaser shall equal the actual revenue times the % increase in rates. If the actual revenue collected by the Seller is greater than $79,560 in the most recent audited year, the increase in revenue credited shall equal $79,560 times the % increase in rates. The total increase in revenue credited shall be cumulative; i.e. the calculation of revenue credited for future rate increases shall be based on the then current revenue credited.

d) After the initial 30 years of the Contract, items S, U & R shall be deleted from the formula.

Water in excess of X as defined on Page 5 shall be sold to Purchaser at a cost of $1.30 per 1,000 gallons for the first five years of this Contract. After the initial five years of this Contract and each year thereafter for the next 25 years of this Contract, this rate shall be adjusted upward or downward to reflect increases or decreases in the Consumer Price Index of the U. S. Department of Labor (1984 = 100). After the initial 30 years of this Contract, all water shall be priced in accordance with the formula in effect at that time.

Purchaser agrees to pay Seller for such water at the applicable rate not later than the 20th day of each month for water delivered in the previous month.

2. That the rate payable shall in no event, be less than $1.30 per 1,000 gallons and, for the first five years of this Contract, shall not exceed $1.70 per 1,000 gallons. After the initial five years of this Contract and each year thereafter for the next 25 years, the maximum rate shall be adjusted upward or downward to reflect increases or decreases in the Consumer Price Index of the U. S.

Department of Labor (1984 = 100), provided however, that this rate limitation shall not apply in the event Seller is required to make capital expenditures or change its method of treating water as a result of a catastrophic event or a requirement imposed upon Seller by the U.S. E.P.A., Illinois E.P.A. or other regulatory agency. Such adjustments shall be calculated by multiplying the rate in effect for the previous five year period by a fraction whose numerator shall be the Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of Labor Statistics of the U. S. Department of Labor, for the month of December of the fifth full year after the initial delivery of water pursuant to this Contract, or the month of December of the fifth full year after the previous adjustment, and whose denominator shall be said Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers", U. S. City Average (1984 = 100) Unadjusted, Bureau of Labor Statistics of the U. S. Department of Labor Statistics of the U. S. Department of Labor, for the month of January in the first year following the initial delivery of water pursuant to this Contract or the month of January in the year immediately following the previous adjustment..

3. To pay as an agreed cost a connection fee to connect Seller's system with the system of Purchaser the sum of $1,111,610 which shall cover any and all costs of the Seller for installation of the metering equipment and the oversizing of Seller's treatment facility and delivery system.

4. To cooperate with Seller in obtaining necessary permits for the right to install water lines on rights of way under the jurisdiction of township and/or county highway agencies within Clay County, Illinois.

C. **It is further mutually agreed between the Seller and the Purchaser as follows:**

1. The agreed upon connection fee of $1,111,610 as set forth in Paragraph B.2. above is based upon Seller extending water lines from the Village of Bible Grove to the Village of Louisville along a line from the Village of Bible Grove to the Village of Louisville. In the event the Seller determines to amend or adjust the lines in order to serve additional rural customers, then the additional costs for construction of the lines to serve such customers shall be solely borne by the Seller with no expenses as to the addition to the line charged to the Purchaser.

2. That this Water Sales Contract shall extend for a term of forty (40) years from January 1 of the first year

following the date of the initial delivery of any water as shown by the first bill submitted by the Seller to the Purchaser and thereafter may be renewed or extended for such term or terms as may be agreed upon by the Seller and Purchaser. Whenever, in this Contract, there is a reference to a term of years, it is agreed that such term shall be measured from January 1 of the year immediately following the initial delivery of any water as shown by the first bill submitted by Seller to Purchaser.

3. Seller and Purchaser both contemplate constructing water systems with the assistance of grants and/or loans from the Department of Commerce and Community Affairs and/or furnished by or guaranteed by the Farmers Home Administration. Seller's obligation to provide water to Purchaser, and Purchaser's obligation to purchase water from Seller, is conditioned upon Purchaser receiving funding from the Department of Commerce and Community Affairs and Farmers Home Administration and Seller receiving an FmHA guaranteed loan to construct the project, and this Water Sales Contract shall be void if either party shall fail to receive the necessary funding to construct the project. Because the size of Seller's water delivery line and water treatment plant are dependent upon whether Purchaser intends to purchase water from Seller, Seller may cancel this Water Sales Contract prior to letting bids for construction unless Purchaser has, prior to such time, given Seller assurances that it has secured its funding and intends to proceed with the project. Seller and Buyer shall further have the right to cancel this Water Sales Contract in the event that the lowest responsible bid for the Louisville project shall be greater than the estimated project cost of $2,131,600. The party desiring to cancel this Water Sales Contract in accordance with this provision must so notify the other party of its intention to do so in writing not less than 30 days following Seller's notification to Buyer of the bids received at the bid opening for the project.

4. That the Seller will, after the completion of its system, at all times operate and maintain its system in an efficient manner and will take such action as may be necessary to furnish the Purchaser with quantities of water required by the Purchaser. Temporary or partial failures to deliver water shall be remedied with all possible dispatch. In the event of an extended shortage of water, or if the supply of water available to the Seller is otherwise diminished over an extended period of time, the supply of water to Purchaser's customers shall be reduced or diminished in the same ratio or proportion as the supply to Seller's customers is reduced or diminished.

5. Seller shall have the right to utilize the existing elevated storage tank of Purchaser for pressure stabilization provided that Seller shall bear the cost of any additional equipment Seller may be required to install in order to so utilize such storage tank.

6. In the event of a dispute as to any adjustments to the cost of water to be determined in accordance with paragraph B.1. above, each party shall select an auditor, and these two auditors shall select a third person who shall act as an auditor and whose determination as to actual adjustments to the cost of water to Purchaser shall be binding upon the parties for the purposes of this Water Sales Contract. The cost of such auditor shall be borne equally by the two parties.

7. That this Water Sales Contract is subject to such rules, regulations or laws as may be applicable to similar agreements in this State, and the Seller and Purchaser will collaborate in obtaining such permits, certificates or the like as may be required to comply therewith.

8. That the construction of both Seller's system and Purchaser's system are being financed by a loan made or guaranteed by, and/or a grant from, the United States of America, acting through the Farmers Home Administration of the United States Department of Agriculture, and the Illinois Department of Commerce and Community Affairs, and the provisions hereof pertaining to the undertakings of the Seller and Purchaser, are conditioned upon the approval, in writing, from the Department of Commerce and Community Affairs and the State Director of the Farmers Home Administration.

9. That, in the event of any occurrence rendering the Purchaser incapable of performing under this Water Sales Contract, any successor of the Purchaser, whether the result of legal process, assignment, or otherwise, shall succeed to the rights of the Purchaser hereunder.

10. For the purposes of this Contract, the "Farmers Home Administration" shall be deemed to mean the "Rural Economic and Community Development (RECD)" agency of the U.S. Department of Agriculture.

IN WITNESS WHEREOF, the parties hereto, acting under authority of their respective governing bodies, have caused this

Water Sales Contract to be duly executed in three (3) counterparts, each of which shall constitute an original.

E J WATER CORPORATION

Delbert D. Mundt
President

ATTEST:

P.B. Finley, Jr.
Secretary

VILLAGE OF LOUISVILLE
PURCHASER

Robert T. Clayton
Village President

ATTEST:

Nancy D. Bland
Village Clerk

u:\users\jayne\ej\louwatk.fnl April 10, 1996

COPY

FIRST AMENDMENT TO WATER SALES CONTRACT

This First Amendment to Water Sales Contract is entered into this 11th day of April, 2002, between E.J. Water Corporation, an Illinois not for profit corporation, of P.O. Box 8, Dieterich, Illinois 62424, (hereinafter referred to as the "Seller"), and the Village of Louisville, an Illinois municipal corporation, of P.O. Box 306, Louisville, Illinois 62858, (hereinafter referred to as the "Purchaser").

WHEREAS, Seller and Purchaser have, on the 11th day of April, 1996, entered into a Water Sales Contract providing for the sale of potable water by Seller to Purchaser; and

WHEREAS, the construction of the water line contemplated by such contract has been completed and Seller has been delivering water to Purchaser since March of 1998; and

WHEREAS, questions have arisen between the parties relative to the interpretation of certain portions of such contract, specifically with respect to the determination of the rate to be charged to Purchaser pursuant to *PARAGRAPH B-THE PURCHASER AGREES* provision of such contract; and

WHEREAS, the parties have reached agreement on modifying the manner in which the rate to be charged Purchaser is to be ascertained and wish to amend the Water Sales Contract to reflect such modification.

NOW, THEREFORE, IT IS AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

I. Subparagraphs 1 and 2 of *Paragraph B-THE PURCHASER AGREES* of the Water Sales Contract between Seller and Purchaser dated the 11th day of April, 1996 are hereby amended to read as follows:

B. THE PURCHASER AGREES:

1. To purchase from the Seller a minimum of 37 million gallons of water per year at the following rates:

   a) For the period from the initial delivery of water in March of 1998 through December 31, 1998, at a rate of $1.50 per thousand gallons.

   b) For the period from January 1, 1999 through December 31, 2001, at a rate of $1.45 per thousand gallons.

   c) Commencing with the period beginning January 1, 2002, such rate shall be adjusted annually to reflect increases or decreases in the Consumer Price Index of the U.S. Department of Labor. Such adjustments shall be calculated by multiplying the rate for the immediately preceding year by a fraction whose numerator shall be the Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers," U.S. City Average (1984=100) Unadjusted, all items, Bureau of Labor Statistics of the U.S. Department of Labor, for the month of December of the immediately preceding year, and whose denominator shall be said Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers," U.S. City Average (1984=100) Unadjusted, Bureau of Labor Statistics of the U.S. Department of Labor, for the month of December in the year prior to the immediately preceding year.

      Such adjustment shall become effective each year with the first billing following the availability of such information for the entire previous calendar year from the U.S. Department of Labor.

   d) To the extent that Purchaser has overpaid Seller for the period of time commencing on January 1, 1999 and terminating on December 31, 2001, Purchaser will receive a credit of $1,000.00 on each regular monthly bill until such time as Purchaser has received the full credit to which it is entitled.

   e) Seller and Purchaser agree to negotiate, in good faith, adjustments to the rates in the event of a catastrophic event (e.g. earthquake) which seriously damages a significant portion of Seller's system or a major regulatory change which significantly increases Seller's cost of producing or delivering water to Purchaser.

2. a) Notwithstanding the provision of Paragraph B1 above, the parties agree that water in excess of a certain annual amount shall be billed at a lower rate as follows:

For the period of time commencing at January 1, 1999 through December 31, 2003, water sold in excess of the amount determined in accordance with Subparagraph (b) below, shall be sold to Purchaser at a cost of $1.30 per thousand gallons. After December 31, 2003 and each year thereafter through December 31, 2028, this rate shall be adjusted upward or downward to reflect increases or decreases in the Consumer Price Index, Revised, "Urban Wage Earners and Clerical Workers," U.S. City Average (1984=100) of the U.S. Department of Labor. The calculation of such annual increase shall be made in a manner identical to the annual adjustments to the rate as set forth in Paragraph B1(c) above.

After December 31, 2028, all water shall be priced as determined in accordance with Paragraph B1(c) above.

b) For the period of time beginning January 1, 1999, the rate determined in accordance with Paragraph B2(a) above shall apply to amounts of water sold that are in excess of the greater of:

1) 37 million gallons per year, or

2) The actual amount sold to Purchaser in the previous year less one million gallons.

II. Except to the extent as being specifically modified by this Agreement, the provisions of the Water Sales Contract dated April 11, 1996, shall remain in full force and effect.

Executed the day and year first above written.

VILLAGE OF LOUISVILLE

Charles R Smith
Village President

Nicole A Worthey
Village Clerk

E J WATER CORPORATION

Diane Sherin
President

Monte Van Sickle
Secretary

U:\Martha\EJ\CLAY\Louisville Water Contract\1st Amendment to Water Sales Contract.wpd.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY	)	R03-11
OF EFFINGHAM TREATMENT	)	(Site-Specific Rulemaking - Water)
PLANT FLUORIDE DISCHARGE,	)	
35 ILL. ADM. CODE 304.233	)	

AFFIDAVIT OF N. LADONNA DRIVER

N. LaDonna Driver, being first duly sworn, deposes and states as follows:

1. I am a licensed Illinois attorney, and one of the counsel of record for the Petitioners, City of Effingham, Blue Beacon International, Inc., and Truckomat Corporation.

2. I contacted the City Administrator of the City of Flora on May 31, 2002 and left a voicemail message notifying the City of Flora of the Petitioners' intent to file their Petition in this matter with the Illinois Pollution Control Board.

3. The statements contained herein, are true and accurate to the best of my knowledge and belief.

FURTHER AFFIANT SAYETH NOT.

N. LaDonna Driver

N. LaDonna Driver

Subscribed and sworn to before
me this 19th day of May, 2003.

Notary Public

"OFFICIAL SEAL"
Mary Kay Younker
Notary Public, State of Illinois
My Commission Exp. 07/21/2005

BLUE:001/Fil/Affidavit – NLD

EXHIBIT
B

Commonwealth Biomonitoring, Inc.

8061 Windham Lake Drive
Indianapolis, IN 46214

(317) 297-7713 PHONE
(317) 297-7147 FAX

water_quality @ tcon.net
www.biomonitor.com

12 May 2003

David Walter
Hodge Dwyer Zeman
3150 Roland Avenue
Springfield, IL 62705

Dear Mr. Walter:

At the April 11, 2003 hearing before the Illinois Pollution Control Board concerning the petition for site-specific regulation for fluoride at Effingham, I was asked whether the acute and chronic fluoride criteria could be calculated at different hardness values than the one used in our review of fluoride toxicity (300 mg/l). Since the equation for chronic toxicity was included in the report, this was fairly easy to do.

At the recommendation of Illinois EPA, the Board instead proposes to use a hardness value of 130 to 143 mg/l. According to the equation developed in our study, the following chronic values would be obtained using the alternative hardness assumptions:

	Chronic Value (mg/l)
hardness 130	4.7
hardness 143	5.2

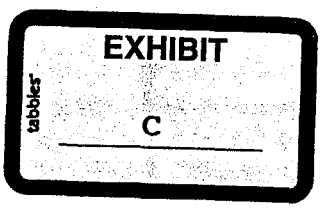
Our report did not include an acute toxicity equation, since the NPDES permit limit would be not be based on an acute criterion. Instead, the report pointed out that acute toxicity has not been observed to any species at concentrations less than 17 mg/l, even in tests at very low hardness values (less than 40 mg/l).

In conclusion, it is safe to assume that even at the hardness values preferred by Illinois EPA, a site-specific limit fluoride limit of 4.5 mg/l will protect freshwater aquatic life at Effingham.

Sincerely,

Greg R. Bright

Greg R. Bright
Director



MATERIAL SAFETY DATA SHEET

Power Vac, Inc
P.O. Box 856
508 Graves Blvd.
Phone 785-826-8220

Updated: 07-10-02
Supercedes: 11-12-98 version

Emergency spill phone 800-424-9300 (CHEMTREC)

SECTION 1: IDENTIFICATION OF PRODUCT

Product name: ABL-43 Aluminum Brightner

Class:	Corrosive (Subsidiary- Poison)
Shipping name:	Hydrofluoric Acid Solutions with not more than 60% strength
Hazard Class:	8 Corrosive Inorganic Acid
UN/NA#:	1790

Precautions: DANGER Causes eye, skin and respiratory tract irritation and potentially serious burns. Avoid contact. Avoid breathing vapors, or fumes. An eyewash station and safety shower should be in close proximity to areas where concentrated HF is handled or mixed.

SECTION 2: HAZARDOUS INGREDIENTS

Ingredients	(CAS#)	%Wt	OSHA PEL	ACGIH/TLV
Hydrofluoric Acid	7664-39-3	15-20	3 ppm	3 ppm

NOTE: Other non-hazardous & environmentally sound ingredients are being withheld as "trade secrets" as afforded by law and in accordance with comment (b) § 757 of the restatement of the law of torts.

SECTION 3: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Eye and skin contact and inhalation.

EFFECTS OF EXPOSURE

- Ingestion: Gastrointestinal tract irritation and corrosion – severe burns, nausea, vomiting and diarrhea.
- Eyes: Causes severe corrosion and corneal burns.
- Skin: Causes severe burns that may not be immediately visible or painful.
- Inhalation: Causes respiratory tract irritation, burns and may cause upper respiratory tract ulcers.
- Chronic hazards: Produces severe skin burns that are slow in healing. HF solution will penetrate skin and attack underlying tissue and bone. Affected tissue may become blanched and bloodless. Symptoms may be corneal burns, pain behind the breastbone, cough, spitting blood, difficulty breathing, shock, muscle spasms, convulsions, and death may result.

EMERGENCY FIRST AID PROCEDURES

- Ingestion: Drink large amounts of water to dilute. Do not induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration. After diluting with water, several glasses of milk, or two ounces of milk of magnesia may be given for their soothing effect. Get medical attention immediately.

EMERGENCY FIRST AID PROCEDURES (Continued)

- Eyes: Flush with copious amounts of water for at least 5 minutes, get medical attention immediately.
- Skin: Thoroughly wash exposed area with soap and water for at least 5 minutes. Immediately remove contaminated clothing and get medical attention.
- Inhalation: Remove to fresh air. Get medical attention immediately. If breathing is difficult, oxygen may be given, preferably with a physician's advice. If victim is not breathing, give artificial respiration, preferably mouth-to-mouth.

CARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No

SECTION 4: FIRE & EXPLOSION HAZARD DATA

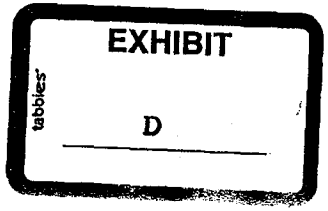
FLASH POINT: N/A (product is non-combustible)
FLAMMABLE LIMITS: N/A
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear NIOSH approved self-contained acid suits.
UNUSUAL FIRE & EXPLOSION HAZARDS: Flammable/explosive hydrogen gas may be produced on contact with certain metals and may react with water. Do not use solid water streams near ruptured tanks or spills of HF solution. Acid may react violently with water and can splatter acid onto personnel. Cool containers exposed to high temperatures with water spray to prevent pressure build-up and possible container rupture.

SECTION 5: PHYSICAL DATA

BOILING POINT:	>200 F	SPECIFIC GRAVITY:	1.05
VAPOR PRESSURE:	NA	MELTING POINT:	NA
VAPOR DENSITY:	1.3	EVAPORATION RATE:	Not established
SOLUBILITY IN WATER:	Complete	APPEARANCE:	Water clear
ODOR:	Acrid		

SECTION 6: REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Uncontrolled contact with active metals (Flammable hydrogen gas may be produced on contact with metals), glass, concrete and other silicone bearing materials. Avoid contact with cyanides and sulfides.
INCOMPATIBILITY: (MATERIALS TO AVOID): Do not mix with bleach or other cleaners of ammonia-containing compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: Fluorides and Hydrogen gas on contact with certain metals; these fumes can be highly corrosive.
HAZARDOUS POLYMERIZATION: Will not occur.



SECTION 7: SPILL, LEAK AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear acid resistant suit and complete protection equipment including self-contained breathing apparatus and eye/face protection. For spills, contain by diking and carefully neutralize with lime or soda ash. Keep non-neutralized material out of sewers, storm drains, and off ground. Comply with all applicable regulations in handling of disposal.

WASTE DISPOSAL PROCEDURES: Carefully neutralize with lime or soda ash, verify neutralized by verifying pH level and flush neutralized residue into drains with water.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Avoid breathing vapors, mist, or fumes. Respirator use not necessary under normal use conditions. The use of a respirator must be based on contamination levels found in the work place.

VENTILATION: Local exhaust or process enclosure ventilation system to keep exposure levels low.

PROTECTIVE GLOVES: Protective neoprene gloves should be worn. This equipment should be cleaned thoroughly after each use.

EYE PROTECTION: Employee should wear splash-proof face shield, or splash-resistant goggles to prevent contact with this material. Contact lenses should not be worn when handling this material.

OTHER PROTECTIVE EQUIPMENT: Protective boots, tyvek protective booties, neoprene apron, gauntlet style neoprene gloves, tyvek bouffant cap, splash-proof face shield, and splash-resistant goggles. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential over-exposure.

SECTION 9: SPECIAL PRECAUTIONS

RECCOMMENDED PRECAUTIONS: Keep containers closed when not in use. Always wash personal protective equipment immediately after handling product. Store in a cool, well-ventilated area designed for spill containment. Eyewash & safety shower in work area.

The information that is provided in this Material Safety Data Sheet (MSDS) is correct to the best of our knowledge. Power Vac, Inc. provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration and investigation. You should satisfy yourself that you have all current data relevant to your particular use.

END OF MSDS

Please see the three pages that follow this MSDS which are provided for your reference related to recommended medical treatments for HF exposure.

MEMORANDUM

FROM: Max Shepard – Shepard Engineering, Inc. **DATE:** May 15, 2003

TO: David Walter – Hodge Dwyer Zeman **FILE NO.:** 01-022

COPY TO: Tina Lan Dorf – Blue Beacon Management, Inc.
Mike Rose – Blue Beacon Management, Inc.

SUBJECT: Effingham Petition – Follow-up Information

Blue Beacon has completed their evaluation and testing program with respect to alternative brighteners. As a brief review, two sets of brightener alternatives were evaluated:

- Brightener list provided by Illinois Pollution Control Board Technical Staff
- Brightener list provided by Illinois Waste Management and Research Center

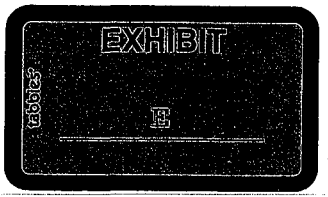
Brightener products provided by the IPCB were evaluated first. Blue Beacon tested three products; several of the products provided by the IPCB contained fluoride, and therefore, were not evaluated:

1) Silver Medal.
2) Aluminum Cleaner and Brightener.
3) Brightener B.

A summary of the test procedures and results, as well as, product specification sheets are provided for each of these three products. In each case, the product performance was inferior to the current, fluoride-based Blue Beacon brightener.

In addition, a cost comparison for these three chemicals is attached. These data show that, even if the products had been effective, they are all cost-prohibitive. Specifically, costs ranged from 12 to 37 times higher for the equivalent amount of chemical.

With respect to the potential alternative chemicals provided by the Illinois WMRC, Blue Beacon discovered that four (4) of the products contained fluoride. The other two potential brighteners, which did not contain fluoride, were very similar to products tested earlier. Therefore, no additional testing was conducted. Summary information with respect to the WMRC evaluation is also attached.



ALTERNATIVE BRIGHTENER-EFFINGHAM

On May 8, 2003 we tested 2 Alternative Brighteners from the IPCB list forwarded from Max Shepherd, Mike Rose, and Robert Kruse.

SILVER MEDAL
RATIO: 3 TO 1 strongest recommended dilution

We began the test on a painted reefer trailer using BB's normal wash procedure. We applied the Silver Medal mixed at the recommended 3 to 1 ratio. The Silver Medal cleaned OK but it didn't remove build-up in the aluminum pits of the rail. We used a 2nd application of Silver Medal to see if it would clean the rail better and we could see no change. Then we applied BB brightener to the next section of rail and it cleaned better with one application. Then we applied BB brightener to the section already brightened with Silver Medal and BB brightener cleaned out the pitted areas of the rails left by Silver Medal.

The next area to test was the trailer wheels that are side by side. We followed our normal BB procedures and then applied Silver Medal to one tire and wheel. It again cleaned OK but left some rust pits in the painted wheel. We next applied BB brightener to the other tire and wheel. One application of BB brightener took out the rust pits and brought out the shine in the painted wheel. We then applied BB brightener to the tire and wheel brightened with Silver Medal and cleaned out the rust pits it had left and made the wheel cleaner.

The Silver Medal is not an acceptable replacement for BB Brightener.

Doug Eddie
Rob Barnett

Chemical Testing Log

Product: Silver Medal

Approved: RK

Purpose: ALUMINUM BRIGHTNER

MSDS: YES

Supplier: EQUIPMENT TRADE SERVICE
20 E. WINONA AVE. NORWOOD, PA. 19074

Ship Date:

Contact (name/phone): (610) 583-7657

Ordered: MAY 2003

Amount Ordered: 5 GALLONS

Received: MAY 2003

Notes: PRICE PER GALLON
$9.34

Safety Precautions:	full Chem Gear		
Test Location:	SALINA	**Date Tested:**	5/8/03
Mix Ratio:	3:1	**Results:**	AT ITS STRONGEST RECOMMENDED DILUTION IT WAS NOT AS GOOD AS BB BRIGHTENER. DIDN'T CLEAN PAINT AS WELL EITHER. IT WAS NOT
Mix Ratio:		**Results:**	AS FORGIVING AS BB BRI. WASHING WOULD HAVE TO BE PRECISE. DWELL TIME TO WORK IS 2-3 MINUTES OF SOAKING? LEFT PAINT AND ALUMINUM
Mix Ratio:		**Results:**	DULLER THAN BB BRI.
Comments:			

INDUSTRIAL CLEANING DETERGENT SPECIALISTS

PRODUCT INFORMATION SHEET

SILVER MEDAL™

NON-ACID - ALUMINUM BRIGHTNER

High Alkaline Detergent

Available through ALL STAR™ DETERGENT DELIVERY PROGRAM

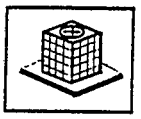
SILVER MEDAL is a clear liquid alkaline based aluminum brightener that quickly removes oxidation and restores dull,oxidized aluminum surfaces. **SILVER MEDAL** does more! With its alkalinity and rinse ability, **SILVER MEDAL** cuts caked on truck wheel grease, cleans restaurant hoods and ducts, is a great brushless painted commercial truck and building wash. It is USDA approved, biodegradable and safer to use than dangerous acid based brighteners. **SILVER MEDAL** has a powerful, penetrating action that removes greasy dirt found on motors and heavy equipment. When diluted, it is a brushless road film remover for painted commercial trucks. Ideal for use with hot or cold water, steam or high pressure washers. (Do not use on polished aluminum.)

APPLICATIONS

Dull Aluminum Tanker Trucks

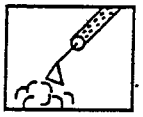
Kitchen Grease Hood & Ducts

Commercial Fleet Trucks



A/C Aluminum Condenser Coils

Dried Grease & Tars



Steam Cleaning

★ ALUMINUM BRIGHTNING	DILUTE 3 to 1	Apply product by spray, from bottom to top. Then let set. High pressure rinse from top to bottom. Repeat as needed.
★ BRUSHLESS PAINTED VEHICLE WASHING	DILUTE 75 to 1	Draw and apply product through a high pressure washer . Apply from bottom to top. Then let set. Rinse from top to bottom.
★ HEAVY DEGREASING	DILUTE 20 to 1	Best results are obtained when product is drawn and applied under Hot high pressure. For cold low pressure use, pre-soak soil with more concentrated product, then pressure rinse.
★ RESTAURANT HOOD & DUCT CLEANING	DILUTE 10 to 1	Pre-spray all greasy surfaces with very concentrated product. Then let set. Wipe or pressure rinse. (Hot if available.)
★ HOUSE CLEANING/ BUILDING WASHING	DILUTE 30 to 1	Draw and apply product through a high pressure washer. Then let Set. High pressure rinse.
★ A/C ALUMINUM COIL CLEANING	DILUTE 5 to 1	Pre-Spray straight or diluted product through a trigger or pump up sprayer. Then let set. Low pressure rinse.
★ CONCRETE OIL STAINREMOVER	DILUTE 15 to 1	Best results are obtained when product is drawn and applied under Hot high pressure. For cold low pressure use, pre-soak stains with more concentrated product then pressure rinse.

DETAILED SPECIFICATIONS

Viscosity	Free flowing liquid	**Biodegradability**	Complete
Color	Clear	**Phosphate Content**	None
Odor	Slight	**Stability**	3 years
pH Concentrate	13.6	**Sudsing**	Moderate
Specific Gravity	1.104 + - 0.005 gm/ml	**Hard Water Stability**	Excellent

PACKAGING

SILVER MEDAL is available in 1 gallon, 5 gallon and 55 gallon containers and through the **ETS ALL-STAR DELIVERY PROGRAM.**

WARNING: CORROSIVE.
Avoid Contact with skin and eyes. Do not take internally.
KEEP OUT OF THE REACH OF CHILDREN
(See Material Safety Data Sheet)

Manufactured by: Equipment Trade Service Co. Inc. 20 E. Winona Ave. Norwood, PA 19076 **Ph** (610) 583-7657 **Fax** (610) 583-5479 www.etscompany.com

MATERIAL SAFETY DATA SHEET
(Prepared According to CFR 1910, 1200)

PRODUCT IDENTIFICATION **SILVER MEDAL** Date : February 15, 2000

SECTION 1A MANUFACTURER'S IDENTIFICATION

EQUIPMENT TRADE SERVICE COMPANY, INC.
20 E. Winona Avenue
Norwood, PA 19074

Reorder Phone: (610) 583-7657
Emergency Phone: CHEMTEL (800) 255-3924

SECTION 1B PRODUCT INFORMATION

TRADE NAME SILVER MEDAL CAS # Not Established
TYPE/USAGE: Alkaline Aluminum Brightener DOT SHIPPING NAME:
Compound Cleaning Liquid, (Sodium Hydroxide), 8,UN1760,PGIII
or Corrosive liquid, N.O.S., (Sodium Hydroxide) 8,UN1760,PGIII

N.F.P.A. RATING: HEALTH (Blue) 2 FLAMMABILITY (Red) 0
(0=SAFE, 4=DANGER) REACTIVITY (Yellow) 0 SPECIAL (White) ALK

SECTION 2 HAZARDOUS INGREDIENTS/IDENTITY

CHEMICAL/COMMON NAME	OSHA PEL	ACGIH TLV	OTHER EXPO LIMITS	% (opt.)	CAS #
Sodium Hydroxide	2.0mg/	2.0mg/m3	N/E		1310-73-2
2-Butoxyethonol	N/E	25ppm	N/E		111-76-2

SECTION 3 PHYSICAL & CHEMICAL CHARACTERISTICS

APPEARANCE: Clear Liquid BOILING POINT: Over 200° F MELTING POINT: N/A
ODOR: Slight SOLUBILITY IN WATER: Complete VAPOR DENSITY: N/A
SPECIFIC GRAVITY: 1.063 REACTIVITY IN WATER: N/A VAPOR PRESSURE: N/A

SECTION 4 FIRE & EXPLOSION DATA

FLASH POINT: None METHOD USED: N/A AUTO IGNITION TEMP: N/A

FLAMMABLE LIMITS IN AIR % BY VOLUME: LEL (lower): N/A UEL (upper): N/A

EXTINGUISHER MEDIA: N/A UNUSUAL FIRE & EXPLOSION HAZARDS: None

SPECIAL FIRE FIGHTING PROCEDURES; Wear SCBA (self contained breathing apparatus) and full protective clothing.

SECTION 5 PHYSICAL HAZARDS (REACTIVITY DATA)

STABILITY: Unstable____ Stable__X CONDITIONS TO AVOID: None

INCOMPATIBILITY (Materials to avoid): Avoid contact with acids & prolonged contact with aluminum, tin, lead, zinc, and their alloys.

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

HAZARDOUS POLYMERIZATION: MAY OCCUR_____ WILL NOT OCCUR__X

ALUMINUM CLEANER AND BRIGHTENER
RATIO 4 TO 1 recommended ratio 5 to 1

We began this test on a painted reefer trailer using normal BB procedure. We then applied Aluminum Cleaner and Brightener to the aluminum rail. The 1st application did very little to clean the rail. The 2nd application took a little more off the rail. On the next section of rail we applied BB brightener and it cleaned that section of rail. We then applied BB brightener to the section of rail that already had been washed twice with Aluminum Cleaner and Brightener and one application cleaned the rail.

Aluminum Cleaner and Brightener used at stronger than recommended dilution ratio was dramatically inferior to BB brightener in cleaning aluminum. It was so bad we did not pursue it further by brightening the tires and wheels.

Doug Eddie
Rob Barnett

Chemical Testing Log

Product: ALUMINUM CLEANER & BRIGHTNER — **Approved:** RK+T

Purpose: ALUMINUM BRIGHTNER — **MSDS:** YES

Supplier: ADDITIVES INC. 5915 N. BROADWAY, DENVER CO. 80216 — **Ship Date:**

Contact (name/phone): (303) 292-0595 — **Ordered:** MAY 2003

Amount Ordered: — **Received:** MAY 2003

Notes: PRICE PER GALLON $6.50

Safety Precautions:	Full chem gear		
Test Location:	Salina	**Date Tested:**	9/8/03
Mix Ratio:	4:1	**Results:**	NOT AT ALL EFFECTIVE. 2 APPLICATIONS DID NOT EVEN CLEAN RAILS, WHERE BB BRT MADE RAILS CLEAN + SHINY.
Mix Ratio:		**Results:**	
Mix Ratio:		**Results:**	
Comments:			

Additives Inc.
5916 N. Broadway, Denver, CO 80216
Tel: (303) 292-0595 Fax: (303) 292-0429
paulh@additivesinc.com

FAX

To: ROB BARNETT	**From:** Paul Hughes
	Additives Inc.
Fax: 785-822-3716	**Date:** 4-18-03
Phone:	**Pages (including cover):** 7
Re: MSDS - ALUMINUM CLEANER & BRIGHTNER	

ROB,

HERE IS THE MSDS INFORMATION YOU REQUESTED.

DILUTION RATIO

1-5 MIN SOAK

1-5 TO 10

1-5-15

Thank you.
Paul Hughes
Additives Inc.
www.additivesinc.com
303-292-0595

MATERIAL SAFETY DATA SHEET

ADDITIVES INC.

Alkaline Aluminum Cleaner and Brightener

Additives Inc.
5915 N. Broadway
Denver, CO 80216
Tel: 303-292-0595 Fax: 303-292-0429
msds@additivesinc.com
MSDS on-line: www.additivesinc.com

MSDS No: 3630
Ver. No: 1
Ver. Date: 1/12/02

EMERGENCY NUMBERS:
PERS 1-800-633-8253

CUSTOMER SERVICE:
303-292-0595

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Alkaline Aluminum Cleaner and Brightener
Product Description:	General purpose, heavy-duty cleaner/degreaser for aluminum
Chemical Name:	Mixture
Chemical Family:	Moderately alkaline aqueous solution.
Chemical Formula:	Mixture
CAS Registry:	Mixture
Other Designations:	None
General Use:	Cleaner and brightener aluminum
Manufacturer:	Additives Inc., 5915 N. Broadway, Denver, CO 80216, Phone (303) 292-0595 FAX (303) 292-0429 (Hours of operation: Mon-Fri 8:00am-5:00pm MST) 24-hour Emergency Number: PERS 800-633-8253 Customer Service: 303-292-0595 24-hour International Emergency Number: PERS 801-629-0667

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	CAS No	% WT	OSHA PEL
Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	15-20%	None established
Potassium Hydroxide	1310-58-3	5-10%	2mg/m^3 (CEILING)
Sodium Gluconate	527-07-1	3-5%	None established
Ethoxylated Alkylphenol	9016-45-9	2-4%	None established
Proprietary, Non-Hazardous thickeners and surfactants	Not applicable	2-4%	Not applicable
Water	7732-18-5	Balance	None

SECTION 3 – HAZARDOUS IDENTIFICATION

Health:	1
Flammability:	0
Reactivity:	1
Special:	0

0 = minimal 1= slight 2=moderate 3= serious 4= severe

HMIS
H #1
F #0
R #1
PPE† E
†Sec. 8

Route(s) of Entry	
Inhalation:	Airborne concentrations of mist or spray may cause damage to the upper respiratory tract and even to lung tissue. Vapor/fumes are not generated at significant levels until temperature is elevated.
Skin:	Can be destructive to tissues contacted and may produce burns. The severity of damage and extent of irreversibility increases with length of contact time.
Ingestion:	Swallowing can cause burns and tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach.
Eyes:	Contact with the eyes may damage delicate eye tissue.
Target Organs:	None known
Effects of overexposure:	This solution is an alkaline irritant with a pH of 9-11. Prolonged contact may be destructive to tissue. Contact with the eyes may damage delicate eye tissue. Ingestion will cause mouth, throat and gastrointestinal irritation. Inhalation of harmful levels of vapors is unlikely due to the relatively low vapor pressure and the relatively low concentrations of ingredients.
Effects of overexposure:	The high pH of this product makes it harmful to all body tissue with which it comes into direct contact. The signs of local exposure usually include areas of superficial destruction of the skin, often painful and/or primary irritant dermatitis. Chronic: None known.
Medical Conditions Generally Aggravated by Long-Term Exposure:	None expected.
Chronic Effects:	None known
Carcinogenicity	
NTP:	None known
IARC Monographs:	None known
OSHA Regulations:	None known
ACGIH	None known

SECTION 4 – FIRST AID MEASURES

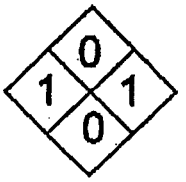
Emergency and First Aid Procedures:	**Eye contact:**	Flush eyes with large amounts of water for 15 minutes. If irritation persists, get medical attention.
	Skin contact:	Wash affected area thoroughly with soap and water. Remove contaminated clothing, rings, etc.
	Ingestion:	DO NOT induce vomiting, dilute stomach contents by drinking water, and seek immediate medical attention.
	Inhalation:	Remove to fresh air. If breathing has stopped, start artificial respiration. Seek medical attention.

Note to Physicians: Treat symptomatically
Special Precautions/Procedures: None known

SECTION 5 – FIRE-FIGHTING MEASURES

Unusual Fire Fighting procedures:	None required; non-flammable product
Flash Point:	None detected
Flash Point Method:	Pensky Martens
Burning Rate:	Does not burn
Auto ignition Temperature:	Not available
Flammable limits in air (% by volume):	Not applicable
LEL:	Not applicable
UEL:	Not applicable
Flammability Classification:	Not flammable
Extinguishing Media:	Water, fog, foam, CO_2, dry chemical
Unusual Fire or Explosion Hazards:	Closed containers may rupture or explode due to steam pressure build-up when exposed to extreme heat. Water may be used to cool closed containers.
Fire-Fighting Instructions:	Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment:	Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.
Unusual Fire Fighting procedures:	Full protective equipment including self-contained breathing apparatus should be used when Additive Inc. Antifreeze Additive Solution is present during a fire. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention.

NFPA



SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures:	Recover usable material by convenient method; residual may be removed by wipe or wet mop
Small Spills:	Small spills should be absorbed with a suitable inert material (sand, earth, clay, etc.). Remove the absorbed material and place in an appropriate chemical waste container for disposal.
Large Spills:	For large spills, dike and pump into suitable containers. Clean up residual water.
Containment:	For large spills, dike far ahead of liquid spill for later disposal.
Regulatory Requirements:	Follow applicable Federal, State and Local regulations.

SECTION 7 – HANDLING AND STORAGE

Handling Precautions	Wear impermeable gloves and other protective clothing to avoid prolonged or repeated skin contact. When handling, wear eye protection.
Storage Requirements:	Keep containers tightly closed when not in use. Store only in containers that are resistant to alkaline solutions with a pH of 10-12.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	
Ventilation:	Provide general or local exhaust ventilation systems.
Administrative Controls	
Respiratory Protection:	If personal exposure cannot be controlled below applicable exposure limits by ventilation, wear respiratory devices approved by NIOSH/MSHA, for protection against organic vapors, dust, fumes and mists.

Protective Clothing/Equipment:	Where skin contact may occur, chemical-impervious gloves should be worn. Use chemical goggles or full face shield when the danger of splashing exists. Rubber apron or similar protective clothing to prevent contact with skin or clothes.
	
Work and Hygienic Practices:	Wash or rinse hands before touching eyes or contact lenses, and before eating.
Safety Stations:	Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment:	Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments:	Avoid contact with skin, eyes and clothing. Do not take internally. Clean up spills immediately. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor::	Clear, liquid with no significant odor
Boiling Point (760 mm Hg):	220°F±2°
Specific Gravity:	(H_2O=1): 1.20-1.30
Percent Organic Volatiles by Volume:	Nil
Evaporation Rate:	(butyl acetate =1): <1
Solubility in Water:	Complete
Vapor Pressure:	(mm Hg.): 20mm Hg
pH:	9.5-10.5

SECTION 10 – STABILITY AND REACTIVITY

Stability:	Stable
Polymerization:	Will not occur.
Chemical Incompatibilities:	Strong oxidizing agents, strong acids.
Conditions to Avoid:	Strong oxidizing agents, strong acids.
Hazardous decomposition products:	If involved in a fire the following decomposition products may be generated: Carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen cyanide (possible in reducing atmospheres).

SECTION 11 – TOXICOLOGICAL INFORMATION

Eye Effects:	Contact with the eyes may damage delicate eye tissue.
Skin Effects:	Can be destructive to tissues contacted and may produce burns. The severity of damage and extent of irreversibility increases with length of contact time.
Acute Inhalation Effects:	Airborne concentrations of mist or spray may cause damage to the upper respiratory tract and even to lung tissue. Vapor/fumes are not generated at significant levels until temperature is elevated.
Acute Oral Effects:	Swallowing can cause burns and tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach.
Chronic Effects:	None known
Carcinogenicity:	Neither product nor its ingredients are listed by IARC, NTD or OSHA
Mutagenicity:	Not mutagenic
Teratogenicity:	Not Teratogenic

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	Not determined
Environmental Fate:	Decomposes to carbon, oxygen, nitrogen, phosphate salts and water.
Environmental Degradation:	Biodegradable
Soil Absorption/Mobility:	Not determined

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste disposal method:	Sanitary landfill or incinerate in approved facilities in accordance with local, state and federal regulations.
Disposal Regulatory Requirements:	Shipments of waste material may be classified as hazardous and subject to manifesting requirements through applicable regulatory agency.
Container Cleaning and Disposal:	Containers should be cleaned of residual product before disposal, and disposed of in accordance with all applicable laws and regulations.

SECTION 14 – TRANSPORT INFORMATION

DOT Shipping Name: Corrosive liquids, n.o.s. (Potassium hydroxide)

Shipping Symbols:

Hazard Class:	8 (Corrosive liquids, n.o.s.)
DOT Identification No.:	UN 1814
Packing Group:	II
Label:	Danger: corrosive; causes burns and irritation to skin and eyes
Special Provisions (172.102):	
Packaging Authorizations	
a) Exceptions:	Not applicable
b) Non-bulk Packaging:	Not applicable
c) Bulk Packaging:	Not applicable
Quantity Limitations	
a) Passenger, Aircraft, or Railcar:	One liter
b) Cargo Aircraft Only:	One liter
Vessel Stowage Requirements	
a) Vessel Stowage:	Not applicable
b) Other:	Not applicable

SECTION 15 – REGULATORY INFORMATION

EPA Regulations

RCRA Hazardous Waste Number and RCRA Hazardous Waste Classification:	Not applicable
CERCLA Hazardous Substance and CERCLA Reportable Quantity:	Not applicable
SARA Toxic Chemical and SARA EHS:	Reportable under SARA Title III (40 CFR, Part 370)
OSHA Regulations:	Must comply with OSHA standard 29 CFR 1910.1200 (employee right to know)

SECTION 16 – OTHER INFORMATION

Prepared By: Richard S. Gelb
Additional Hazard Rating Systems: None
Disclaimer: THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not apply.

CONSULT ADDITIVES INC. FOR FURTHER INFORMATION.

BRIGHTENER B
RATIO 4 TO 1 strongest recommended dilution ration

On May 14, 2003 I tested Brightener B from Panther Industries at the strongest recommended dilution ratio of 4 to 1.

The 1st truck was a painted dry box trailer with painted wheels and I began using BB normal wash procedures. I then applied Brightener B on the aluminum rail and it did OK but didn't clean build up in pitted areas as well as BB Brightener cleaned its section. I then used BB Brightener on the section of rail originally brightened with Brightener B and the rail came cleaner. I next applied Brightener B to the painted wheel and it cleaned OK but didn't take out rusted pitted areas as well as the BB Brightener wheel. A follow up coat of BB Brightener on the Brightener B wheel again cleaned the rust pitted areas better.

On the 2nd truck I picked a painted dry box trailer without pitted aluminum rails and without rust pitted areas in the painted wheels. I followed normal BB wash procedures and then applied Brightener B to a section of aluminum rail. The Brightener B cleaned close to BB Brightener when compared side by side. An application of BB Brightener on the Brightener B section of the rail didn't produce noticeable improvement. The Brightener B was applied to the painted wheels and cleaned almost as well as BB Brightener. The BB Brightener seemed to produce a brighter white on the painted wheel. The Brightener B was applied to the frame area by the wheels. It was noticeably less effective than BB Brightener in cleaning this area. The area was painted light gray so dirt and film were very visible. The Brightener B leaves film on painted surfaces and isn't as effective as BB Brightener.

Doug Eddie

Chemical Testing Log

Product: BRIGHTENER B

Approved: RK

Purpose: ALUMINUM BRIGHTENER

MSDS: YES

Supplier: PANTHER IND.

Ship Date:

Contact (name/phone): (817) 834-7164
FAX: (817) 831-0028

Ordered: MAY 2003

Amount Ordered: 5-GALLONS

Received: MAY 2003

Notes: PRICE PER GALLON
$ 193?

Safety Precautions:	FULL CHEM GEAR		
Test Location: SALINA #01		**Date Tested:**	
Mix Ratio: 4 TO 1		**Results:**	SEE ATTACHED TRUCK 1
Mix Ratio:		**Results:**	SEE ATTACHED TRUCK 2
Mix Ratio:		**Results:**	
Comments:			

MATERIAL SAFETY DATA SHEET

SECTION I

Product: BRIGHTENER B — Product Number: 1050
Date: August 20, 1996
Supersedes: November 1, 1993
Manufacturer: PANTHER INDUSTRIES, INC.
Address: 600 N. Beach, P.O. Box 961001, Ft. Worth, TX 76161
Emergency Telephone: 817/834-7164 (8am-5pm CDT) or CHEMTREC: 1-800-424-9300 (24 hrs.)
Preparer: P. Fields

NFPA Codes: Health-3; Flammability-0; Reactivity-0; Spec. Hazard-Corrosive

SECTION II - HAZARDOUS INGREDIENTS

	TLV	%
Phosphoric Acid; Orthophosphoric Acid; CAS# 7664-38-2 *	1mg/m³	< 35
2-Butoxyethanol; CAS# 111-76-2 *	25 ppm (skin)	< 7

* This chemical is subject to the reporting requirements of Section 313 of SARA Title III.
--This product contains no IARC, NTP, or OSHA carcinogens subject to the reporting requirements of 29 CFR 1910.1200--

SECTION III - PHYSICAL DATA

Boiling Point (°F): >212
Vapor Pressure (mm Hg): N/D
Vapor Density (air=1): N/D
Solubility in Water: complete
Spec. Grav. (H_2O=1): 1.20-1.25
% Vol. by Volume: 68
Evap. Rate (n-BuAc=1): <1
pH (1% sol'n.): 1.9-2.2
Appearance and Odor: Clear, red liquid with a mild butyl odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F, method used): None to boiling point
Flammable Limits: (LEL) N/A (UEL) N/A
Extinguishing Media: Water fog, dry chemical, foam, CO_2
Special Firefighting Procedures: Always wear self-contained breathing apparatus (SCBA) when fighting chemical fires.
Unusual Fire Hazards: May liberate flammable hydrogen gas upon contact with many common metals.

Product: BRIGHTENER B
Product Number: 1050

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing: Keep from freezing. Store at temperatures between 40°-120°F. Store in dry, cool, well-ventilated area. Keep container closed when not in use.

Other Precautions: Wash hands and garments thoroughly after use or exposure. Keep out of the reach of children. Wear protective equipment when handling.

Note: Eyewash fountains and safety showers in the workplace are strongly recommended.

This information is being supplied to you under OSHA "Right To Know" regulation 29 CFR 1910.1200 and is offered in good faith.

Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information.

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, expressed or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the customer. No suggestions are intended as, and should not be construed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

PRODUCT DATA SHEET

PANTHER INDUSTRIES, INC.

Established 1922

CHEMICAL ETCHING

BRIGHTENER B

DESCRIPTION:

BRIGHTENER B is a red liquid with a pleasant solvent aroma. Composed of an inorganic acid, a water soluble solvent, and a surface active agent, it has a pH of approximately 2.0.

PURPOSE:

BRIGHTENER B is designed for two basic purposes:

1. To remove oxidation, dirt and road film from aluminum surfaces such as aluminum trailers.
2. To remove light oil and rust from steel surfaces while leaving a light phosphate coating that provides an excellent paint bonding surface.

DIRECTIONS FOR USE:

1. CLEANING and BRIGHTENING: Dilute **BRIGHTENER B** at a ratio of 1 part to 4 parts water. Apply through pressure spray equipment or manually with a brush. Thoroughly rinsing with water is necessary to prevent streaking.

2. PREPARING STEEL SURFACES FOR PAINTING: Dilute **BRIGHTENER B** as above. This removes light oil and normal dirt on the steel surface. A spray or vat application can be used for this purpose. If heat is applied, a stainless steel vat should be used. Agitation, manually or mechanically, speeds the cleaning and improves the phosphate coating for paint bonding. Follow with a water rinse or wipe dry with a cloth.

ADVANTAGES:

1. Completely soluble liquid - mixes instantly with water.
2. Economical concentrate - dilute with water to use.
3. Free Rinsing - leaves no scum or chemical spotting.
4. Controlled action - contains no hydrofluoric acid.

PRECAUTIONS:

DANGER: CORROSIVE
CAN CAUSE EYE AND SKIN BURNS

Contains phosphoric acid and 2-butoxyethanol. Avoid skin, eye, or clothing contact. Mist may be irritating. Use with adequate ventilation. keep container closed when not in use. Wash thoroughly after handling. Safety glasses with side shields and rubber gloves are recommended when handling. Always add acid compounds to water and pour slowly to avoid splattering. Eyewash fountains in the workplace are strongly recommended. Store away from strong caustic compounds and metals.

(continued on reverse)

800-433-7664 600 N. BEACH STREET, FORT WORTH, TX 76111 FAX: 817-831-0028

COST COMPARISON

BB BRIGHTENER
$4.47 per gallon = .13 per mixed gallon
34 to 1 dilution ratio

SILVER MEDAL-EQUIPMENT TRADE SERVICES
$9.34 per gallon = $3.11 per mixed gallon
3 to 1 dilution ratio

ALUMINUM CLEANER AND BRIGHTENER – ADDITIVE INC.
$6.50 per gallon = $1.30 per mixed gallon
5 to 1 dilution ratio
As tested at 4 to 1 dilution ratio = $1.62 per mixed gallon

BRIGHTENER B – PANTHER IND.
$19.37 per gallon = $4.84 per mixed gallon
4 to 1 dilution ratio

Also because of dilution ratios being 3,4, and 5 to 1 safe storage of enough chemical would be a concern.

Doug Eddie

ALTERNATIVE BRIGHTENER EFFINGHAM

On May 6, 2003 we received the list of alternative brightener products suggested by Dr. Nelson with the WMRC from Max Shepherd, Robert Kruse, and David Keyser.

In establishing which products to test we found that some of them contained hydrofluoric acid. Those products therefore would not be acceptable for testing. I've listed the products with hydrofluoric acid and included a copy of its MSDS.

KO Manufacturing:
KO #206 Buffered Brite Alume
KO #207 Brite Alume
KO #208 Econo Brite

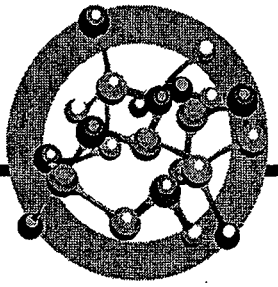
Panther Products:
Brightener F

In researching these products we also found that Nu-Brite from Nu-Calgon had sodium hydroxide as its main active ingredient. This makes it a similar product to Silver Medal from the list submitted by the IPCB. So we didn't want to duplicate our testing efforts.

Next was the product from Truckshine Line called TransPhos. Its base ingredient is phosphoric acid and we have already ordered a similar product from Panther Industries called Brightener B. Its base ingredient is also phosphoric acid, so we didn't want to duplicate our testing efforts.

Doug Eddie
Rob Barnett

Technical Data Sheet



KO#206

BUFFERED BRITE ALUME™

General Description:

206 is a fast acting combination cleaner and aluminum brightener made with a special agent that helps to buffer the harmful effect of hydrofluoric acid. It chemically cleans and brightens in one step. It quickly removes oxide film, road film and diesel smoke from aluminum trailer bodies and may also be used for aircraft and other aluminum components. 206 is highly efficient. This product does not require additional detergent or cleaning before or after the one step cleaning/brightening operation. If the trailer is excessively dull or dirty with a heavy build-up of diesel smoke, a second coat of 206 may be needed. Since 206, is a high foamer, it cushions the acid as it is sprayed on trailer, reducing splash back. This action also permits the acid to cling to the trailer longer.

Application and Use Concentrations:

206 should be applied through high pressure sprayer, foamer, or brush. Brushes should have natural bristles. Do not use synthetic bristles. The trailer body should be cool. If it is exceedingly hot, wash down with clear cold water. Spray from bottom up. Allow to stand about 2-3 minutes and rinse. The effectiveness of 206 is considerably enhanced when applied hot. A higher temperature considerably increases the activity, lowers the pH and helps soften oil, road film and soil to increase penetrating power of 206.

Use 206 diluted from 1:10 to 1:20 with water, depending on soil.

Customer Benefits:

Quickly removes oxide film, road film and diesel smoke.
Highly efficient.
Highly foaming.
Non-toxic.
May be used either hot or cold.
Excellent wetting ability.
Biodegradable.

Types of Companies Using the Product:

Automotive Supply Companies
Automatic Car Washes
Trucking Companies

Attention:

Refer to our Material Safety Data Sheet regarding hazards, personal protection and disposal of this product.

Revised: 9/18/00

KO MANUFACTURING, INC. 2720 E. DIVISION SPRINGFIELD, MO 65803
(417) 866-8000 FAX: (417) 866-2662

KO MANUFACTURING, INC.
MATERIAL SAFETY DATA SHEET

KO MANUFACTURING, INC. 2720 E. DIVISION P.O. BOX 3574 SPRINGFIELD, MO 65808-3574
(417) 866-8000 FAX: (417) 866-2662

#206

SECTION 1: GENERAL INFORMATION

PRODUCT NAME	[redacted]	**DATE PREPARED**	7-24-2000
CHEMICAL NAME & SYNONYMS	BLEND	**SUPERSEDES**	11-22-96
CHEMICAL FAMILY	ACID	24 HOUR EMERGENCY ASSISTANCE	CHEMTREC 1-800-424-9300
FORMULA	PROPRIETARY BLEND		

SECTION II: PHYSICAL DATA

pH (1% SOLUTION)	1.0-2.0	**SOLUBILITY IN WATER**	COMPLETE
BOILING RANGE	212F AND ABOVE	**EVAPORATION RATE (WATER = 1)**	<1
% VOLATILE BY VOLUME	77%		
SPECIFIC GRAVITY	1.07		
APPEARANCE & ODOR	CLEAR, COLORLESS LIQUID WITH PENETRATING ODOR		

SECTION III: HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPOUNDS	%	THRESHOLD LIMIT VALUE (UNITS)
PHOSPHORIC ACID	3.8	1MG/CUBIC METER
[redacted]	8.5	2PPM (VAPOR)
NONIONIC SURFACTANT	1	NOT ESTABLISHED
SAFE CORR ACID	<25	5PPM

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)	NA
FLAMMABILITY LIMITS	NA
EXTINGUISHING MEDIA	NA
SPECIAL FIRE FIGHTING PROCEDURES	NA
FIRE AND EXPLOSION HAZARDS	MAY GENERATE HYDROGEN GAS IN CONTA WITH SOME METALS. VAPORS ARE VERY CORROSIVE.

SECTION V: HEALTH HAZARD DATA

ACGIH THRESHOLD LIMIT VALUE	3PPM FOR HYDORFLUORIC ACID
CARCINOGEN - NTP PROGRAM	NO
CARCINOGEN - IARC PROGRAM	NO
PRIMARY ROUTES OF ENTRY	CAUSES SEVERE EYE AND SKIN BURNS UPON CONTACT. VAPORS AND MISTS ARE EXTREMELY CORROSIVE TO NOSE, THROAT, AND MUCOUS MEMBRANES. INGESTION MAY CAUSE SEVERE BURNS TO MOUTH AND THROAT. LARGE AMOUNTS MAY CAUSE DEATH.
CHRONIC HEALTH HAZARDS	NONE KNOWN
EMERGENCY FIRST AID	EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: FLUSH WITH COLD WATER FOR 15 MINUTES AND THEN SOAK IN .13% ICED ZEPHIRAN CHLORIDE SOLUTION FOR 1 HOUR. INHALATION: REMOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. INGESTION: DO NOT INDUCE VOMITING. GIVE MILK OR WATER. GET MEDICAL ATTENTION IMMEDIATELY. SEE NOTE TO PHYSICIAN ON PAGE 3.

MATERIAL SAFETY DATA SHEET
FORMULA #206

SECTION V: HEALTH HAZARD DATA (Cont'd)

SECTION 313 SUPPLIER NOTIFICATION
THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND 40CFR372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7664-39-3	HYDROGEN FLUORIDE	8.45%
7664-38-2	PHOSPHORIC ACID	3.8%

SECTION VI: REACTIVITY DATA

STABILITY	STABLE	**CONDITIONS TO AVOID**	NA
MATERIALS TO AVOID	CORRODES MOST MATERIALS	**HAZARDOUS POLYMERIZATION**	WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS	HYDROGEN GAS FROM CONTACT WITH SOME METALS		

SECTION VII: ENVIRONMENTAL PROTECTION

SPILL RESPONSE	USE PROTECTIVE EQUIPMENT AND AVOID CONTACT WITH SKIN AND EYES. NEUTRALIZE SPILL WITH SODA ASH. FLUSH WITH PLENTY OF WATER APPLIED QUICKLY TO ENTIRE SPILL AREA.
WASTE DISPOSAL METHOD	FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS REGARDING HEALTH AND POLLUTION.

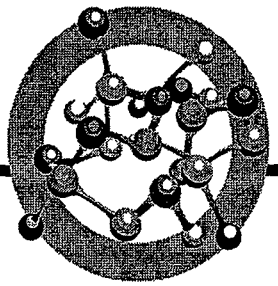
SECTION VIII: SPECIAL PROTECTION INFORMATION

EYE PROTECTION	FULL FACE SHIELD	**SKIN PROTECTION**	RUBBER, PVC, OR NEOPRENE
RESPIRATORY PROTECTION	APPROVED RESPIRATOR FOR ACID VAPOR.	**VENTILATION RECOMMENDED**	NEEDED TO MAINTAIN BELOW THRESHOLD.
OTHER PROTECTION	ACID RESISTANT APRON, RUBBERIZED BOOTS AND HAT.		

SECTION IX: SPECIAL PRECAUTIONS

HANDLING & STORAGE PRECAUTIONS	DANGER!! CORROSIVE!! CONTAINS HYDROFLUORIC AND PHOSPHORIC ACID. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. AVOID BREATHING VAPORS. MAY CAUSE SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY VISIBLE. IN CASE OF CONTACT, FLUSH WITH LARGE QUANTITIES OF COOL WATER UP TO 3-4 HOURS OR UNTIL MEDICAL ATTENTION IS MAINTAINED.
OTHER PRECAUTIONS	CONTAINERS SHOULD BE STORED IN COOL PLACE WITH CLOSURES UP. AVOID PHYSICAL DAMAGES TO CONTAINERS. DO NOT STORE FOR PROLONGED PERIODS OF TIME.

Technical Data Sheet



KO#207
BRITE ALUME™

HYDROFLUORIC

General Description:

207 is a fast acting combination cleaner and aluminum brightener. It chemically cleans and brightens in one step. It quickly removes oxide film, road film and diesel smoke from aluminum trailer bodies and may also be used for aircraft and other aluminum components. 207 is highly efficient. This product does not require additional detergent or cleaning before or after the one step cleaning/brightening operation. If the trailer is excessively dull or dirty with a heavy build-up of diesel smoke, a second coat of 207 may be needed. Since 207, is a high foamer, it cushions the acid as it is sprayed on trailer, reducing splash back. This action also permits the acid to cling to the trailer longer.

Application and Use Concentrations:

207 should be applied through high pressure sprayer, foamer, or brush. Brushes should have natural bristles. Do not use synthetic bristles. The trailer body should be cool. If it is exceedingly hot, wash down with clear cold water. Spray from bottom up. Allow to stand about 2-3 minutes and rinse. The effectiveness of 207 is considerably enhanced when applied hot. A higher temperature considerably increases the activity, lowers the pH and helps soften oil, road film and soil to increase penetrating power of 207.

Use 207 diluted from 1:20 to 1:30 with water, depending on soil.

Customer Benefits:

Quickly removes oxide film, road film and diesel smoke.
Highly efficient.
Highly foaming.
Non-toxic.
May be used either hot or cold.
Excellent wetting ability.
Biodegradable.

Types of Companies Using the Product:

Automotive Supply Companies
Automatic Car Washes
Trucking Companies

Attention:

Refer to our Material Safety Data Sheet regarding hazards, personal protection and disposal of this product.

Revised: 7/26/00

KO MANUFACTURING, INC. 2720 E. DIVISION SPRINGFIELD, MO 65803
(417) 866-8000 FAX: (417) 866-2662

KO MANUFACTURING, INC.
MATERIAL SAFETY DATA SHEET

KO MANUFACTURING, INC. 2720 E. DIVISION P.O. BOX 3574 SPRINGFIELD, MO 65808-3574
(417) 866-8000 FAX: (417) 866-2662

#207

SECTION 1: GENERAL INFORMATION

PRODUCT NAME	BRITE ALUME	**DATE PREPARED**	7-24-2000
CHEMICAL NAME & SYNONYMS	BLEND	**SUPERSEDES**	2-15-99
CHEMICAL FAMILY	ACID	24 HOUR EMERGENCY ASSISTANCE	CHEMTREC 1-800-424-9300
FORMULA	PROPRIETARY BLEND		

SECTION II: PHYSICAL DATA

pH (1% SOLUTION)	1.0-2.0	**SOLUBILITY IN WATER**	COMPLETE
BOILING RANGE	212F AND ABOVE	**EVAPORATION RATE (WATER = 1)**	<1
% VOLATILE BY VOLUME	77%		
SPECIFIC GRAVITY	1.07		
APPEARANCE & ODOR	CLEAR, COLORLESS LIQUID WITH PENETRATING ODOR		

SECTION III: HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPOUNDS	%	THRESHOLD LIMIT VALUE (UNITS)
PHOSPHORIC ACID	5.0	1MG/CUBIC METER
HYDROFLUORIC ACID	12.5	2PPM (VAPOR)
NONIONIC SURFACTANT	5.0	NOT ESTABLISHED

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)	NA
FLAMMABILITY LIMITS	NA
EXTINGUISHING MEDIA	NA
SPECIAL FIRE FIGHTING PROCEDURES	NA
FIRE AND EXPLOSION HAZARDS	MAY GENERATE HYDROGEN GAS IN CONTA WITH SOME METALS. VAPORS ARE VERY CORROSIVE.

SECTION V: HEALTH HAZARD DATA

ACGIH THRESHOLD LIMIT VALUE	3PPM FOR HYDORFLUORIC ACID
CARCINOGEN - NTP PROGRAM	NO
CARCINOGEN - IARC PROGRAM	NO
PRIMARY ROUTES OF ENTRY	CAUSES SEVERE EYE AND SKIN BURNS UPON CONTACT. VAPORS AND MISTS ARE EXTREMELY CORROSIVE TO NOSE, THROAT, AND MUCOUS MEMBRANES. INGESTION MAY CAUSE SEVERE BURNS TO MOUTH AND THROAT. LARGE AMOUNTS MAY CAUSE DEATH.
CHRONIC HEALTH HAZARDS	NONE KNOWN
EMERGENCY FIRST AID	EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: FLUSH WITH COLD WATER FOR 15 MINUTES AND THEN SOAK IN .13% ICED ZEPHIRAN CHLORIDE SOLUTION FOR 1 HOUR. INHALATION: REMOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. INGESTION: DO NOT INDUCE VOMITING. GIVE MILK OR WATER. GET MEDICAL ATTENTION IMMEDIATELY. SEE NOTE TO PHYSICIAN ON PAGE 3.

MATERIAL SAFETY DATA SHEET
FORMULA #207

SECTION V: HEALTH HAZARD DATA (Cont'd)

SECTION 313 SUPPLIER NOTIFICATION

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND 40CFR372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7664-39-3	HYDROGEN FLUORIDE	12.5

SECTION VI: REACTIVITY DATA

STABILITY	STABLE	**CONDITIONS TO AVOID**	NA
MATERIALS TO AVOID	CORRODES MOST MATERIALS	**HAZARDOUS POLYMERIZATION**	WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS	HYDROGEN GAS FROM CONTACT WITH SOME METALS		

SECTION VII: ENVIRONMENTAL PROTECTION

SPILL RESPONSE	USE PROTECTIVE EQUIPMENT AND AVOID CONTACT WITH SKIN AND EYES. NEUTRALIZE SPILL WITH SODA ASH. FLUSH WITH PLENTY OF WATER APPLIED QUICKLY TO ENTIRE SPILL AREA.
WASTE DISPOSAL METHOD	FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS REGARDING HEALTH AND POLLUTION.

SECTION VIII: SPECIAL PROTECTION INFORMATION

EYE PROTECTION	FULL FACE SHIELD	**SKIN PROTECTION**	RUBBER, PVC, OR NEOPRENE
RESPIRATORY PROTECTION	APPROVED RESPIRATOR FOR ACID VAPOR.	**VENTILATION RECOMMENDED**	NEEDED TO MAINTAIN BELOW THRESHOLD.
OTHER PROTECTION	ACID RESISTANT APRON, RUBBERIZED BOOTS AND HAT.		

SECTION IX: SPECIAL PRECAUTIONS

HANDLING & STORAGE PRECAUTIONS	DANGER!! CORROSIVE!! CONTAINS HYDROFLUORIC AND PHOSPHORIC ACID. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. AVOID BREATHING VAPORS. MAY CAUSE SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY VISIBLE. IN CASE OF CONTACT, FLUSH WITH LARGE QUANTITIES OF COOL WATER UP TO 3-4 HOURS OR UNTIL MEDICAL ATTENTION IS MAINTAINED.
OTHER PRECAUTIONS	CONTAINERS SHOULD BE STORED IN COOL PLACE WITH CLOSURES UP.. AVOID PHYSICAL DAMAGES TO CONTAINERS. DO NOT STORE FOR PROLONGED PERIODS OF TIME.

MATERIAL SAFETY DATA SHEET

NOTE TO PHYSICIAN: THE MEDICAL TREATMENT PROCEDURES FOR HF BURN TREATMENT AS OUTLINED BELOW HAVE BEEN APPROVED BY PHYSICIANS FOR HF PRODUCTION FACILITIES.

1. SKIN BURNS: BEFORE PROCEEDING WITH THE MEDICAL TREATMENT OUTLINED BELOW, IT IS SUGGESTED THAT THE ZEPHIRAN CHLORIDE TREATMENT UNDER THE ABOVE FIRST AID PROCEDURE BE REPEATED. IT HAS BEEN FOUND IN MOST CASES THAT CONTINUED FIRST AID TREATMENT WILL OBVIATE THE CALCIUM GLUCONATE INJECTIONS OUTLINED BELOW. TREATMENT CONSISTS OF INJECTION IN THE BURNED AREA WITH 10% CALCIUM GLUCONATE SOLUTION (STANDARD AMPOULE OF 10% INTRAVENOUS SOLUTION).

THE CALCIUM GLUCONATE SOLUTION SHOULD BE INJECTED BY A PHYSICIAN BY INFILTRATING THE SKIN AND SUBCUTANEOUS TISSUE IN THE SAME MANNER AS USED IN THE INJECTION OF A LOCAL ANESTHETIC. ALL THE SKIN WHICH HAS BEEN EXPOSED TO THE ACID SHOULD BE INFILTRATED, INCLUDING AT LEAST 1/4 TO 1/2 INCH AROUND THE AREA. EXTREME CAUTION SHOULD BE USED WHEN INJECTING CALCIUM GLUCONATE INTO FINGERS - IT COULD PRODUCE SUFFICIENT PRESSURE TO ENDANGER CIRCULATION AND CONTRIBUTE TISSUE NECROSIS. APPLY CALCIUM GLUCONATE DRESSING CREAM TO AFFECTED AREA BEFORE APPLYING DRESSING. USE DRESSING THAT WILL NOT SOAK UP CREAM.

2. EYE BURNS: EYE EXPOSURE SHOULD BE FOLLOWED IMMEDIATELY BY PROLONGED GENTLY IRRIGATING WITH COPIOUS AMOUNTS OF COOL TAP WATER. FURTHER TREATMENT TO THE EYE CONSISTS OF ANAESTHETIZING WITH DROPS OF PONTOCAINE SOLUTION, 0.5%. THEN IRRIGATE WITH DISTILLED WATER. PERSISTANT PAIN USUALLY INDICATES A NEED FOR ADDITIONAL GENTLE IRRIGATION. FLUORESCEIN SHOULD BE INSTILLED IN THE EYE AND, IF STAINING OCCURS, INTERMITTENT IRRIGATION SHOULD BE PROMPTLY SOUGHT BUT IRRIGATION MUST NOT BE DELAYED.

3. FINGER NAILS: FINGER NAILS AFFECTED SHOULD BE CUT BACK OR SPLIT AND IT MAY BE NECESSARY TO DRILL THE NAILS OR REMOVE FOR DRAINAGE. WASH AND SOAK IN ZEPHIRAN CHLORIDE SOLUTION AS DIRECTED UNDER FIRST AID. IT MAY BE NECESSARY TO INJECT UNDER THE NAIL WITH 10% CALCIUM GLUCONATE SOLUTION. DRESS WITH THE 10% CALCIUM GLUCONATE CREAM.

4. INGESTION: LAVAGE WITH LIME WATER SHOULD BE DONE PROMPTLY BY A PHYSICIAN ONLY. SOLUBLE CALCIUM INACTIVATES THE FLUORIDE ION. IN ADDITION TO LAVAGE, 10CC OF A 10% SOLUTION OF CALCIUM GLUCONATE SHOULD BE INJECTED INTRAVENOUSLY. RESPIRATORY DEPRESSION SHOULD BE COMBATTED WITH OXYGEN AND STIMULANTS IF NECESSARY, AND ARTIFICIAL RESPIRATION SHOULD BE USED IF NEEDED.