

Date: October 15, 2018
City of Sedona
Community Development Department
Planning and Zoning Commission
102 Roadrunner Drive
Sedona, AZ 86336

Re. Objections to Arizona Water Company's Permit Application for Water Treatment Plant with Chemical Storage Facility in Single Family Residential District

Dear Commission Members:

I. Introduction and Request for Postponement

I am writing in response to the AWC's additional conditional use permit submission. This letter states further reasons why the Commission doesn't have the authority to grant the AWC's permit.

Initially, on its face the Company's submission should be considered a new application. The so-called simple water tank project that initially necessitated a less than 50 page proposal has revealed itself to be a monstrously complex proposal for a treatment plant covering nearly 200 pages. Incredibly, the Commission has decided to consider this exceedingly complex engineering document in 3 weeks. Given the sheer volume of material, the Commission should consider this a brand new application. It is not conceivable that the Commission could adequately accomplish its task of reviewing this proposal and dealing with the myriad issues it raises in such a short time.

The Commission cannot reasonably expect the citizens to review this vast and complex submission in a matter of weeks. The Company, with all its resources, has been working on it for months if not years. Absent the Commission considering it a new application, I request a 6 month postponement to the hearing to consider the Company's new submission.

II. Sedona Lacks the Legal Authority to Grant the Permit

In my previous letter I explained why Sedona lacks the legal authority under the zoning laws to grant the requested permit. The Company's monstrous application proves exactly what I pointed out in my letter. The Company proposes a large industrial treatment plant, not a water tank project. This should be readily apparent to any fair-minded reader of the Company's complex application. I've provided a letter from an engineer, Mr. George Sudol, explaining that

this is not a simple water tank project.

As shown, this project includes facilities—pumping station, electrical room, sodium hypochlorite storage and feed systems, and a physical building—that are not part of a water tank. The Company’s own proposal shows that these are separately classified use and occupancy facilities that must meet their own codes and specifications. (According to the Company, they are classified F1 Factory). As such, they are individually non-permitted uses that the Commission and Sedona lack the legal authority to approve just because the Company calls them a water tank.

Mr. Sudol further explains that these facilities are not “appurtenances” to the tank. He states that the pump room, electrical room, and sodium hypochlorite storage facilities are not tank appurtenances. “An engineer would consider them facilities in the overall plant design. This is made clear in the proposal as each of these are the subject of separate design criteria, specifications, codes, planning, costing etc. An appurtenance to a tank are small attachments, like valves, covers etc.” The Commission must reject the Company’s attempt to avoid the zoning laws governing these uses by relabeling them “appurtenances.”

The building itself is also not a water tank. Water tanks do not entail building facilities to enclose them. This is a separate physical system. Because the building is not the tank and not an appurtenance to the tank, it must be a separately permissible use. But there is no permitted or permissible use for a building to hide a water tank and to house the other uses in the application. And therefore the application should be denied.

III. The Company Incorrectly Classified the Chemical Feed System as “Factory”

The Company tells the Commission that the sodium hypochlorite storage and feed facility are classified as F or Factory use and occupancy. This alone warrants denial of the application because the Company admits that the sodium hypochlorite storage and feed facility requires a separate use and occupancy classification than a water tank. Thus it requires its own permit procedure, which would be denied out of hand because factory uses are not permitted. The Company blatantly seeks to avoid the permit process for this use by enveloping it under a water tank use. It is transparent and illegal and the Commission should stop the Company on this basis alone.

But it gets worse. Mr. Sudol explains that sodium hypochlorite is actually a “corrosive” and that the correct use and occupancy code should be H4-High Hazard, not F1-Factory as the Company represented to the Commission. (He provided me with a Material Safety Data Sheet which the Commission should review.) A High Hazard Use and Occupancy requires much different design criteria than the Company is telling the Commission. Mr. Sudol states that the Sodium Hypochlorite should be a closed system, meaning it should not be integrated with the

other systems and buildings as proposed. “This dictates the type, construction and spacing of the buildings that would be required. Because Arizona Water incorrectly designated the storage facility as F1 instead of H4, its proposal failed to address these design criteria.”

Frankly, neither the Commission nor the residents should be put to the task of engaging experts to unravel the Company’s byzantine application. The application plainly tells the Commission that it includes additional use and occupancy codes that ought to be the subject of separate applications and these would be denied on their face. Nevertheless, if the Commission believes it has the authority and the expertise to review this application, then it must undertake the review in painstaking detail. We can graciously call the Company’s misstating the use and occupancy code for the sodium hypochlorite storage and feed system an oversight or mistake on the Company’s part. But are there other mistakes that happen to work in the Company’s favor? Likely.

IV. The Project Neither Preserves Nor Promotes Single Family Residential In the District

I showed in my last letter that the project doesn’t promote single family residential in the district. The Company’s renewed application presents no evidence that the proposed project promotes or preserves the purpose of the zoning in the district “in which the site is located.” Thus there is nothing in the record for this Commission to base the mandatory fact-findings it must make.

It should be obvious to the Commission that the proposed site presents unique views of Sedona’s Red Rocks. The views of Elephant Rock can’t be duplicated anywhere else. Legally speaking, placing an industrial facility there deprives the district of those lots for the district’s purpose, and this warrants denying the permit. A permanent removal of the lots from development of single-family residences violates the zoning law.

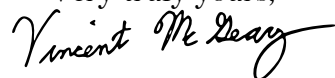
But the Commission can also apply common sense. And common sense dictates that no one should place an industrial facility on a unique location with sight lines to Elephant Rock. It would be a blight on the legacy of the Commission to approve it.

V. The Company Lacks Evidence Showing its Project Will not Harm Property Values

My last letter points out that the Company provided a single power point slide stating it is not aware of any evidence showing the project will hurt property values. I showed that this is not enough under the law because the Company has the burden to prove its project will not negatively impact the existing properties. In addition to the arguments and evidence I presented in my previous letter, I now understand that any residential real estate appraisal, particularly for a mortgage, must consider proximity to industrial facilities such as water tanks

in appraising the property. The Company has an affirmative burden to show no property owner will suffer decreased values due to the project. It has not met this burden and the Commission should deny the permit for this reason as well.

Very truly yours,

A handwritten signature in black ink that reads "Vincent McGear". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

Vincent McGear

George Sudol (Mech. Engineer)
c/o Vincent McGeary
31 Kingsridge Rd.
Frenchtown, NJ 08825

Vincent McGeary
31 Kingsridge Rd.
Frenchtown, NJ 08825

Dear Mr. McGeary:

You asked me to review the Arizona Water Company's conditional use permit application to the Sedona Planning Commission and your letter to the Commission regarding them. You then asked me to address whether I, as an engineer, would consider the proposed project a water tank project; whether the pump room, electrical room and sodium hypochlorite facility are appurtenances of the tank; and whether the building could be considered a tank or appurtenance.

An engineer would not consider this a water tank project. This is a water plant and treatment facility. This is a project of very considerable engineering complexity with multiple interacting systems. These systems include the physical structure to enclose the tank, the electrical supply systems, the pumping systems, the chemical storage and feed systems, fire safety systems, physical safety systems and the like. This is demonstrated at least by the Company's 196 page application.

The proposed pump room, electrical room, and sodium hypochlorite storage facilities are not "appurtenances" to a water tank. An engineer would consider them facilities in the overall plant design. This is made clear in the proposal as each of these are the subject of separate design criteria, specifications, codes, planning, costing etc. An appurtenance to a tank are small attachments, like valves, covers etc.

This project is not just a water tank but as Arizona Water states in their proposal it is a 1.5 million gallon reservoir with a complete water treatment and distribution and pumping system.

In reviewing your letter from an engineer's perspective, I generally agree with your comments on the proposal. You should further note that Arizona Water's proposal in section 3 page 6 lists the pump building and the Sodium Hypochlorite storage facility and designates them as International Code Council Use and Occupancy Classification as F1 - Factory. **Because Sodium Hypochlorite is a Corrosive, the correct Use and Occupancy Code should be H4 - High Hazard.** The Sodium Hypochlorite should also be a closed system, meaning it should not be integrated with the other systems and buildings as proposed. I included a MSDS for Sodium Hypochlorite 12.5%. This dictates the type, construction and spacing of the buildings that would be required. Because Arizona Water incorrectly designated the storage facility as F1 instead of H4, its proposal failed to address these design criteria. Understand that AWC operates these kind

of systems in other states but this is in a residential area. I feel that they have not addressed the issue storage and control of hazardous material in case of fire or spillage. As you can see from the MSDS Sodium Hypochlorite turns into Chlorine gas when heated. My concern is that the 4 motors will generate a significant amount of heat and the control and cooling of that building is not addressed in the proposal.

Although I am not a civil engineer, I have the requisite expertise to make the statements and evaluations in this letter. I was awarded a Masters of Science in Mechanical Engineering from the New Jersey Institute of Technology in 1985. I have been employed from 1987 to present as a Mechanical Engineer by the Munitions Engineering and Technology Center of the U.S. Army RDECOM-Armament Research and Engineering Center at Picatinny Arsenal, NJ. I currently lead an engineering team engaged in the research and development of Countermine and IED Defeat technologies.

Very truly yours,

/s George Sudol

George Sudol

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **SODIUM HYPOCHLORITE SOLUTION (10-15% AVAILABLE CHLORINE)**

Recommended Use of the Chemical and Restrictions on Use Water treatment: Sanitising agent.
Available chlorine = 10 - 15%.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Skin Corrosion - Sub-category 1B
Eye Damage - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
Acute Aquatic Toxicity - Category 1

SIGNAL WORD: DANGER



Hazard Statement(s):

H314 Causes severe skin burns and eye damage.

Precautionary Statement(s):

Prevention:

P260 Do not breathe mist, vapours, spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Safety Data Sheet



Response:

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Other Hazards:

AUH031 Contact with acids liberates toxic gas.

Poisons Schedule (SUSMP): S5 Caution.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Water	7732-18-5	>60%	-
Sodium hypochlorite	7681-52-9	10-<30%	H314 H400
Sodium hydroxide	1310-73-2	<1%	H290 H314 H318

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre. Continue to wash with large amounts of water until medical help is available.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Product Name: SODIUM HYPOCHLORITE SOLUTION (10-15% AVAILABLE CHLORINE)
Substance No: 000034421401

Issued: 09/07/2018

Version: 11

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Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns. Delayed pulmonary oedema may result.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2X

Specific hazards arising from the chemical:

Non-combustible material. Corrosive chemical. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of chlorine. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. For small amounts, in case of spillage flush with large quantities of water.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from acids. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s) and decomposition product(s):

Sodium hydroxide: Peak Limitation = 2 mg/m³

Chlorine: Peak Limitation = 3 mg/m³ (1 ppm)

Safety Data Sheet



As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

Peak Limitation - a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If determined by a risk assessment an inhalation risk exists, wear an air supplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Pale Yellow - Green
Odour:	Chlorine
Solubility:	Miscible in water.
Specific Gravity:	1.2 @20°C
Relative Vapour Density (air=1):	Not available
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not available
Boiling Point/Range (°C):	Not available

Product Name: SODIUM HYPOCHLORITE SOLUTION (10-15% AVAILABLE CHLORINE)
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pH: 12.5 (1% w/w)

10. STABILITY AND REACTIVITY

Reactivity:	Contact with acids liberates toxic gas.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. The amount of available chlorine diminishes over time.
Possibility of hazardous reactions:	Hazardous polymerisation will not occur. Reacts exothermically with acids . Reacts with ammonia, amines, or ammonium salts to produce chloramines. Decomposes on heating to produce chlorine gas.
Conditions to avoid:	Avoid contact with foodstuffs. Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to light. Avoid contact with other chemicals. Avoid contact with acids .
Incompatible materials:	Incompatible with acids , metals , metal salts , peroxides , reducing agents , ethylene diamine tetraacetic acid , methanol , aziridine , urea . Incompatible with ammonia and ammonium compounds such as amines and ammonium salts.
Hazardous decomposition products:	Chlorine.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
Inhalation:	Breathing in mists or aerosols may produce respiratory irritation. Delayed (up to 48 hours) fluid build up in the lungs may occur.
Acute toxicity:	No LD50 data available for the product. For the constituent SODIUM HYPOCHLORITE: Oral LD50 (mice): 5800 mg/kg
Serious eye damage/irritation:	Moderate irritant (rabbit). Standard Draize test
Respiratory or skin sensitisation:	No information available.
Chronic effects:	No information available for the product.
Aspiration hazard:	No information available.

12. ECOLOGICAL INFORMATION

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Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	This material is biodegradable.
Bioaccumulative potential:	Does not bioaccumulate.
Mobility in soil:	No information available.
Aquatic toxicity:	Very toxic to aquatic organisms.
96hr LC50 (fish):	0.065 mg/L (for sodium hypochlorite)

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No:	1791
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	HYPOCHLORITE SOLUTION
Hazchem or Emergency Action Code:	2X

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No:	1791
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	HYPOCHLORITE SOLUTION
IMDG EMS Fire:	F-A
IMDG EMS Spill:	S-B

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No:	1791
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Product Name: SODIUM HYPOCHLORITE SOLUTION (10-15% AVAILABLE CHLORINE)
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Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: HYPOCHLORITE SOLUTION

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Skin Corrosion - Sub-category 1B

Eye Damage - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

Acute Aquatic Toxicity - Category 1

Hazard Statement(s):

H314 Causes severe skin burns and eye damage.

Poisons Schedule (SUSMP): S5 Caution.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2018.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:

Revised Primary SDS

Change in Stability and Reactivity

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.



James F. Murnane II, PE

NJ Lic No. 24GE03664800

Professional Engineering Consulting

October 16, 2018

Vincent McGeary
20 Cathedral Rock Trail
Sedona, AZ 86336

RE: Plans for Water Treatment Plant
By Arizona Water Company

Mr. McGeary,

I have performed a brief engineering review of the above referenced plan for the construction of the Water Treatment Plant proposed by the Arizona Water Company.

After my review, and taking under consideration the aspects delineated in your letter, it would appear that the project for all intents and purposes would be considered a treatment plant and not a simple water tank. It would also appear that the pump room, electrical room and sodium hydrochlorite treatment facilities are not simply supporting equipment of the tank. In my professional opinion, this proposal is a more complicated project than portrayed in the application.

I would encourage the Community Development Department Planning and Zoning Commission of the city of Sedona to pause on a decision to approve this project until (1) a further detailed assessment is performed by a multi-disciplinary team of subject matter experts to properly evaluate all the technical aspects of the project and (2) experts are consulted in the area of the planning/zoning aspects to evaluate the need, appropriateness and environmental impact to the community.

Sincerely,

James F. Murnane, II
NJ Lic No GE36648

Analysis of Hazardous Use Classification - Water Treatment Facility

Date: 10/16/18

Subject: Storage and Use of Sodium Hypochlorite

Where: Proposed Water Tank and Treatment Facility

Code: 2006 International Building Code (Adopted Building Code of the City of Sedona)

By: Steve Mertes, CBO, City of Sedona

Sodium Hypochlorite is classified by the building code and other regulatory agencies as a corrosive material that falls under the larger classification of a hazardous material. However, the use or storage of any hazardous material does not, in and of itself, create a hazardous use (Use Group H) classification. In accordance with IBC Section 307.1, "High-hazard Group H occupancy includes, among others, the use of a building or structure, or portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard **in quantities in excess of those allowed in control areas** constructed and located as required in Section 414." The section then goes on to further specify that, buildings utilizing control areas in accordance with Section 414.2 that contain no more than the maximum allowable quantities per control area of hazardous materials as shown in Tables 307.1(1) and 307.1(2)" shall not be classified in Group H, but shall be classified in the occupancy that they most nearly resemble.

Table 307.1(2) addresses the maximum allowed quantities of corrosive materials, and said table is broken down into three main use categories – Storage, Closed Systems and Open Systems. Taking a conservative approach and assuming that the treatment facility will engage in an open system of adding the Sodium Hypochlorite to the water supply, we find that the IBC permits the storage and use of 100 gallons of such material per control area, with the number of control areas being limited to four in a single story building. Thus, the treatment facility could store and use up to 400 gallons before the building would be classified as a hazardous Group H use. The Table goes on to indicate that the maximum quantity of corrosive material in the same situation could be doubled if the building were fully protected with an approved, automatic fire sprinkler system without classifying the building as a Group H use.

In conclusion, although Sodium Hypochlorite is classified as a hazardous material (as is oxygen, gasoline, propane, engine oil, etc.), the treatment facility would be classified as Group F-1 if the quantity of the corrosive material per control area does not exceed that identified in IBC Table 307.1(2).

[F] TABLE 307.1(2)
 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL POSING A HEALTH HAZARD^{a, b, c, i}

MATERIAL	STORAGE ^d			USE-CLOSED SYSTEMS ^d			USE-OPEN SYSTEMS ^d	
	Solid pounds ^{e, f}	Liquid gallons (pounds) ^{e, f}	Gas (cubic feet at NTP) ^e	Solid pounds ^e	Liquid gallons (pounds) ^e	Gas (cubic feet at NTP) ^e	Solid pounds ^e	Liquid gallons (pounds) ^e
Corrosive	5,000	500	810 ^{f, g}	5,000	500	810 ^{f, g}	1,000	100
Highly toxic	10	(10) ⁱ	20 ^h	10	(10) ⁱ	20 ^h	3	(3) ⁱ
Toxic	500	(500) ⁱ	810 ^f	500	(500) ⁱ	810 ^f	125	(125) ⁱ

For SI: 1 cubic foot = 0.028 m³, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

- a. For use of control areas, see Section 414.2.
- b. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs, consumer or industrial products, and cosmetics, containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.
- c. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.4, see Table 414.2.4(1).
- d. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.
- e. Quantities shall be increased 100 percent in buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Where Note f also applies, the increase for both notes shall be applied accumulatively.
- f. Quantities shall be increased 100 percent when stored in approved storage cabinets, gas cabinets or exhausted enclosures as specified in the *International Fire Code*. Where Note e also applies, the increase for both notes shall be applied accumulatively.
- g. A single cylinder containing 150 pounds or less of anhydrous ammonia in a single control area in a nonsprinklered building shall be considered a maximum allowable quantity. Two cylinders, each containing 150 pounds or less in a single control area, shall be considered a maximum allowable quantity provided the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- h. Allowed only when stored in approved exhausted gas cabinets or exhausted enclosures as specified in the *International Fire Code*.
- i. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.
- j. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 2703.1.2 of the *International Fire Code*.

DEFLAGRATION. An exothermic reaction, such as the extremely rapid oxidation of a flammable dust or vapor in air, in which the reaction progresses through the unburned material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

DETACHED BUILDING. A separate single-story building, without a basement or crawl space, used for the storage or use of hazardous materials and located an approved distance from all structures.

DETONATION. An exothermic reaction characterized by the presence of a shock wave in the material which establishes and maintains the reaction. The reaction zone progresses through the material at a rate greater than the velocity of sound. The principal heating mechanism is one of shock compression. Detonations have an explosive effect.

DISPENSING. The pouring or transferring of any material from a container, tank or similar vessel, whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

EXPLOSIVE. Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G (Class B, Special).

The term “explosive” includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than consumer fireworks, 1.4G (Class C, Common) by the hazardous materials regulations of DOTn 49 CFR.

High explosive. Explosive material, such as dynamite, which can be caused to detonate by means of a No. 8 test blasting cap when unconfined.

Low explosive. Explosive material that will burn or deflagrate when ignited. It is characterized by a rate of reaction that is less than the speed of sound. Examples of low explosives include, but are not limited to, black powder; safety fuse; igniters; igniter cord; fuse lighters; fireworks, 1.3G (Class B, Special) and propellants, 1.3C.

Mass-detonating explosives. Division 1.1, 1.2 and 1.5 explosives alone or in combination, or loaded into various types of ammunition or containers, most of which can be expected to explode virtually instantaneously when a small portion is subjected to fire, severe concussion, impact, the impulse of an initiating agent or the effect of a considerable discharge of energy from without. Materials that react in this manner represent a mass explosion hazard. Such an explosive will normally cause severe structural damage to adjacent objects. Explosive propagation could occur immediately to other items of ammunition and explosives stored sufficiently close to and not adequately protected from the initially exploding pile with a time interval short enough so that two or more quantities must be considered as one for quantity-distance purposes.

UN/DOTn Class 1 explosives. The former classification system used by DOTn included the terms “high” and “low” explosives as defined herein. The following terms further define explosives under the current system applied by DOTn for all explosive materials defined as hazard Class 1 materials. Compatibility group letters are used in concert with the division to specify further limitations on each division noted (i.e., the letter G identifies the material as a pyrotechnic substance or article containing a pyrotechnic substance and similar materials).

Division 1.1. Explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire load instantaneously.

Fwd: Upcoming P&Z Water Tank Hearing

Eric Brandt <eric@brandtarchitect.com>

Tue 10/16/2018 1:06 PM

To: Karen Osburn <KOsburn@sedonaaz.gov>; Warren Campbell <WCampbell@sedonaaz.gov>;

Hi Karen and Warren, I received this email last week from a past client in Mystic Hills. I replied in a general way. He then replied to that. The oldest message is at the bottom. I thought I would be reading this into the record at the meeting. But now, I am sending this to you so I do not have to do that....Sorry for the delay... Eric

----- Forwarded message -----

From: **Larry Kane** <LIKANE@msn.com>

Date: Mon, Oct 8, 2018 at 11:41 AM

Subject: RE: Upcoming P&Z Water Tank Hearing

To: Eric Brandt <eric@brandtarchitect.com>

Eric,

I am not suggesting you change your approach. But, based on universal opinion, you have been anything but objective in your evaluation of the AWC project. And, the purpose of the P&Z Commission when it comes to Conational Permits (or in this case a variation of the code) requires the Commissioners to be objective because the detail of the rules and regulations are not adequately covered. This is why the P&Z Commission is asked to make a decision. That decision should cover all aspects of the project, not just the ones AWC wants you to hear. If the rules and laws, as you put it, were adequate, this issue would not even be in front of the Commission.

LK

From: Eric Brandt <eric@brandtarchitect.com>

Sent: Monday, October 8, 2018 9:27 AM

To: Larry Kane <LIKANE@msn.com>

Subject: Re: Upcoming P&Z Water Tank Hearing

Hi Larry,

starting back in the 1980's, when I was a member (including chairperson) of the Historical and Architectural Review Commission in Telluride, Colorado, people on both sides of many, very contentious issues were not able to understand my "politics". What confused both sides was that I was honored to follow the rules, laws and codes that were well established. I have no intention of changing my approach.

all the best, Eric

On Sun, Oct 7, 2018 at 8:53 AM Larry Kane <LIKANE@msn.com> wrote:

Eric,

I was not at the last P&Z Water Tank hearing. We were in New York at a wedding. But, I assured my neighbors that you would be objective in your decision making. I was wrong. I got chewed up and spit out over your one-sided approach and what you said. Again, I was not at the meeting, but the comments I received from my neighbors were universal. Maybe this is a surprise to you. One of my neighbors said you were clearly in the "pocket" of AWC and this neighbor wondered if you were "on the take". He said you sounded just like any big city politician getting a payoff.

When I probed my neighbors and also, I listened to parts of the recording of the hearing, it does sound like AWC has gotten to you. At least you did not get the real story straight. Yes, you got AWC story, but not the real issues or the alternatives available to AWC.

AWC is using the "holes" in the code to push through a project on a site that does not warrant approval for a long list of reasons. Much of what AWC has said just is not true or accurate. Even their flood analysis has not been signed by a registered and licensed engineer. His opinion is not worth any more than mine. All I ask of you is:

- Be objective
- Be a steward of the land and its use
- Recognize there is a much better alternative less than a ¼ miles north that does not use two residential lots for an industrial project
- Ask why P&Z has not truly evaluated these alternative site
- A "NO" vote does not prohibit AWZ from coming back to P&Z (resubmitting their plan) if either of the Forest Service sites just won't work or can't be used for a legitimate reason
- AWC will get strong community support if they move to the new site, instead of continued opposition and maybe even legal action against AWC and the City
- Make a decision that is in the best interest of the neighborhood and Sedona

Larry Kane

John Snickers

From: Vernon Dumbeck [VDUMBECK@azdot.gov]
Sent: Friday, October 12, 2018 4:44 PM
To: John Snickers
Subject: Application - SR179 Temp Access Haul Road

Encroachment Owner/Permit Applicant

The Northcentral District Encroachment Permit Office of the Arizona Department of Transportation has received your submittal related to a request for a permit for the project or activity identified in the subject line of this email.

The submitted application information will be entered to the ADOT Encroachment Permits Database and the Tracking Number of T113135 has been generated. Please refer to this number with any future inquires or submittals.

Your application has been assign to myself for processing. A cursory look at the submitted documents indicate an acceptable design. A detailed review will be provided shortly.

Please contact me should have any questions.

Vernon V. Dumbeck
District Encroachment Permit Supervisor

Arizona Department of Transportation
Northcentral District
1801 S. Milton Rd.
Flagstaff, AZ 86001-6311

District: 928.774.1491
Direct : 928.779.7529
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Infrastructure Delivery & Operations

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John Snickers

From: Branton, Nicole -FS [nbranton@fs.fed.us]
Sent: Monday, October 15, 2018 2:29 PM
To: John Snickers
Subject: RE: Plans in paper and digital Monday?

Hi John,

I did get to speak with Warren today and clarified that even if P&Z chooses not to issue a permit for the project at the Mallard/179 location that would not necessitate the FS permitting construction on the National Forest. I also confirmed his statement about the NEPA requirement. Even if the FS was able to accept the proposal (IF AZ Water Company could demonstrate that the project cannot be carried out off of the National Forest), we would have to complete a NEPA analysis and associated archaeological and wildlife surveys and consultation in order to consider whether the proposal should be authorized (most likely AZ Water Company would hire your own company to do this with the FS reviewing it but either way it would be at AZ Water Company's expense). The law requires us to analyze a "no action" alternative and there is no guarantee that the proposal would be selected as the best alternative over taking no action.

I may not be able to get you a more formal letter prior to the P&Z hearing tomorrow night but I'm still trying. We just have very little lands special uses assistance these days to help me draft that letter with the appropriate citations of the regulations. I told Warren that I was comfortable with you all sharing the emails that we have exchanged.

Nicole