Camp Minden Dialogue Committee
Vendor Responses as of 3/7/2015

As of end of day on 3/7 we have response information from the following vendors:

- ARCTECH/Actodemil (separate attachments)
- ATON (see below and attached flow diagrams)
- CO2AL (see below)
- DAVINCH (see below)
- Eldorado Equipment (see below)
- US Demil (separate attachments)

All vendor response information is in bold text

ARCTECH/Actodemil

ARCHTECH Answers are in a separate Attachment
ARCTECH also has 6 documents that they provided in a separate attachment:

1. **White Paper, Dr. Solim Kwak, Senior Science Advisor, Defense Ammunitions Center, US Army Joint Munitions Command—an Evaluation of Options for Propellant Disposal**
2. **25 Acre Site Concept**
3. **Independent Lab Reports on Actodemil® Product from Single Base Propellant**
4. **TheUTSlistof135Organicsand8ToxicMetalsShowingActodemilproductmeets the limits**
5. **An independent lab report for ActoHAXTM derived from lignite—Shows free of any toxic organics and metals.**
6. **Humic Acid Tech Bulletin.**

Questions Posed

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system?
2. Can you identified successful demil projects your company completed in the United States and what type and amount of material was processed?
3. Can indicate identify the waste streams and how much waste material will be generated from this process?
4. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?
5. Can you identify recycled or byproduct material and how much is generated? Please identify an end user to any material? Do you have any documentation of interest from end user?
6. Please identify an studies or sampling regarding dioxins?
7. You identified the potential to provide 11 train systems toward this process at Camp Minden. Can you indicate the train systems that are currently available to be deployed and the location of each train available? For any train that must manufactured, please indicate the timeframe necessary to acquire materials and fabricate the train for operation.

8. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

1. Please quantify and identify the estimated amount of any waste.
2. Please quantify the estimated amount of end product/fertilizer to be produced.
3. What is the estimated length of time for processing the M6 into the final end product?
4. What are the detection limits for testing for total organic compounds? Are you able to test for specific organic compounds? Is it possible for organic chemicals to reform in your process?
5. What is the plan for the end product?
6. Would storage be required for the end product? If so, what type, conditions, and packaging? How long would it need to be stored?
7. Who would own the end product upon completion of the process?
8. Are there infrastructure requirements? If so, please list.
9. Is ArchTech planning on partnering with a prime or are they willing to be the prime?
10. Is the equipment used in the Actodemil process already permitted for use in the approved DDESB process?
11. Will ArchTech consider an NDA with members of the Technical Workgroup to discuss the data which clarifies the questions about the chemical destruction of the DNTs and other organics of concern?
12. Is there noise associated with this process? If so, please define in estimated decibels.
13. What is the published peer-reviewed scientific proof that humic acid can serve as a reducing agent for the nitro groups on nitroaromatic compounds?
14. It was indicated that the humic acid used in the Actodemil would be able to sequester the over 1 million pounds of nitrocresols that are known to be created from basic hydrolysis of DNT. How has this been proven?
15. Is the laboratory you use for testing of water and emissions accredited by the state and EPA?

We want to understand the chemistry for these concerns.
Please develop a chemical flow chart:

- nitro group reduction process with humic acid on 1 million pounds of nitrocresols
- amide formation process between carboxylate salts and anilines under basic conditions--no such process
- the use of lignite as a source of humic acid.(heavy metals/mercury in product?) (MSDS available?)

ATON
Thank you for your continued interest in the ATON MTT technology, as stated several times during the presentation, We came to the Minden issue very late in the process, and where not able to conduct lab tests to give more concrete answers.

The second issue is that Dr.Parosa (inventor of the technology) has been extremely busy preparing a offer for AREVA in the destruction of low level Alpha

Radiation wastes for the Nuclear reactors they are decommissioning in Europe, hence he was on travel during the conference. (MTT process liquidates the organic carrier of the radiation, leaving far smaller amounts of radioactive ash to encapsulate)

However, I have taken steps to obtain samples of M6 propellant from demil operations in Poland, and in the shortest time possible will make sure they are provided to the ATON lab for testing. I spent 20 years in Poland working with the defense industries, represented such companies as Hughes Aircraft,Delco Defense Systems, Raytheon Missile Systems, Goodrich Aerospace, and most recently ATK in their program in purchasing TNT for the U.S. govt, from the Polish TNT producer nitro Chem.

Today I represent Nitro Chem SA in their U.S. office www.nitrochemamericas.com as their general manager (this is like being self unemployed). Moral of the story is that in Poland we make all these materials, and we know how to get rid of them, but like every other co involved, we have not dealt with the amounts of M6 propellant involved. Now to your questions.

1. For addition of sand to the M6 propellant, how would you prevent fires from friction and/or static electricity?

This would be done in a water sprayed environment, the MTT reactor quickly causes the water to evaporate into steam, which is run through the electricity production process.

2. Would you provide a process flow diagram or schematic of the process and of the pollution control system?

First attachment, Second attachment, taken from our "Red Water" treatment process. After tests of the M6, we will make a M6 specific diagram.

3. Can you identify successful demil projects your company completed in the United States and what type and amount of material was processed?

We have never done demil projects in the U.S. But we do have close contacts with companies that have, and could put together a consortium which would satisfy all involved.

4. Can you identify the waste streams and how much of each waste material will be generated from this process? How much waste sand will be produced through this process.

   We can identify these waste streams after testing of the M6 ppropellant in our lab, the amount of sand will be very samll, as it will be constantly recirculated between the two HR5000 reactors, next attachment.

5. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?

   Only after lab testing of M6 propellant.

6. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

Will provide after testing, have similar data from our red water tests, which has many similar compounds to M6 as it is also nitrocellulose based.

Next week we will strive to provide more answers, but once again I would like to stress the benefits of the MTT technology, it allows for the rapid destruction of large amounts of the M6 propellant, is minimally invasive to water, ground, and air resources, and can be used downstream to treat other wastes such as infected ground soil, auto salvage residue, PCB's, and other.

CH2M HILL/ Dynasafe/ EXPAL

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system? Could please provide a picture of the process unit and specifically the tunnel furnace?
2. Can you identify successful demil projects your company completed in United States and what type and amount of material was processed?
3. Can you identify the waste streams and how much waste material for each will be generated from this process?
4. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?
5. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.
6. Please indicate the complete timeframe that will required to acquire, fabricate, deploy a system? What will the estimated timeframe to complete proper testing of the system after setup?

7. What is stack gas flow rate in dry standard cubic meters per second per pound of waste? What is the total amount of gaseous wastestream projected to be emitted throughout the process?
8. Please list all specific compounds, inorganic and organic, that you will test for during continuous emissions monitoring, how you will test for them, and what the detection limits of the tests are.
9. If you cannot do continuous emissions monitoring for organic compounds, how will you monitor for them?
10. When you take samples to monitor, what are the detection limits for testing for total organic compounds that your laboratories can do? Are you able to test for specific organic compounds?
11. Is it possible for organic chemicals to reform in your process?
12. Please list the types of scrubbers used. How will the technologies you use to treat the gas stream factor into your overall budget?
13. Is it possible to include an additional activated carbon scrubber at the final emission point? If so, how would this affect the overall timeline of processing in weeks?
14. Is it possible to add a hold/test/release function to this equipment since this is not a continuous flow process, but rather more similar to a batch process?
15. Please name the manufacturer of the continuous monitoring system used with this equipment.
16. Is it possible to dismantle and remove this facility following completion of the project? If so, who would retain ownership?
17. Regarding the “ample space and utilities” mentioned in the presentation: Does this mean that no additional infrastructure provisions would need to be provided

other than what is currently on site and the companies have pre-determined the infrastructure to be satisfactory as-is?
18. Are there other infrastructure requirements? If so, please list.
19. Please quantify the estimated volume/pounds of ash waste that would be diverted to an appropriate landfill. Where would the ash be sent?
20. Is there noise associated with this process? If so, please define in estimated decibels.
21. Is the laboratory you use for testing of emissions accredited by the state and EPA?

Clean Harbor Env. Services

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system?
2. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?
3. Can you provide any and all analytical data, including but not limited to air emissions, stack testing, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.
4. Can you identify successful propellant demil projects your company completed in the United States and what type and amount of material was processed?
5. Please indicate the complete timeframe that will required to acquire, fabricate, deploy a system? What will the estimated timeframe to complete proper testing of the system after setup?

1. What is stack gas flow rate in dry standard cubic meters per second per pound of waste? What is the total amount of gaseous wastestream projected to be emitted throughout the process?

2. Please list all specific compounds, inorganic and organic, that you will test for during continuous emissions monitoring, how you will test for them, and what the detection limits of the tests are.
6. If you cannot do continuous emissions monitoring for organic compounds, how will you monitor for them?
7. When you take samples to monitor, what are the detection limits for testing for total organic compounds that your laboratories can do? Are you able to test for specific organic compounds?
8. Is it possible for organic chemicals to reform in your process?

1. Please list the types of scrubbers used. How will the technologies you use to treat the gas stream factor into your overall budget?
2. Is it possible to include an additional activated carbon scrubber at the final emission point?
3. It was discussed that this was a permanent on-site fabrication at Camp Minden but that it could be dismantled and taken by rail to Colfax, Louisiana following completion of the process. Could this be guaranteed as part of the cleanup process?
4. Please quantify the estimated volume/pounds of ash waste that would be diverted to an appropriate landfill. Where would the ash be sent?
5. Are there other infrastructure requirements? If so, please list.

6. Is there noise associated with this process? If so, please define in estimated decibels.
7. Please name the manufacturer of the continuous monitoring system used with this equipment. Is the laboratory you use for testing of emissions accredited by the state and EPA?

CO2AL

We had a few questions that we were not sure if the answer we provided was completely understood:

One questions was our ability to destroy aromatics within the M6. We have gone back and looked at the different components of M6 from the MSDS sheet provided. As each of the compounds has at least one aromatic ring, I believe this was the source of the aromatic compounds the questioner was referring to. We have experience with aromatic rings, more specifically Benzene. We have shown the ability to break the rings resulting in recovery or capture of just elemental material Carbon and Hydrogen. This has been demonstrated in each of the coal tests we have performed. If there are other compounds than those in the MSDS sheet provided, could Mr. Fruitwala please forward this information and information on CBI to me at this email address.

When we start the process, we will use propane or natural gas to initially melt the alloy pool. As long as the process is running, we will not require the addition of any heat to melt the alloy, in fact as the process is exothermic, we will have to run a heat exchanger to remove the heat generated by the process. This would be similar to the radiator on your car. Another option is running a cogeneration process, this power can be fed back onto the base.

We can hold all the solid materials (carbon, sulfur, alumina and aluminum salts) that are off takes from the process for testing before they are transported off site. The machine is designed to continuously monitor the off gas from the process using a GCMS.

We were asked the time required to treat the 15M pounds of M6. We put pin to paper and we figure with three machines we can conservatively treat all of the material within a year of the issue of the contract, even with our conservative 4 month machine build, delivery and setup. This would be running machines 24/7/365. The machines can be set into a stand-by mode if we need to cease operations for a short period of time. The machines can be shut down and restarted should there be a need to cease operations over multiple days.

1 For bulk propellant, how would you be able to prevent flashback and fire in the feed system?
The feed system is designed to segregate the feed stock should the temperature rise with in the feed tube. The stock is injected below the surface of the treatment pool using a force nitrogen system. The temperature is tracked and should it start to rise above a controlled point, the system feeding the material in the tube will be shut down and the port will close. The forced nitrogen system will continue to run, forcing the remaining material into the treatment system. Once the temperature stabilizes the feed system will restart.

2 M6 propellant in normal use is able to burn without needing atmospheric oxygen. How would your process prevent burning of the M6?
The primary catalyst is molten aluminum, which has an oxidation state of 3+. Because Al has this high oxidation state is has a great affinity for oxygen, thus any oxygen whether free or in a compound, will be consumed by the aluminum to form alumina (Al2O3) which is a highly stable ceramic and will not give up oxygen.

3. Would you provide a process flow diagram or schematic of the process and of the pollution control system?
Yes

4 Can you identify successful demil projects your company completed in the United States and what type and amount of material was processed?
CO2AL has not been involved in any demil projects to date. We are currently in talks with a larger company that has extensive demil work both in the US and overseas.

5 Please identify how much aluminum is required for input into the system.
We calculate that 0.5 to 0.6 lbs of catalyst is required per pound of M6. This will fluctuate based on the actual chemical composition of the nitrocellulose and the number of nitro groups present. If you reference the MSDS sheet, nitrocellulose is presented with the nitro groups as $(NO2)_x$ with x being 1, 2 or 3. This will cause the amount of catalyst consumed to vary.

6. Can you identify the waste streams and how much waste material will be generated from this process?
We will generate carbon, hydrogen, Alumina and Nitrogen from process of breaking down the M6. We have done the stoichiometric analysis, which was presented earlier this week, but have not created a spreadsheet to calculate the actual amounts of products created. The amount of alumina created with be 2 times the aluminum used within the process. But as we do not know the actual chemical composition of the M6, we can only provide an estimate based on the actual nitro groups present.

7. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?

The residency time of the process will be such that the off-gases from the breakdown of the M6 will be hydrogen and nitrogen. The hydrogen can be captured and compressed or burned. If it burned the resultant product will be heat and H2O. We have done the basic equations, but have not calculated the actual volume produced.

8. Can you identify recycled or byproduct material and how much is generated?

For M6, the byproduct will be carbon and Alumina, we have not calculated the mass of carbon created. But the amount of alumina and other metal oxides created would be close to 1 pound per pound of M6 treated.

9. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

Can you please be more specific. CO2AL, Mr. Bishop and Mr. Presswood have no

data relating to propellants and specifically M6. Mr. Presswood has worked on numerous project where samples have been taken and analyzed for air emissions, water quality, and solid wastes have been tested for hazardous compounds.

DAVINCH

1. Is the throughput calculation of 1200 pounds per day per unit accurate? If not, please clarify the projected range of throughput per unit.
2. Would any of these proposed throughputs force the use of the unit into "design base overload"?
3. Please state the overall estimated projected timeline for this process to include deployment, systemization, processing, cleanup, release of equipment from the site.
4. What operational period would be used? (16-hr, 24-hr, etc.)
5. Would adding additional units (over 1) potentially exceed the current budget range?
6. Please quantify the estimated volume of gaseous waste-stream projected to be emitted throughout the process. What is the total amount of gaseous waste-stream projected to be emitted throughout the process?
7. Please list what organic compounds will be included for testing in the hold/test/release of emissions. How will you test for them?
8. Please list all specific compounds, inorganic and organic, that you will test for during continuous emissions monitoring, how you will test for them, and what the detection limits of the tests are.
9. Please list the types of scrubbers used in the stack, if any.
10. Please quantify the estimated volume/pounds of ash or scrap waste that would be diverted to an appropriate landfill. Where would the ash be sent?
11. Please list any infrastructure/utilities that would be needed on site.
12. Is the laboratory you use for testing of water and/or emissions accredited by the state and EPA?

3 Would you provide a process flow diagram or schematic of the process and of the pollution control system?

A. The DAVINCH system is the sole property Kobe Steel LLC. No US government funding was used in the development of the system. As such, the DAVINCH design is treated as proprietary. Since your committee is identified as a public entity, this information cannot be disseminated without proper execution of non-disclosure agreements. I will contact Kobe this weekend and confirm this information.

2 Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?

A. At this time, we have insufficient data regarding the starting material containers and any stabilizers or binding agents that may be contained in the M6. Without this information we cannot specifically identify the off gas and the requisite environmental controls.

5 Can you identify the waste streams and how much waste material for each will be generated from this process?

A. The same reasoning lies as in #2. In general , the typical waste streams consist of gases and scrap metals. No liquid wastes are created by the process. The nature of the gases is governed by the operations strategy, i.e. the temperature pressure and any chemical additives that may be added to the process. Until such time as always able to optimize process using their models we are unable to identify the answers to questions two and three.

6 Can you provide any and all analytical data, including but not limited to air emissions, stack testing, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

A. To date, no M6 propellant has been processed by the DAVINCH system. l

10. Can you identify successful demil projects your company completed in the United States and what type and amount of material was processed?

A. DAVINCH operations are currently in progress in Japan, Belgium and China, all processing chemical munitions containing a variety of explosives. No operation has been conducted in the United States.

11. Are employing shock induced chemistry? Are you anticipating using a donor charge on this process and if not, what will induce the shock? How do you get a 6 9s DRE from this process?

A. At this point in time, we have not determined whether shock induced chemistry is necessary. Kobe engineers will such design and programming . the six 9's value has been demonstrated consistently in all DAVINCH operations.

12. Please indicate the complete timeframe that will required to acquire, fabricate, deploy a system? What will the estimated timeframe to complete proper testing of the system after setup?

A. Kobe is looking into diverting an existing unit from Salt Lake City to this project. Should they be successful, the installation time to operation will be approximately 30 days from arrival on site plus and additional time for systemization and permitting. If this is not possible, the fabrication of a new DV60 could take 10 to 12 months followed by the time it takes for and DDESB certification and environmental permitting.

Eldorado Equipment—Contained Burn

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system?
2. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?
3. Can you provide any and all analytical data, including but not limited to air emissions, stack testing, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.
4. Can you identify successful propellant demil projects your company completed in the United States and what type and amount of material was processed?

Eldorado Equipment—Rotary Kiln

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system?

We can provide detailed process flow diagram information, however it is considered proprietary. The process design of our pollution control system, which was developed over many years specifically for propellant thermal treatment, is a significant competitive advantage which we would wish to remain confidential so our competitors don't copy it. This will be provided in our technical proposal but will be marked proprietary. If something is needed for the dialogue committee which becomes public domain we can provide something general for public release if this is of use, but think it is best to retain confidentiality on the process design. We have described air pollution control technology which we have successfully employed in the contained burn pdf that we sent out previously. It is attached again for convenience. The same controls can be used on either of our processes.

2. Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?

Primary Gaseous Products from combustion of M6 in the primary thermal treatment unit (from either contained burn or rotary kiln EWI) are the same: CO_2, H_2O, and N_2. The amount produced of each element is essentially the same as calculated by the complete stoichiometric chemical equation for the complete oxidation of M6. By design we provide sufficient oxygen to both processes in order to ensure complete oxidation and avoid production of large amounts of unoxidized or partially oxidized species such as organics, CO, etc. which are toxic and can also result in an explosive atmosphere hazard.

Minor gas products from both processes include NOx, CO, and the potential for trace VOCs; there is also the potential for trace quantities of particulate, although solid, which may be entrained in the exhaust gas stream. The quantity of minor species produced in the primary unit is extremely small (measured in PPM or PPT range). Both primary thermal treatment processes we presented on result in lower levels of CO and VOCs than open burning (75%-99% lower). A description of air pollution controls, including but not limited to those we plan to propose for Minden, are described in detail in our contained burn pdf document provided previously.

3. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

Stack testing for destruction via thermal treatment of M6 propellant, including packaging materials (bags, flash reducer, lead liners.

data:

CO < 1.9 mg/Nm3
TOC <0.5 mg/Nm3 , within zero error of CEMS
NOx< 0.5 mg/Nm3, within zero error of CEMS
PM <0.5 mg/Nm3, within zero error of CEMS

4. Can you identify successful propellant demil projects your company completed in the United States and what type and amount of material was processed?

Please see attached sample projects. We have specialized in demil for our entire company history, with the vast majority of our business consisting of demil projects. We have many hundreds of demil projects which we have performed over our 34 year history. Attached is a fraction of sample demil project descriptions, which my assistant put together on short turnaround based on your request; the vast majority are in the U.S. but we did not sort out the international projects. We also provided some additional details on sample projects in documents previously submitted for both contained burn and rotary kiln EWI. We can provide additional projects and additional information if required.

As you can see, we have a breadth and depth of experience with a wide variety of materials, including M6, and many other types of propellants (other single base, double base, triple base, composite, etc.), having been successfully demilitarized in our facilities. We provide turnkey facilities and train the operators, but we are an engineering technology company and do not typically perform the demil operations at our facilities, they are normally run by DOD or commercial operating personnel.

Our well qualified Prime, Explosive Service International (ESI), who is very familiar with the site conditions and has an impeccable longstanding safety record will be downloading the magazines and operate at Minden.

Because we do not operate we don't have accurate data for total quantities completed for each project, many which completed their workload and were dismantled long ago, and many which are still in operation. Often our clients do not publically release the throughput they currently perform or have performed and although we sometimes receive this information it is protected under non-disclosure agreements. We do have accurate data we can share for a few projects , which have published achieved throughput and timelines in the public domain, such as our single facility for NATO in Albania which processed more than 23 million pounds of ammunition at our turnkey facility in about 2 years – all containing propellant or high explosives. Our systems typically have capacities measured in the tons per day, so each system completes in the range of hundreds of thousands of pounds to millions of pounds net explosive quantity (NEQ) per year. Because the number of facilities we have provided have sometimes operated for many years, I'm certain that if we could accurately add up the quantity processed at all of our demil facilities it would well exceed 500 million pounds and likely reach into the billions of pounds, all without , to our knowledge, any injuries due to an explosive accident.

1. What is stack gas flow rate in dry standard cubic meters per second per pound of waste? What is the total amount of gaseous wastestream projected to be emitted throughout the process?
2. Please list all specific compounds, inorganic and organic, that you will test for during continuous emissions monitoring, how you will test for them, and what the detection limits of the tests are.
3. If you cannot do continuous emissions monitoring for organic compounds, how will you monitor for them?
4. When you take samples to monitor, what are the detection limits for testing for total organic compounds that your laboratories can do? Are you able to test for specific organic compounds?

5. Is it possible for organic chemicals to reform in your process?
6. Please list the types of scrubbers used. How will the technologies you use to treat the gas stream factor into your overall budget?
7. Is it possible to include an additional activated carbon scrubber at the final emission point? If so, how would this affect the overall timeline of processing in weeks?
8. Is it possible to dismantle and remove this facility following completion of the project? If so, who would retain ownership?
9. What specific electrical power provisions would be required?
10. Are there other infrastructure requirements? If so, please list.
11. Please quantify specifically the destruction efficiency.
12. Please clarify which of your proposed processes is projected to have:
    a. Best emissions output
    b. Best destruction efficiency
    c. Best/most productive throughput
13. Please quantify the estimated volume/pounds of ash waste that would be diverted to an appropriate landfill. Where would the ash be sent?
14. Is there noise associated with this process? If so, please define in estimated decibels.
15. Please name the manufacturer of the continuous monitoring system used with this equipment.
16. Is the laboratory you use for testing of emissions accredited by the state and EPA?

General Atomics

1. Please define the amount of water waste-stream that will be produced daily as it corresponds to the timeline provided. (ex. 6000-8500 gallons daily for months 3-8; 13,000-18,000 gallons daily for months 9-14)
2. If this waste-stream is simply water that has been tested for ph, conductivity, and TOC measurements, why can it not be redirected to the ground? Must it be processed through a wastewater treatment facility? When you do Hold/Test/ Release and you send water samples to a lab, what are the detection limits for testing for total organic compounds that your laboratories can do? Are you able to test for specific organic compounds?
3. Is it possible for organic chemicals to reform in your process?
4. How likely is it that water recycling can be implemented?
5. How likely do you believe it to be that you will request and receive permission from the Army to transport and use its 10gpm unit currently located at McAllister?
6. If a 10gpm unit must be fabricated, what would the timeline for introduction into the process look like? How would this affect the 14 month timeline initially provided? If so, would such fabrication potentially exceed the current budget?
7. Is the handling of the water waste-stream something that GA manages or would this need to be subcontracted? (i.e. shuttle trucks, pumping, etc.)
8. Does GA already have potential primes that they are considering partnering with?
9. Please list any infrastructure requirements.
10. What engineering modifications would you recommend to minimizing the problems resulting from supersaturation of the SCWO slurry, which could potentially lead to malfunction of the machines and disrupt the continuous operation of the machines.
11. Is the laboratory you use for testing of water and emissions accredited by the

state and EPA?

12. There is some concern that insolubility of the ground M6 material could potentially lead to the precipitation of solids within the SCWO units, leading to a disruption of the continuous process and even system malfunction. What engineering modifications of the units could be performed beforehand in order to minimize such problems, and how are such problems typically addressed if and when they do occur?
13. We have concerns about the total volume of aqueous effluent that would be generated by the SCWO process on M6, what system and/or process modifications could be performed in order to be able to reuse the water during the SCWO process? What additional water feedback infrastructure and equipment would be necessary to accomplish this? For example, what filtration and degassing facilities would be required?
14. Have you obtained verification from Minden waste water treatment system (Camp Minden) of their ability to process this additional water? The Design capacity is only 250,000 gpd.
15. Your chemical evaluation of the effluent must include Priority Pollutants as well as ph, conductivity, TOC and CBOD.

1. Would you provide a process flow diagram or schematic of the process and of the pollution control system?
2. Can you identify successful demil projects your company completed in the United States and what type and amount of material was processed?
3. Can you identify the waste streams and how much waste material will be generated for each from this process?
4. Can you identify any recycled or byproduct material and how much is generated?
5. Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.

Munirem

1- Please provide additional explanation of the bioremediation process of the wastewater.
2- Must the wastewater be remediated prior to recycling in the process?
3- How is the cellulosic solid residue separated from the finished water?
4- List the types of scrubbers used.
5- Do you have a continuous monitor in your process?
6- What are the organic compounds to be tested?

1- Would you provide a process flow diagram or schematic of the process and of the pollution control system?
2- Can you identify all off-gases produced from this process, the amounts of each, and what air pollution controls are used for each?
3- Can you identify all waste materials and how much is generated for each? How much wastewater for disposal will be produced from this process?
4- Can you provide any and all analytical data, including but not limited to air emissions, effluent testing, solid or hazardous waste testing. Please identify if any of the data relates to propellant, and specifically M6.
5- Can you identify successful demil projects your company completed in the United

States and what type and amount of material was processed?

US Demil

US Demil's answers are in a separate PDF
They also provided a copy of a letter from US EPA Headquarters, Solid Waste Division to The Wyvern Group Ltd. which was the predecessor to U.S. Demil, LLC