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ONTARIO
SUPERIOR COURT OF JUSTICE

BETWEEN:)
)
)
HER MAJESTY THE QUEEN) *Elizabeth Nadeau and Stephen Byrne*, for the
) Crown
- and -)
)
BYRON SONNE) *Joseph Di Luca, Peter Copeland and Kevin*
) *Tilley*, for Byron Sonne
Defendant)
)
)
) **HEARD:** November 7-10, 16-18, 21-24, 28-
) 30, December 2, 12-15, 2011, March 19-23,
) 26, 27, 29, 30, April 2, and 13, 2012

SPIES J.

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INTRODUCTION

[1] Byron Sonne came to the attention of the Toronto Police Service on June 15, 2010, when he was observed taking photographs of the security fence that was being erected in advance of the G20 Summit. In the same timeframe, an investigation by G20 intelligence officers uncovered a Twitter¹ account and a Flickr² account and both were suspected to belong to Mr. Sonne. The Flickr account contained a very large number of photographs of the security fence and police security cameras that had been installed for the G20 Summit and photographs of police officers, some with derogatory captions, and photographs of places like the rear of the American Embassy. Older photographs, dating from 2009, included several that appeared to depict what was believed to be a makeshift projectile launcher (later identified as a potato cannon³), wooden boards showing damage apparently from shooting various objects with this launcher, and a device that appeared to be a modified microwave oven and believed to be a “wave guide”, which the police believed could be used to interfere with police surveillance cameras and communications. Posts on the Twitter account described design flaws in the security fence and items that could be used to climb or pull it down.

[2] Mr. Sonne was arrested on June 22, 2010 while riding on a TTC bus. Immediately thereafter the police began to execute a warrant to search 58 Elderwood Drive, the home Mr. Sonne shared with his wife. Based on the named offences in the warrant, the police were to search for various items including the wave guide. During the search of the basement of the house, the officers found a workshop containing a variety of laboratory equipment and a collection of chemicals stored in individually labelled jars and what was later identified as an electrolysis cell (also referred to as an electrochemical cell) in the furnace room. Other chemicals were found in the attached garage. There had been no expectation that chemicals would be found in Mr. Sonne’s home. A second warrant to search the home was obtained the next day expanding the list of named offences and the items to be searched for to include items related to the production of explosive substances as well as extending the duration of the search.

¹ “Twitter” is a social networking website where people can post short comments of no more than 140 characters (“tweets”) and have discussions with others online. All tweets posted to Twitter are public and visible to anyone with a connection to the Internet. Mr. Sonne had a Twitter account with the title “Toronto Goat” and the relevant tweets are set out in the Chronology. It is reasonable to infer that these tweets were made by Mr. Sonne based not only on the fact they were posted on his account, but also given their content.

² “Flickr” is a website that allows users to upload, manage and share photographs and videos. Each photograph uploaded to Flickr has a permanent web address, or “URL” commencing with the characters, “<http://www.flickr.com/...>”. By cutting and pasting this permanent link into emails, blogs, comments or otherwise sharing them on the Internet, other users of the Internet can be conveniently directed to a specific photo on Flickr. Mr. Sonne had a Flickr account with the title “Toronto_Goat” and the relevant photographs uploaded to this account are referred to in the Chronology. It is reasonable to infer that these photographs were uploaded by Mr. Sonne based not only on the fact they were posted on his account, but also given their content.

³ A projectile launcher that is intended to be used to launch potatoes for recreational purposes.

[3] Mr. Sonne stands charged with four counts of unlawfully possessing six explosive substances and / or the ingredients to make them, contrary to section 82(1) of the *Criminal Code*, namely tri-acetone tri-peroxide (“TATP”), hexamethylene tri-peroxide diamine (“HMTD”), urea nitrate, hexamine dinitrate (“HDN”), and two oxidizer-based explosive substances, one using potassium chlorate and the other ammonium nitrate. In addition, Mr. Sonne is charged with one count of counselling persons unknown to commit the indictable offence of mischief which offence was not committed, contrary to section 464 of the *Criminal Code*. This charge relates to his photographs and posts on Flickr and Twitter in connection with the G20 security fence. Mr. Sonne re-elected trial by judge alone and pleaded not guilty to all of the charges.

THE ISSUES

[4] The main issue to be decided with respect to counts 1-4 is whether the Crown has proved beyond a reasonable doubt that Mr. Sonne intended to use the chemicals found in his home to create an explosive substance or that he used them or intended to use them to cause or to aid in causing an explosion on or with an explosive substance.⁴ As a corollary to this main issue, it is also necessary to define the term “explosive substance” for the purposes of s. 82(1) of the *Criminal Code*. A determination of this issue will require consideration of a number of questions including whether or not Mr. Sonne was in possession of certain chemicals for innocent purposes. No assembled explosives or explosive substances were found in Mr. Sonne’s possession. Subject to one exception, there was, however, not much dispute about the fact that he possessed the various chemicals and related equipment relied upon by the Crown’s expert, Dr. Crawford John Anderson, who opined that these chemicals could be combined in various ways to produce the various explosive substances as pleaded in the indictment.

[5] In summary, the Crown’s evidence with respect to intent is as follows. It is the theory of the Crown that Mr. Sonne started to amass chemicals in January 2010, beginning with potassium permanganate, followed by the ammonium nitrate and hexamine tablets and other chemicals and that he then started making substantial quantities of potassium chlorate in March-April 2010. Mr. Sonne’s obsession with the G20 in May and June 2010 put him under the microscope with the police and Ms. Nadeau submitted that it would have been clear to him then that he would need to come up with an innocent explanation for the chemicals in his home. It is the theory of the Crown that Mr. Sonne realized he needed a cover or alibi and that he decided that cover would be that the potassium chlorate was intended to make rocket fuel. Ms. Nadeau’s submission is that Mr. Sonne never had a real interest in rocketry. She argued that this would explain why there is no evidence of any other rocket parts in Mr. Sonne’s home or any designs of rockets or documents with respect to rockets, why his chats as a member of a club called Hacklab,

⁴ These definitions come from s. 2 of the *Criminal Code* under “explosive substance”. Proof of either beyond a reasonable doubt results in conviction. The focus of the trial, however, was on the first definition – whether Mr. Sonne intended to create an explosive substance – and not the second. For the sake of readability, the remainder of the judgment will only reference the first definition. In coming to my conclusions, however, I have considered both definitions.

concerning rocketry, are in May and June 2010, why websites like the Canadian Association of Rocketry ("CAR") and the North American Propulsion and Aerospace Society ("NAPAS") were not bookmarked on Mr. Sonne's computer until June 2010 and why Mr. Sonne joined CAR and NAPAS before he even had a rocket. It is the position of the Crown that all of this was part of an elaborate alibi to provide an innocent explanation for why Mr. Sonne had these chemicals in his home. Ms. Nadeau adopted the opinion of Dr. Anderson that the only reasonable inference to be drawn from all of the evidence is that Mr. Sonne was intending to make at least some of the explosive substances pleaded. She submitted that the Crown's case was strongest with respect to counts 3 and 4, namely explosive substances made with urea nitrate, ammonium nitrate and potassium chlorate.

[6] Mr. Di Luca submitted that there are two explanations for why Mr. Sonne had such a variety of chemicals in his possession. The first is that the chemicals were intended to be used for innocent purposes. For example, potassium chlorate was being produced as rocket fuel as part of Mr. Sonne's growing interest in amateur rocketry. Mr. Di Luca presented Mr. Sonne as a layered, intelligent, skilled individual with a multitude of interests who had a legitimate interest in amateur rocketry and in particular, high powered rockets which explains the presence of the electrochemical cell that he was using to make potassium chlorate found in his workshop. Similarly, the ammonium nitrate could be used as fertilizer. Mr. Di Luca submitted that if Mr. Sonne decided he needed an alibi he would never have gone public in the first place and used his own credit card and home address to purchase the various chemicals found in his home.

[7] The second explanation submitted by Mr. Di Luca is that the chemicals found in his home were intended by Mr. Sonne to "test the system". He reasoned that you would expect that if Mr. Sonne was trying to raise flags by buying chemicals he would have the precursors to make explosive substances.

[8] In support of this submission, Mr. Di Luca relied in particular on an email exchange Mr. Sonne had with someone named Kate Milberry on April 26, 2010, at a time when he was not under investigation, and in particular Mr. Sonne's statement that he had ordered lab equipment and chemical precursors "in an attempt to purposefully raise flags and get 'the man' to take a look at me". He submitted that since Mr. Sonne is presumed innocent, the Court must start with addressing this email exchange and see whether or not it explains what Mr. Sonne was doing. He argued that the statement in this email was entirely consistent with the evidence about the groups Mr. Sonne was a member of including Hacklab, Toronto Area Security Klatch ("TASK") and SecTor and that Mr. Sonne had a genuine interest in surveillance, countersurveillance, security measures and an interest obviously tied to the upcoming G8/G20 Summits. Mr. Di Luca's position is that Mr. Sonne was testing the system for his own educative, intellectual and personal interest to be shared with a group of like-minded individuals and that he wanted to make a name for himself in this field.

[9] In response to this defence that Mr. Sonne was "testing the system", Ms. Nadeau submitted that as an intelligent man Mr. Sonne would not actually purchase chemicals, and if he did, he would not take them out of their commercial packaging and store them in hand labelled jars in his lab desk and that in any event, he would have some protection in place, such as a

document explaining what he was doing and why, in order to provide what she described as a clear-cut alibi to establish that if he caught the attention of the police what his purpose was.

[10] With respect to count 5; the counselling charge, there is no dispute that Mr. Sonne posted pictures on Flickr showing design flaws in the G20 fences and tweets on how those fences could be scaled or pulled down. The central issue is whether or not the Crown has proven the *actus reus* of this offence beyond a reasonable doubt, namely that these tweets actively induced persons to scale or pull down the G20 fence, particularly in light of the fact that the Court may not have the complete record of the dialogue with respect to these tweets.

THE EVIDENCE AND PRELIMINARY FINDINGS OF FACT

[11] The Crown's case relied not only on the physical evidence of the chemicals and equipment seized from Mr. Sonne's home, but also the considerable evidence seized from the hard drive of Mr. Sonne's main computer, as well as some of his Visa records. As well, some evidence from the blended *voir dire* that was heard during the hearing of the many applications in the first four weeks of this trial was agreed to form part of the trial record. In addition, the Crown called Dr. Anderson as an expert witness, the exhibits officer, D.C. Albrecht and re-called D.C. Ouellette who conducted the primary search of Mr. Sonne's computer. The Crown also tendered two statements given by Mr. Sonne to Detective Bui, subject to the portion that was ruled inadmissible in the second statement. Mr. Sonne did call a defence and I heard from a friend of his, Fryderyk Supinski. Mr. Sonne did not testify. As a result of considerable cooperation between counsel, four extensive agreed statements of fact with associated documents were filed.

[12] Because of the nature of the case, a detailed chronology is of assistance in determining what reasonable inferences can be drawn from all of the evidence. That Chronology is found at Schedule "A" to this decision. The facts set out in the Chronology were either expressly agreed to or came from documents admitted on consent and agreed to be authentic. However, statements made by Mr. Sonne in his blog, in chats, on Twitter and Flickr, in emails and in correspondence were not admitted for their truth. A list of the relevant bookmarks, documents and books is found at Schedule "B" with a summary of contents.

Evidence Seized from 58 Elderwood Drive

The Chemicals

[13] The chemicals that the Crown relies upon were found in either the basement workshop or the garage of 58 Elderwood Drive, where Mr. Sonne resided with his wife. It is an agreed fact that the property seized in the workshop and furnace room belonged to Mr. Sonne and not his wife. This admission does not extend to the chemicals and other property seized from the garage. D.C. Albrecht testified as to where the chemicals and some of the property were located before these items were seized by police. Photographs of the inside of the home and garage taken close in time to the start of the execution of the search warrant and of the various items that were tagged and seized were filed.

[14] Photographs showing the garage and workshop before they were searched show a very well organized space. The garage is attached to the home and entry from the garage to the home is through a laundry room. The laundry room opens up into the workshop in the basement which contained what was referred to as a lab desk with some lab equipment on it and a cupboard under that desk, a tall multi-sectioned cabinet next to the lab desk, a workbench where various hand and power tools were found, a shelving unit and a fridge. Most of the chemicals found in the workshop were in the cupboard under the lab desk; most in plastic screw top jars that were hand labelled with their chemical contents. There was also a furnace room where the electrochemical cell was found along with a quantity of potassium chlorate as well as a storage room in the basement.

[15] In the garage there were various gardening tools along one wall as well as lumber and plastic gas containers. There were bicycles on the other wall, and at the back there were shelving units which contained some of the chemicals relied upon by the Crown, in addition to materials related to, among other things, acrylic welding, a large circular saw, a drill press and some other power tools. There was a small workbench in the centre of the garage. The chemicals seized by police from the garage were mostly found on the shelving unit at the back among a lot of products that one would expect to find in a typical garage.

[16] It is important to consider where the various chemicals were found and how they were packaged. For example, chemicals found in their original commercial containers in the garage, which have household purposes, obviously raise fewer questions than chemicals found in the cupboard under Mr. Sonne's lab desk in his workshop, particularly where the chemical has been moved to a plastic jar and labelled by hand. The quantity of the chemical and, where available, the date of purchase, is also important. In the case of some of the chemicals and other property, the Crown was able to establish when these items were purchased. That information is set out in the Chronology.

The Computer

[17] As the courts have recognized, the search of a personal computer is an extensive invasion of one's informational privacy. This was true for Mr. Sonne. Detective Constable Ouellette gave evidence about certain items that he found on Mr. Sonne's computer and, as a result, I have evidence of Mr. Sonne's tweets on Twitter, the pictures he posted on Flickr, the posts he made on his blog⁵, his chats⁶ and a chain of emails⁷ he participated in as a member of Hacklab, copies of other emails sent and received by Mr. Sonne with various individuals and organizations, his

⁵ A "blog" is a modern communications tool; a type of website that can be updated anytime. A person may access and edit the blog while the general public may, in some cases, add comments to blog postings. Mr. Sonne hosted a blog entitled, "Toronto Goat" from February to August, 2009.

⁶ Chats on four dates in May and June 2010 posted on an Internet Relay Chat ("IRC") channel run by Hacklab through a third party site ("Hacklab chats") were introduced into evidence by the Defence. These chat rooms were open to anyone around the world. Some people used nicknames or aliases. Mr. Supinski simply used his first name.

uploads of torrent files⁸ to an Internet site called The Pirate Bay, the bookmarks and folders and documents he had on his computer including the files and books he may have read as a result and a history of some of his online purchases.

[18] Ms. Nadeau submitted that I should draw an adverse inference from the fact that two files on the hard drive of Mr. Sonne's computer could not be accessed by Corporal Lee and Mr. Letch, suggesting that this portion had been encrypted. The two files suspected to be encrypted are possibly quite large and named after bodies of water by Denmark, presumably because Mr. Sonne is Danish. There was a program called TrueCrypt found on the hard drive but it was not determined that this program created the suspected encrypted files. Mr. Letch has been trying to decrypt these two files for some time without success. Those efforts are apparently ongoing. Ms. Nadeau submitted that we know Mr. Sonne has the skill in hiding things that he doesn't want people to know of and referred to a Hacklab chat he had on June 5, 2010 with "shaz" when he discussed hiding Internet traffic, hijacking Internet Wi-Fi signals and portscanning government servers and how he usually upped files of "sketchy shit" from his car parked in a quiet neighbourhood after jacking someone's Wi-Fi. Ms. Nadeau queried what might be in these files given the nature of the documents Mr. Sonne did upload to The Pirate Bay, like Ragnar's Guide to Home and Recreational Use of High Explosives. She suggested that the encrypted portion could contain plans with respect to use of the bombs.

[19] There are a number of problems with this submission and, in fairness, Ms. Nadeau agreed that the fact there may be encrypted files on Mr. Sonne's computer is not a strong piece of evidence. It has not been proven that the files are encrypted, at least as I understand the agreed facts. However, the fact Mr. Letch has not been able to view the contents certainly suggests this, particularly as it appears Mr. Sonne had an encryption program on his hard drive. However, even if I were to conclude that Mr. Sonne had encrypted a portion of his hard drive, that does not mean that he did so for nefarious purposes. As I will come to, I have concluded that Mr. Sonne had a genuine interest in security and if there are encrypted files, they could just as easily contain

Mr. Sonne used "the _goat". During the course of such a chat, you could double click on someone's name and have a private conversation directly with that person. These chats are primarily relevant to the issue of whether or not Mr. Sonne was truly interested in rocketry in this timeframe. In addition, certain chat log files in May-June 2010 found on the hard drive of Mr. Sonne's computer, from an IRC network called Freenode, were entered into evidence. Again Mr. Sonne used "the _goat" ("Freenode chats").

⁷ The email chain had the subject "[hacklab-discussion] G20/G8 monitoring and documenting." Mr. Supinski estimated that the Hacklab email list was somewhere between 25 and 50 members in June 2010 ("Hacklab discussion group").

⁸ A torrent file is a type of file that will direct a user's computer to other computers on the Internet that have portions of a specified file and contains instructions on where and how to download the associated file(s). A torrent file does not itself contain the information to be ultimately downloaded and shared. Users can create and upload torrent files to The Pirate Bay that can then be accessed by others using a file sharing system called the BitTorrent system, which will assemble a completed file from those multiple sources. Mr. Sonne controlled an account on The Pirate Bay called "Goatmaster" that hosts torrent files that he uploaded various files to.

personal financial records. Certainly there is a great deal of information the Crown relies upon concerning explosives that was in plain view on Mr. Sonne's computer. I, therefore, am not prepared to draw any adverse inference from the fact that Mr. Sonne may have encrypted a portion of his hard drive.

Mr. Sonne's Statements to Detective Bui

[20] The Crown sought to introduce the statements made by Mr. Sonne to Detective Bui on June 23 and 26, 2010. I ruled that the first statement was admissible in its entirety but that only the first portion of the second statement was admissible. This evidence was then tendered as part of the Crown's case. At the time of the first statement, the charges Mr. Sonne was facing were different but did include weapons dangerous and possession of an explosive substance, although no particular substance was specified. Mr. Sonne knew that his house had been searched and that chemicals had been found. The information provided by Mr. Sonne was largely in response to questions asked by Detective Bui who, at that point, did not have a lot of information about the case in that the police had not had a chance to analyze the chemicals found or conduct the search of Mr. Sonne's computer. The statements contain explanations or qualifications favourable to Mr. Sonne that bear upon the matters in issue but were not given under oath. These statements by Mr. Sonne are, however, the only evidence that I have from him directly, where I can at least observe his demeanour, as opposed to statements that he made in various forums online. In addition, I was able to make observations of Mr. Sonne on the police videos taken at the time he was detained on June 15, 2010 and when he was arrested.

[21] I will refer to the statements of Mr. Sonne as I review the evidence, and consider the weight to be attached to them when I proceed to my analysis of the evidence and determination of the charges.

Mr. Sonne's background, interests, hobbies and political views

[22] In deciding this case it is important that I consider the evidence that I have that sheds some light on the kind of person Mr. Sonne is; his background, interests and hobbies, his opinions and political views and anything else that could assist in determining the key issue I must decide of whether or not he had any intention to combine any of the chemicals that he possessed into explosive substances. While such evidence, strictly speaking, pertains to motive and not intention, "as evidence motive is always relevant to the issue of intention The existence of a motive makes it more likely that a person committed the crime. Persons do not usually act without a motive."⁹ The evidence may also help explain why Mr. Sonne had different items in his possession.

[23] In addition to what Mr. Sonne told Detective Bui, the fact that he used his computer extensively has provided me with a lot of information about Mr. Sonne and what he was doing in

⁹ *R. v. Jeffers*, 2012 ONCA 1, at para. 35.

the months before his arrest. The following is a review of Mr. Sonne's broad and diverse interests.

Interest in Security Issues

[24] Mr. Sonne told Detective Bui that he worked in computer security and that he met his wife when he worked for her father's company which manufactured digital security systems. That business had been sold and, at the time of his arrest, Mr. Sonne was self employed and, with the downturn in the economy, he was not busy. He clearly had time on his hands, at least in the weeks before his arrest. Mr. Sonne told Detective Bui that he had been working on trying to land two contracts and had been trying to research and find people and get his name out there "by writing papers and presentations about things that are interesting such as things that are germane to the city like the G20." Mr. Sonne also told Detective Bui that he was a member of TASK, that he was into other security related things and that he was interested in writing about these things and coming up with a good presentation that he could put on at TASK after the G20 and maybe make his name with. He said "look at the cameras. Here they are. They went down. You know, this is what happened. This is what didn't happen. These are some of the people. This is the kind of stuff you can hear when you hang around with activists. This is exactly how the whole thing was overblown. This is how a city can successfully manage these things." One of the theories of the Defence is that Mr. Sonne's interest in the G20 was for the purpose of making a presentation surrounding security issues at the G20. Ms. Nadeau pointed out that there were no notes or any documents that would suggest Mr. Sonne had actually started writing such a paper. He was, however, creating a record of sorts on his computer; for example, by tweeting and posting photographs to Flickr and joining mailing lists and it may be that any interest in doing a paper later overlapped his interest in monitoring the police in the lead up to the G20.

[25] At the time of his arrest Mr. Sonne was licensed as a Security Guard and as a Private Investigator by the Province of Ontario. He obtained his designation, like his friend Mr. Supinski, as a Certified Information System Security Professional ("CISSP") in May 2009. Mr. Supinski testified that the process of becoming certified takes five years of practice in the information security industry followed by a written examination. To maintain the certification you have to continue to earn credits with security related courses which can include attending conferences hosted by TASK and SecTor.

[26] Mr. Supinski met Mr. Sonne four to five years ago at a TASK meeting. He described TASK as an organization of individuals who share an interest in security. Monthly meetings take place and there are typically two presentations at those meetings followed by a period of networking. The topics are on a vast variety of security related subjects including privacy, law enforcement, and information security. According to Mr. Supinski it is a privilege to present at TASK and he believes the fact he has done so assisted him in establishing his reputation for knowledge in the industry. Mr. Supinski described SecTor as an annual security education conference held in Toronto, organized by founders of TASK, which brings together security professionals from all over the world.

[27] Mr. Sonne was a member of TASK and there is evidence that he spoke at a security conference and then at TASK in the fall of 2009 on the subject of RF CounterSurveillance. A

document from Mr. Sonne's computer that appears to be speaking notes on the subject was introduced into evidence and appears to be a legitimate presentation related to the use of scanners to monitor radio frequencies. Although it addresses the legal issues in Canada, the focus of the presentation is on the security concerns raised by the use of radio frequency communications in the average business or enterprise and how those could be intercepted by scanners for improper purposes. Suggestions were made as to how to address those concerns. As set out in the Chronology it seems that Mr. Sonne also attended several security conferences with SecTor and DefCon and other organizations in the months leading up to his arrest.

[28] All of this evidence suggests that Mr. Sonne had a legitimate interest in security issues and was looking for work in this field. Given the considerable effort involved to obtain a certification as a CISSP, it seems reasonable that Mr. Sonne would want to maintain this certification and based on the evidence, his interest in writing papers for TASK presentations was legitimate to further his employment prospects.

Interest in Electronics

[29] Mr. Sonne described himself to Detective Bui as an electronics engineering technologist by trade and there was some reference to this being from a college. On all of the evidence it is reasonable to conclude that Mr. Sonne had a hobby interest in electronics as Mr. Supinski testified that he and Mr. Sonne had developed closer ties while they were both members of "Hacklab;" a group of about 30 people who lease space that members can use for a monthly fee. Although one meaning of the term "hacker" is to describe individuals who are trying to intrude on computer systems, Mr. Supinski was very firm in saying that persons with that intent are not permitted to join Hacklab, that both safety and abiding by the law are important to Hacklab members and that members of Hacklab were not doing dangerous experiments and did not want to have a reputation of being "bad hackers". Individuals who are members of this group are those who want to share in technology-related projects and build or repair electronics or work on other projects. Members will have their own project or brainstorm ideas for group projects or help someone with their project. In the leased space there are work areas and various tools including soldering irons, a laser engraver, two 3D printers and anything that you might need to work with electronics. Mr. Supinski described projects such as increasing the speed of a laser engraver and designing a hardware component that tweets a message to the Internet when a toilet is flushed. He characterized these as "fun little things". Although I expect many people would not find this sort of project amusing, this does appear to be the type of project that would amuse Mr. Sonne. In March 2009, he blogged on his Toronto Goat blog that he was a member of this "very cool thing called Hacklab.to." and referred to the fact that two members got a "busted laser etcher" to work and how they had posted a blog of this. He described it as a "mothafuckin' tour-de-force of hackery. It doesn't get too much better!"

[30] Mr. Sonne's interest in electronics is also clear from his Toronto Goat blog about his experiment to make a magnetron/wave guide in the period February to June 2009 as detailed in the Chronology. Ms. Nadeau submitted that the magnetron experiment shows Mr. Sonne's dedication to projects of somewhat questionable motives. She relied on the first blog in late February 2009, in which Mr. Sonne queried the ability to build a device capable of burning out communication systems. On the last day of the blog Mr. Sonne posted a number of photographs

of antennas which suggested that his original intent was real. There is no doubt, however, that at the time of Mr. Sonne's arrest, the project was still shelved as he said on his last blog on June 21, 2009, and the magnetron was found disassembled in the workshop. In a file box inside a cupboard in the office, a file marked "microwave/magnetron experiments" was found containing a number of files detailing that microwave device.

Interest in "Tinkering"

[31] Mr. Sonne described himself in an email as an extreme do-it-yourselfer and Mr. Di Luca submitted that he is a "tinkerer." There is evidence that supports this submission. Although as Ms. Nadeau submitted, Mr. Sonne bought potato cannons online, rather than building them, the photographs show how he experimented with them; shooting candles and shallots through particle board and noting the effects.¹⁰ Based on Mr. Sonne's blog about his magnetron experiment and his comments about various electronics issues in the Hacklab chats and emails, there is no doubt that Mr. Sonne's interest in electronics and tinkering continued during the months leading to his arrest. Mr. Supinski testified that he would see Mr. Sonne at the Hacklab space on a weekly basis and that some days it seemed as though Mr. Sonne lived there. This could explain some of the tools and other items found in Mr. Sonne's workshop and the garage. In fact, the number of power tools and regular tools that were in the garage and workshop suggests that Mr. Sonne may have worked with wood to build things or make home repairs. Indeed, one of his bookmarks suggests an interest in wood and boats.

Interest in Chemistry

[32] Although there is no evidence that Mr. Sonne had any training as a chemist, he clearly had some interests in chemistry; making blue crystals from copper sulphate for one and the electrochemical cell for another. He was truthful when he told Detective Bui that he was using copper sulphate to grow blue crystals and that the beakers on the lab desk were for this purpose. This has been corroborated not only by Dr. Anderson's evidence but also the photographs on Flickr. It is reasonable to infer that Mr. Sonne had learned enough about chemicals to be able to correctly label the various jars of chemicals that he had in his workshop, not only with their chemical name but also, in many cases, with the correct nomenclature.

[33] As I will come to, Mr. Sonne had experimented with at least three different electrochemical cells and successfully made potassium chlorate. Although Mr. Supinski believed that he had some help from a member of Hacklab who had knowledge as a chemist, based on what Mr. Sonne was posting on the Hacklab chats and in the emails about what he was doing and certain chemicals mentioned in the chats, he seemed fairly knowledgeable about chemicals and

¹⁰ Although these photographs demonstrate the force that shooting a potato from a potato cannon exerts, there is no evidence that any potato cannons in Mr. Sonne's possession were illegal or had ever been used other than for fun up at his cottage.

their potential uses. It is reasonable to infer from this evidence that Mr. Sonne had the necessary skill to work with the chemicals he had to make explosive substances if that were his intent, with or without the help from the Hacklab member that Mr. Supinski believed was assisting him.

Interest in Explosions and Explosives

[34] Ms. Nadeau submitted that Mr. Sonne had an obsession with explosions. I have only four days of Hacklab chats as selected by the Defence and she submitted that on those four days Mr. Sonne talked about explosions nine separate times, including a discussion on May 29, 2010 that included a discussion about TATP. Mr. Sonne, however, was not the only person involved in these chats, and it is not surprising that explosions would be of interest to members of a club like Hacklab; Mr. Supinski said that they were “cool”. According to Mr. Supinski, he spoke to Mr. Sonne about explosions and he admitted that they were a frequent topic of conversation on the Hacklab chats.

[35] Although I would not conclude that Mr. Sonne was obsessed with explosions, it would be fair to say he was fascinated by them. However, that in and of itself, in my view is hardly evidence of someone who might be inclined to make an explosive substance, particularly someone like Mr. Sonne with an interest in chemicals. I can take judicial notice of the fact that there was, for example, a great deal of news reported about the Sunrise Propane explosion; clearly explosions are newsworthy. Furthermore, as Mr. Di Luca submitted, the discussion on the Hacklab chat was not about advocating the use of explosives as much as discussing how dangerous these chemicals are. Mr. Sonne commented about TATP production being the stupidest thing someone could do and mocked someone who would smash a beaker of it. The chat suggests he knew what TATP was and that he recognized the danger in these substances. I agree with Mr. Di Luca that it does not suggest Mr. Sonne had a desire to personally use an explosive substance to blow things up.

[36] Ms. Nadeau also submitted that explosives would be within the top five of ten of Mr. Sonne’s interests. In considering Mr. Sonne’s interests and views in this regard, I have considered the substantial amount of evidence about information on Mr. Sonne’s computer which included documents uploaded to The Pirate Bay¹¹, user-created bookmarks¹² and

¹¹ Given the use of Mr. Sonne’s computer and the name of the account it is reasonable to assume the relevant files, uploaded to The Pirate Bay were uploaded by Mr. Sonne. Although the Crown had to source these documents separately as they were not available from Mr. Sonne’s computer, given the titles match and the nature of the subject matter, I am satisfied that the files entered into evidence by the Crown are the same or at least substantially the same as the torrent files Mr. Sonne uploaded to The Pirate Bay. Schedule “B” contains a summary of the main uploads relied upon by the Crown.

¹² Mr. Sonne created “bookmarks” of certain webpages and organized those bookmarks into folders or subfolders on his computer. A bookmark contains the name of the webpage on the Internet and may contain a description of the webpage that is obtained from the bookmarked webpage. When a user selects a bookmark that has been previously created within the program, the web browser will attempt to go to the specific webpage reference in the bookmark.

documents on his computer. The documents uploaded to The Pirate Bay include Ragnar's Guide to Home and Recreational Use of High Explosives, uploaded in September 2009, which appears to be a book Mr. Sonne ordered from Amazon, with the comment that it was rumoured to be out of circulation but that he did not believe it was illegal, and a file called Setting Fires with Electrical Timers which he uploaded on January 1, 2009, with the comment "Please, education purposes only ... don't be one of these idiots that goes out and hurts people. Support Freedom of Speech!"

[37] Based on the evidence of Dr. Anderson, both of these documents assist in making improvised explosive devices and one would query the wisdom of further putting them out in the public domain. The Ragnar's Guide is of particular concern as, according to Dr. Anderson, there are some significant correlations with what is in this book and what he saw from the evidence in terms of the chemicals available in Mr. Sonne's home. This book contains detailed information on how to make explosive substances. However, the evidence of Dr. Anderson is also clear that the Internet has all of the information needed to make explosive substances so it is not as if Mr. Sonne was disclosing some sort of State secret.

[38] Mr. Sonne's posting of these documents on The Pirate Bay may also be consistent with the fact that Mr. Sonne is someone who likes to test the limits of authority and is a strong supporter of freedom of speech. As he said in an email on November 4, 2009, "either you're free to traffic in the worst shit imaginable or you're not free at all". In the email to Kate Milberry on April 26, 2010, Mr. Sonne stated that he kept torrents going of matters of interest to counter-surveillance and activist security culture, and some other "sketchy stuff" that he monitored to see how active it would get as various political situations arose and that he had concluded that governments survey the Internet to see what's out there and who might be looking at it. This is consistent with a possible paper/presentation on security issues.

[39] As set out in Schedule "B", there are almost 300 files that were first created on Mr. Sonne's computer on January 5, 2009 that are all similar in nature and are based on military practices and training. Many of these documents include information on explosives, rockets that are used as weapons and incendiaries. Given when these documents were first created on Mr. Sonne's computer and the nature of these documents, they were likely not related to any interest in hobby rockets, although both D.C. Ouellette and Mr. Supinski testified that the principles would be the same. Mr. Supinski testified that a lot of information about rockets used as weapons could be applied to non-weaponized rockets. I find it most likely, given the vast array of topics of the other documents and bookmarks, that these documents reflect an interest Mr. Sonne had in the American and Canadian military field and technical manuals and military history and that it is not reasonable to conclude that these documents were downloaded as a result of an interest in explosives. However, it is fair to say that if Mr. Sonne read these documents they would have advanced his knowledge of explosives, rockets and incendiaries. The fact he referred to the Home Depot pail containing potassium chlorate that was found buried in his backyard as a "storage magazine" supports the fact that he was at least generally conversant with some of these documents.

[40] On the whole, based on the documents uploaded to The Pirate Bay and those on Mr. Sonne's computer either as documents or as bookmarked, Mr. Sonne clearly had an interest in

the subject of explosives and easy access to the knowledge to make the explosive substances pleaded in the indictment. This is corroborated by his knowledge of explosives as expressed on the Hacklab chats. I find that Mr. Sonne had ready access to the “recipes” and techniques to make the various explosive substances set out in the indictment and that given his intelligence and proficiency in making potassium chlorate, he had the necessary knowledge and skill to assemble the explosive substances set out in the indictment.

Interest in Reading

[41] Ms. Nadeau also led some evidence about Mr. Sonne’s choice of reading material generally. He uploaded a copy of the Turner Diaries to The Pirate Bay on August 16, 2009 and D.C. Ouellette testified that the Turner Diaries were connected to the Oklahoma City bomber. In my view, this piece of evidence is completely irrelevant. As Mr. Di Luca observed, the fact Mr. Sonne may have had an interest in writings that leave others uncomfortable, and some of which might be considered taboo, if we are to be free in this country that freedom gets tested in the margins where people are collecting these kinds of books. It should not, in the circumstances of someone with a broad range of interests, be considered a piece of circumstantial evidence. Looking at the hard copy books in Mr. Sonne’s home that can be seen from the photographs taken before the search and the bookmarked files on Mr. Sonne’s computer, he clearly had broad and varied interests that he read about or researched on his computer that, for the most part, were not related to a particular interest in explosives.

Interest in Air Rifles

[42] Ms. Nadeau submitted that Mr. Sonne had a fascination bordering on an obsession with guns. I do not accept that submission; on this evidence this was simply another example of Mr. Sonne’s many interests. In any event, any interest in guns that Mr. Sonne had appears to have been primarily in air rifles for hunting, not for any nefarious purpose. Mr. Sonne volunteered to Detective Bui just before he was shown a photograph of four air rifles in a closet, not only what they were but why they were there. He told Detective Bui that they had not been modified, that he owned them because he liked shooting tin cans at the cottage, that they were at home because he wanted to work on them over the winter, and so they would not get rusty. The posting of photographs on Flickr of a worn piston and the new piston from an air rifle would support this. It is true that Mr. Sonne had a lot of bookmarked articles on air rifles and how to turn them into semi-automatic rifles, but there is no evidence of any attempt to do so or that that would be illegal, nor is there any suggestion that it was illegal for Mr. Sonne to possess the air rifles. Considering all of the evidence, I find that Mr. Sonne’s interest in guns was not nefarious or in any way connected to the allegations before the Court.

[43] Mr. Sonne applied for and had obtained a licence to possess a firearm in the months before his arrest but there is no evidence that he had acquired one. In fact, Mr. Sonne recognized he would be subject to an RCMP check to obtain this licence which is hardly the action of someone who would want to keep a low profile if he intended on building bombs. Based on the chats set out in the Chronology, his intended purpose for obtaining a firearm was for hunting.

Interest in Gardening

[44] It is important to review the evidence that supports the statement of Mr. Sonne to Detective Bui that he had ammonium nitrate and urea for use as a fertilizer in his vegetable garden. He told Detective Bui that if he looked in his yard he would see how he had various plots of corn, beans and plants laid out and that each one of those was to be fertilized with a specific fertilizer so that he could see the difference it made for yet another paper or just his own edification.

[45] In Mr. Sonne's workshop, near his workbench, the photographs taken before the search show several paper packages of seeds; the top one is labelled herbs. On the bulletin board above the workbench, two Ziploc bags containing what appear to be seeds removed from a vegetable are tacked to the board. When Detective Bui showed Mr. Sonne photographs of these seeds, Mr. Sonne responded that they were squash and corn seeds and that he is an amateur farmer. In a close-up photo it is clear that the paper behind these bags relates to "Sister Corn" and what appears to be a drawing of a plant and some information about plants and so this statement appears to be true. There were also a number of bookmarks that relate to plants under the "Firearms, hunting, survival and military" folder. Ms. Nadeau submitted that for the bookmarks on farming, nothing was added after November 2008 but this does not mean that Mr. Sonne did not have a continuing interest in gardening or amateur farming. Although the police had an opportunity to search the backyard when the original search was executed, there is no evidence that was done and, therefore, no evidence to contradict Mr. Sonne's statement that he had a garden. In light of the physical evidence consistent with the presence of a vegetable garden, it is reasonable to conclude that Mr. Sonne's statement to Detective Bui that he had a vegetable garden was true.

Interest in Camping and Fishing

[46] In addition to the camping gear in the workshop and storage room, which would suggest an interest in camping, Mr. Sonne appears to have had an interest in fishing. A fishing rod was found near the camping supplies and a business card for a fishing supply store was on the bulletin board in Mr. Sonne's office provides support for Mr. Sonne's statement to Detective Bui that he goes fishing at his cottage.

Interest in Rocketry and Pyrotechnics

[47] There is evidence of Mr. Sonne having an interest in amateur rocketry, particularly in May and June 2010. As I have stated, whether this interest was real and explains the presence of the electrochemical cell and potassium chlorate is one of the main issues to be determined in this trial. I will deal with this issue when I consider count 4.

[48] As set out in the Chronology, as of June 9, 2010, there does, however, seem to have been a late-blooming interest in pyrotechnics which could have been, as Mr. Di Luca submitted, a natural progression from rocketry or at least is evidence of yet another interest. On June 18, 2010, just a couple of days before his arrest, Mr. Sonne purchased zinc oxide and red iron oxide and uploaded a file onto The Pirate Bay entitled "Practical Pyrotechniques by Buto Visser" with

the comment that it is a “*de facto* standard for beginning pyrotechnicians”. Dr. Anderson testified that zinc oxide is not relevant to explosives but can be used to generate smoke in fireworks and so it seems likely that this interest in pyrotechnics was real; there was no need for a “cover” for these chemicals.

Interests in the G20 and Anarchism

[49] Ms. Nadeau submitted that in the months leading to his arrest there was a change in Mr. Sonne that should cause the Court concern. He told Detective Bui that he had voted for Prime Minister Harper, and she referred to evidence on Twitter when in May 2009, Mr. Sonne made disparaging comments about the Tamil protestors and that he liked “messing with protestors.” She also suggested there was evidence Mr. Sonne had become paranoid based on a Hacklab chat he had on January 14, 2010. Although Ms. Nadeau recognizes political freedom, she submitted that Mr. Sonne became obsessed with the G20 and his political views swung to that of an anarchist. She also submitted however, that the evidence does not show that Mr. Sonne was really political but rather that he was looking for an outlet for his desire to “stick it to the system”.

[50] Although Ms. Nadeau rightly pointed out that she did not need to prove that Mr. Sonne had a particular plan to use an explosive substance at the G20, or anywhere else, she did rely on this alleged change in political views and his interest in the G20 in support of her argument as to Mr. Sonne’s intent with respect to the explosive substance counts. Implicit in these submissions was the suggestion that Mr. Sonne had a reason to inflict damage at the G20 by way of an attack using an explosive substance. Although Ms. Nadeau did suggest the possibility that Mr. Sonne had some of these explosive substances to blow a hole in the G20 fence, that seems inconsistent with the overall theory of the Crown that he had amassed enough chemicals to make six different explosive substances that could cause substantial damage and injury.

[51] There are a number of comments made by Mr. Sonne, as set out in the Chronology, to the effect that he was “strongly anarchist” in the months leading up to his arrest and in one comment he described this as a shift from being a Liberal. How this can be reconciled with voting for Mr. Harper is hard to say. In a Freenode chat on March 22, 2010, Mr. Sonne described himself as “less liberal nowadays, more anarchist” and he went on to comment that an “armed discussion group is a polite discussion group”. That, however, was in the context of a discussion about air rifles and firearms so I do not consider this comment to be serious, particularly given my conclusion that Mr. Sonne’s interest in firearms was for hunting. As Ms. Nadeau fairly acknowledged Mr. Sonne was probably joking when he made this statement. In his email to Kate Milberry of April 26, 2010, Mr. Sonne described his politics as “strongly anarchist and I’m an ex-commie”.

[52] I have considered the chat Mr. Sonne had with “aonomus” on January 14, 2010 which is summarized in the Chronology. The topics of discussion were quite varied. I would not conclude, taken in context, that they suggested paranoia on Mr. Sonne’s part. The comments relied upon by the Crown do not appear to have been made seriously. It is of note that there was some

suggestion in the chat that is consistent with Mr. Sonne wanting to test the system as he queried whether or not he would get a licence for a firearm given some disclosure he had made of a health issue. As for the Tamil protestors, I would not take those comments seriously.

[53] Mr. Sonne sent a mass email to the members of the Hacklab discussion group on November 4, 2009 on the subject of "tickling the dragon" (the "Tickling the Dragon email"). He said he was feeling in a civilly disobedient mood, "but what's new about that" and that email did go on to suggest that he wanted to provoke a government response by something that was "*almost* guaranteed to be illegal right off the bat." When asked about this comment, Ms. Nadeau submitted that Mr. Supinski went to great pains to seize on the word "*almost*" to suggest that Mr. Sonne had no intention of doing anything illegal but I would not say that is necessarily an unfair characterization of the comment, particularly given that Mr. Sonne added that the action would have to be "*relatively morally clean*". There are, however, a couple of other occasions when Mr. Sonne suggested that he did not care if some activity might be illegal. For example, in his post on the Hacklab chat on May 18, 2010, in response to Mr. Supinski's advice that he needed certification for larger motors, Mr. Sonne initially said that it was "*only illegal if you get caught*". However, in the same chat he said that proceeding with certification was probably a good idea. There are, as well, pictures of police officers that Mr. Sonne posted on Flickr with derogatory terms such as "bacon on wheels".

[54] Mr. Sonne told Detective Bui that he didn't like how the G20 had made his city into a sort of "prison camp" but at the same time it was a democratic establishment. He said he wished it had been done a little more openly but didn't have anything against any of the leaders. When asked if he supported the security establishment in Toronto, namely the police and the security effort, he answered that he had always been respectful to officers and that he had only been documenting it to look at it because it was interesting. This statement to Detective Bui is consistent with the evidence I have as to what happened when Mr. Sonne actually came into contact with the police; he was polite and respectful. Although I do not have the words that were spoken from the video when Mr. Sonne was detained by police officers on June 15, 2010, there is no suggestion that he was aggressive towards the officers or disrespectful, nor did any of the officers that interacted with him suggest otherwise. Similarly, in the video taken at the time of Mr. Sonne's arrest, Mr. Sonne is polite and respectful. Throughout the interviews by Detective Bui, Mr. Sonne was very respectful and responsive to most of his questions. He referred to Detective Bui as "Sir" throughout and even apologized when he used mildly offensive language. He did not behave with police as some of his language in the Tickling the Dragon email might suggest. Before his arrest, there is no evidence that Mr. Sonne was not a law abiding citizen. It seems his anarchist sentiments were aimed more at government censorship and invasions of privacy.

[55] As set out in the Chronology, Mr. Sonne was on the mailing list for SAN, a student activist network, a surveillance club and the Toronto Community Mobilization Network ("TCMN") which had called various open meetings in the months leading up to the G8/G20 to discuss various forms of action against the Summits. Ms. Nadeau queried why, with the G20 approaching, Mr. Sonne would join student activist groups. She submitted that the TCMN was an anarchist organization and relied on some of the emails that are set out in the Chronology, for example the mass email on April 9, 2010 which gave notice of a meeting to be held to discuss

"the black bloc and diversity of tactics" and an email on April 13, 2010 that was "a call to disrupt and shut down the places, the systems and the ideas that exploit and exclude us" and included recognition of the fact people may have different needs regarding safety, including the need to be supported if arrested. Ms. Nadeau submitted that Mr. Sonne knew what was implied with respect to tactics and arrests that left little to the imagination. She also relied on an email dated April 22, 2010 from Mr. Sonne to the Hacklab discussion group, where he referred to the G8/G20 meetings/riots coming to Toronto. Ms. Nadeau submitted that at the time the average citizen was not anticipating riots even though the police may have been. Mr. Di Luca submitted that the contrary was true. I have no evidence of this one way or the other.

[56] However, in terms of what Mr. Sonne believed and when, which is the relevant question, in a Freenode chat on December 14, 2009, he responded to a question asking if he had any read on how badly the G20 protests were going to go by stating that he didn't know for sure being Canada is said to "half expect total anarchy and politeness at the same time" but that he had read somewhere that some anarchists were planning on some "militant confrontation" and that there would definitely be "some beat downs".

[57] The fact Mr. Sonne was expecting riots at the G20 does not mean that he intended to participate in them. I have no evidence about the activities of the TCMN save the emails which suggest that there were a broad range of persons on the mailing list. Although there is some evidence that Black Bloc tactics were going to be discussed at one of the TCMN meetings, there is no evidence that Mr. Sonne supported those tactics or attended any of the open meetings, let alone that particular one. Although, as set out in the Chronology, Mr. Sonne ordered some first aid supplies on June 22, 2010, in an email to Norman Chu who appears to have been sharing in the order, he stated that he did not know when the shipment would arrive. I find it unlikely that this purchase had anything to do with the G8/G20.

[58] In the email to Kate Milberry on April 26, 2010, Mr. Sonne stated that he had been monitoring most of the social action lists such as SAN and that he was not very impressed. He went on to question the technical merits and skills of the people involved in these groups and told Ms. Milberry that he had tried to volunteer to educate and train people. An intention of monitoring these groups could have been Mr. Sonne's purpose in joining the mailing lists and this would tie in to preparing a paper on security issues and the G20.

[59] Mr. Sonne's interests in the G20 however, clearly went well beyond joining the email lists for these various groups. In an email to TCMN on December 23, 2009, Mr. Sonne stated he would like to attend some of the TCMN meetings or at least pursue the information and be of some use. He advised that he was currently working on a project to assemble textual, visual and logistical information about the locations of the G8 and G20 to be released as a package into the public domain and that he was working on setting up a communications network to assist protestors in staying safe and to help ensure that police and security monitoring were under control. Mr. Di Luca submitted that the effect of this email was Mr. Sonne publicly identifying himself and effectively saying the police ought to be watched and that was what he was trying to do. He submitted this does ring true and maybe this was exactly what Mr. Sonne was trying to do.

[60] There is other evidence that supports this submission. In an email on January 14, 2010, to the head of the media and communications committee of TCMN, Mr. Sonne asked if there were any particular skills they were in need of and advised he had been working on teaching people about various technical communication issues and that with the G8/G20 there might be an opportunity to apply some of it: "Whether it's as simple as making sure police abuses are documented and communicated or helping word get around, etc." In a Freenode chat on March 1, 2010, following comments about an article in the *Toronto Star* about the downtown becoming a fortress for the G20, Mr. Sonne stated that he was trying to figure out some way to help other than to film it "to make sure the security doesn't get too kent-state on people". In the April 22, 2010 email to the Hacklab discussion group already referred to, Mr. Sonne tried to recruit Hacklab members for the G20 and stated he was hoping to partner with people to help monitor the police "visually and RF wise and to document and disseminate the results." He stated he would be videotaping and monitoring but the process of doing that would be pretty intense and that he wanted to know if anyone would like to help out with processing video and audio and retransmitting it, tweeting it out, etc. "This is not without risk, so no half-milers please". I attribute this last comment to concern about being caught up in any riots as what Mr. Sonne was asking members to help with ought not to have resulted in arrests.

[61] In summary, there is no evidence that Mr. Sonne did any more than offer to provide some assistance to TCMN to assist protestors in staying safe and help ensure that the police and security monitoring were under control.

[62] Ms. Nadeau also relied on the fact Mr. Sonne took a large number of photographs of the G20 security cameras which he posted to Flickr. D.C. Ouellette testified that making note of where security cameras are if one is planning action or attack is something, that he has learned through his training, that is used by those involved in activism and counterintelligence as a preamble to an attack. I have reviewed the evidence with respect to this issue in connection with count 5. There are some examples of Mr. Sonne making a point of posting comments as to where certain cameras were pointed so that protestors could practice good "security culture." For example, in a tweet on June 20, 2010, Ms. Sonne referred to a security camera pointed at the 1266 Queen convergence space and commented that people should practice "good security culture" and he posted a link to the Security Culture Handbook. On the same day he posted a photograph of a very small camera on the Hilton where a large number of internationally protected persons including members of State were going to stay. Ms. Nadeau submitted that it was puzzling why peaceful protestors would be concerned about cameras if it was police behaviour they were concerned about, but that does not mean that Mr. Sonne was endorsing the use of illegal tactics. As for his reference to the Security Culture Handbook, security culture in that handbook is described as the culture where the people know their rights and assert them. A number of Mr. Sonne's tweets in this timeframe advocate that people "know their rights". There is no evidence that Mr. Sonne attended any meeting of the TCMN where Black Bloc or other tactics were being advocated. Mr. Sonne's stated interest in the G20 security cameras was also consistent with his interest in keeping police and security monitoring under control and ensuring that the security cameras were taken down after the G20 and not used for new police monitoring.

[63] A number of lanyards with convention passes were tacked to the bulletin board and on June 15, 2010, Mr. Sonne tweeted asking that someone who was a resident or worked in the G20 zone post a picture of the pass that would get them behind “the line” and that they edit out their details so they would not get caught. This caused the police some concern, particularly as on his Toronto Goat blog Mr. Sonne had experimented with removing plastic from passes. This experiment, however, is consistent with someone who is interested in security issues and there is no evidence that Mr. Sonne made any attempts to actually duplicate a pass to the secured area. When Detective Bui asked Mr. Sonne if he was intending on trying to create a pass, he emphatically denied it although he did respectfully agree that he could see how someone could draw that conclusion. Mr. Sonne told Detective Bui that this tweet asking for a copy of a pass was not because he wanted to create one, rather that he wanted to see what one looked like. It was strictly curiosity because billions of dollars were being spent and he wanted to see if the pass was some “little photocopy piece of crap”. This explanation is consistent with Mr. Sonne’s interest in security issues and the money being spent on G20 security.

[64] Ms. Nadeau also relied on the fact that when Mr. Sonne was arrested he had a piece of paper dealing with a terrorism section of the *Criminal Code* and a scanner. There was no suggestion that the scanner was illegal although it was seized when Mr. Sonne was arrested. Possession of the scanner was consistent with Mr. Sonne’s stated intention of monitoring the police and the presentation he had prepared and presented on countersurveillance. As for the piece of paper, it was a paragraph from an Internet article posted by the G8/G20 Community Solidarity Network on the TCMN website which purported to quote from Jennifer Wisinski, with the Law and Government Division of the Parliamentary Information and Research Service referring to section 83.3 of the *Criminal Code* “which governs preventative arrests and permits a police officer to arrest a person without warrant and detain that person in custody if the person with the officer suspects on reasonable grounds that detention is necessary in order to prevent a terrorist activity.”

[65] When asked about this, Mr. Sonne told Detective Bui that it was something he had found online because he was reading about people “getting beaten downtown just for taking pictures”. Given that Mr. Sonne had been detained unlawfully on June 15, 2010 and, based on his tweets, had been stopped and questioned by police again on June 20, 2010, just for taking pictures near the G20 fence line, it is hardly surprising that he would know his rights and have this kind of information available to him. I find nothing suspicious about this. Mr. Sonne clearly realized that by taking pictures of the G20 fence line he was attracting the attention of the police and, as an intelligent man, one would expect him to be prepared. However, he did emphatically deny that he was intending on getting arrested, when asked by Detective Bui.

[66] I have already concluded that Mr. Sonne’s posting of certain documents on The Pirate Bay may be consistent with the fact that he is someone who likes to test the limits of authority and is a strong supporter of freedom of speech. I conclude that even as someone who characterized himself as being strongly anarchist, there is no evidence that Mr. Sonne ever had any intention to break the law at the G20 by engaging in some of the more extreme activities that may have been advocated by some members of organizations like TCMN. Although he may have been more active than the average citizen in the lead up to the G20, there is no evidence to suggest that any negative feelings he had about holding the G20 in Toronto and turning Toronto

into a “prison camp” were strong enough to give him a motive to do actual damage at the G20. He did appear to resent excessive authority and at times may have wanted to test the limits of what is lawful, but there is no evidence that at any time he, in fact, did anything that was unlawful or could have resulted in him being lawfully arrested prior to his arrest for the offences before this Court.

Conclusion on Mr. Sonne's Interests and Political Views

[67] To the extent I am equipped to come to any conclusion about Mr. Sonne as a person, I would say that having considered all of the evidence available about him, he is clearly an intelligent man and a methodical man who likes organization. He had a large number of varied and wide ranging interests from gardening to camping to potato cannons and air rifles and reading an extensive range of material, some of which could be considered taboo. His hobbies ranged from gardening to working with wood; from electronics to growing blue crystals. He was a tinkerer and a “hacker”, in the sense of the word used by Mr. Supinski. Mr. Sonne is clearly technologically advanced in computer use and computer security related issues and he had a number of like-minded friends whom he chatted with online. Although I would have to conclude that Mr. Sonne was intellectually capable of committing the offences he has been charged with, there is nothing from the evidence concerning his interests, hobbies or political views that would suggest that he had any particular inclination or motive to combine any chemicals in his possession into explosive substances. His political views and these varied interests, however, may shed some light on some of his statements and the presence of certain chemicals and equipment in his home, which will assist in determining these charges.

Opinion Evidence of Dr. Anderson - General

[68] Dr. Anderson, currently the Head of the Military Engineering Section of Defence Research and Development Canada, gave evidence on behalf of the Crown. Dr. Anderson is highly qualified in his field; his CV is very impressive. His expertise was not challenged by the Defence and I qualified him to give opinion evidence on the subjects of organic chemistry and homemade explosive devices. In giving his opinion evidence, Dr. Anderson relied on photographs of what was seized from 58 Elderwood Drive and the report of Gavin Edmonstone, a forensic chemist, dated December 15, 2010. It was admitted that the chemicals seized from the home were of the nature and quantity described in Mr. Edmonstone’s report.

[69] Dr. Anderson’s credibility and the reliability of his evidence about the nature of the chemicals and the composition of the various explosive substances pleaded in the indictment were not really challenged by the Defence. He testified that the different chemicals that were found in Mr. Sonne’s workshop or the garage would all be considered “precursor” materials and that none were explosive on their own. He gave an opinion that “in the big picture”, in considering the equipment that is necessary to process the chemicals a certain way and the presence of the chemicals themselves, that he could think of no other reason why Mr. Sonne would have all of these chemicals other than to make some sort of improvised explosive. That opinion was challenged in cross-examination as Mr. Copeland’s questions were directed primarily to possible innocent explanations for the chemicals and other equipment found in Mr.

Sonne's home and Mr. Sonne's defence that some of the chemicals could be used for rocketry, pyrotechnics and other hobbies.

[70] Dr. Anderson repeatedly advised the Court that he was not very familiar with rocket engines for the rocketry hobby and that he tends to "blow things up, not launch them." He said that he has a general knowledge as opposed to an expert knowledge with respect to propellants. In her closing submissions Ms. Nadeau submitted that Dr. Anderson's evidence about the possibility of something being used as a propellant could not be seen as expert evidence and that I should assign very little weight to the responses that were so speculative in nature. She submitted that there has been no expert evidence on rocket fuel. However, this limitation was acknowledged when Dr. Anderson gave evidence and both Ms. Nadeau and Mr. Copeland asked Dr. Anderson questions on the subject of rocketry in the hope of eliciting favourable evidence from him. It was clear that given Dr. Anderson's extensive qualifications in organic chemistry, and given the overlap in the use of chemicals for propellants and explosives, that Dr. Anderson was able to give some reliable expert evidence on the subject of propellants and hence rocketry. He was always very fair in stating when he felt some uncertainty about his answer to a particular question and I would not characterize his answers on this subject as speculation. Although I will be mindful of his stated limitations when weighing his evidence, I have concluded that I should consider his evidence on the subject of propellants and rocketry both as elicited by Ms. Nadeau and by Mr. Copeland.

[71] As I will come to, one issue I must determine is how to define the term "explosive substance" as set out in section 82(1) of the *Criminal Code*. This is a matter of law but to the extent that Dr. Anderson gave evidence that assists in determining how the term ought to be defined, I have considered this.

[72] Dr. Anderson did make distinctions between explosives and propellants which could be used for rockets. For an explosive event to occur, you need an initiation system, typically based on a detonator and a main charge. A detonator is the entire package that contains a small amount of an explosive substance that, when set off, delivers a sufficient shock to set off the explosive that is the "main charge". He said, however, you have to separate explosions from detonations. A house that fills with gas can explode but that is not a detonation. A pipe bomb filled with black powder will explode and blow apart but not burn at a detonation rate. From his perspective, an explosive must be detonated.

[73] Dr. Anderson said that a propellant is a substance that undergoes a chemical reaction and releases energy and, like an explosive, it releases a pressurized gas in one direction that propels an object. A propellant has the ability to detonate and explode so it must be shaped and the interior core of the propellant must be designed to allow for the controlled burn rate that is necessary for a controlled thrust. It is possible, if you are not careful in terms of formulation and the configuration, for a propellant, rather than burning nice and evenly, to burn to detonation. In other words, the intended use of a propellant is that it not explode, but rather provide a controlled thrust. I will come back to this distinction. Dr. Anderson agreed that there is some crossover in the types of materials that are suitable for use as propellants and explosives and that fact is clear considering his evidence about some of the chemicals found in Mr. Sonne's workshop. The same organic materials can be used as a fuel in a propellant or as a fuel for an explosive substance.

Given the crossover in the types of chemicals that Dr. Anderson spoke to, I found this evidence with respect to propellants to be reliable.

[74] In Dr. Anderson's opinion there were more than enough materials in Mr. Sonne's home to make improvised explosive devices and he testified as to the number of explosive devices that could be made with the chemicals found in Mr. Sonne's workshop and the garage. Some of that evidence is problematic as it presumed, for example, with respect to the TATP, that both cans of acetone that were in the garage were full and had useable acetone. As I will come to, that has not been proven. Furthermore, there was some overlap in chemicals that were needed for some of the named explosive substances. In any event, it is not necessary to review this evidence save to say that there is no doubt that *if* Mr. Sonne intended to combine any of the chemicals that he had into an explosive substance, that he could have made several one kilogram devices and the resulting explosions could have done a lot of serious damage in one or more attacks; for example, by blowing out the back half of a bus if the device was in the back or even just blowing a hole in the G20 security fence. In a crowded area, a blast from such a device could no doubt cause serious injury or worse.

[75] A lot of the chemicals available to Mr. Sonne could have been used as they were to make explosive substances. Others might need some preparation. For example, the ammonium nitrate prills could be ground to improve the resulting explosive. To the extent preparation was needed there is no evidence that this was started or attempted. Furthermore, the required ingredients for any particular explosive substance were not together on the lab desk or workbench suggesting Mr. Sonne was ready to start a synthesis experiment.

[76] When asked how long it would take to make explosive substances from the ingredients found, Dr. Anderson testified that it would depend on what and how much you were making but that it would take anywhere from a couple of hours to a couple of days. To create an oxidizer based explosive, i.e. potassium chlorate, ammonium nitrate, urea nitrate and HDN, you just need to add fuel and blend the chemicals to create an explosive substance, although it is important to note that Mr. Sonne did not have nitric acid that would have been needed for urea nitrate and HDN and would have had to make nitric acid with other chemicals. The process for making TATP and HMTD was more involved although I expect Mr. Sonne had the necessary expertise, based on the steps Dr. Anderson described were necessary.

[77] As Mr. Di Luca submitted, there was not much discussion with Dr. Anderson about how, once you had made an explosive substance, you would package it, make a detonator or in some cases a blasting cap or an initiating charge to set off the explosive and how you might get it ready and test it and bring it to your planned target, for example the G20. For example in the Edmonstone report, it is stated that ANFO, which is the combination of ammonium nitrate and fuel, typically diesel fuel, is relatively difficult to detonate requiring another explosive to initiate it. The need for an explosive as a detonator is, therefore, important in some cases.

[78] Dr. Anderson admitted that some elements to make explosive devices were missing from what was seized from Mr. Sonne's home. For example, there were no small metal tubes that could be used as a detonator but these would be readily available at your nearest Canadian Tire. Other things could be used however, to hold a detonator, even a plastic bottle. There were no metal pipes found in Mr. Sonne's home and according to Dr. Anderson "your average terrorist" would use plumbing supply type steel to make a pipe bomb because it can be filled with steel fragments, nuts, bolts and ball bearings and would generate a lot of fragments.

[79] Two short pieces of white plastic pipe with blue caps on either end, with a friction fit, were found somewhere in the back of the garage. Dr. Anderson said that they could be turned into pipe bombs, with material inside them that would detonate but they would only make a bang and generate a blast; you would lose the metal shrapnel effect. There were also other pieces of plastic pipe of different widths found in Mr. Sonne's workshop that Dr. Anderson said could be used as containers for explosives but obviously they too would not create metal shrapnel.

[80] As already stated, Dr. Anderson testified, there are some significant correlations with what is referenced in Ragnar's Guide to Home and Recreational Use of High Explosives and the chemicals and other materials found in Mr. Sonne's workshop and garage. This includes ammonium nitrate, potassium chlorate, hexamine tablets, nichrome wire, aluminum powder and how to make nitric acid from potassium nitrate and sulphuric acid. However, as Dr. Anderson conceded, a lot of chemicals that can be used to make explosives are chemicals commonly found with household uses. In fact, the fuel that he testified that could be used to mix with ammonium nitrate or potassium chlorate to produce explosives, included vegetable oil, sugar and various flours that one would find in anyone's kitchen. For that reason, in this case it becomes important to consider not only how the chemicals were packaged, when they were seized, but also where they were seized from. Chemicals like the various chemical substances found in the cupboard under the top of the lab desk, hand labelled presumably by Mr. Sonne, may raise more questions than, for example, a container marked "drain opener" in its original packaging, found at the back of the garage. In addition, I must consider the fact that Mr. Sonne appears to have had certain hobbies and interests as some of those could explain the presence of certain chemicals and equipment.

Count 1 - TATP

[81] TATP is a primary explosive substance that is stable but very sensitive to friction, impact and heat. Dr. Anderson testified that TATP is so sensitive that if you had some in your hand or in a glass jar and you dropped it, it would explode. It can both be used for the main charge or as a detonator. Dr. Anderson said that because TATP and HMTD are very easy to detonate; a wire with a current across it, for example from a broken light bulb, so that it glowed red would be sufficient heat to ignite and detonate either one of them. For this reason both TATP and HMTD get a lot of use as improvised detonators to ignite another explosive substance; the main charge.

[82] Based on the unchallenged evidence of Dr. Anderson, the required ingredients to make TATP are acetone, hydrogen peroxide and an acid which can be either sulphuric acid or hydrochloric acid. With the exception of the acetone, there is no dispute that these ingredients were present in either Mr. Sonne's workshop or the garage. Acetone is an essential ingredient to

make TATP. Two cans, both original commercial containers with commercial labels as "Acetone," were found on the shelves at the back of the garage. One had the words "used acetone" written on a piece of paper over the print on the can. Acetone is a common solvent sold for use as paint thinner and for the purpose of cleaning and is readily available in hardware stores. Apart from all of the innocent explanations as to why Mr. Sonne may have had acetone in his garage, the two cans labelled acetone were not seized and the contents were not examined by Mr. Edmonstone. D.C. Albrecht admitted that he is not aware how much, if anything, was inside these containers.

[83] A four litre black plastic bottle; an original commercial container labelled: "Optimum Hydrogen Peroxide 29%," was found on the same shelf as the other jars of chemicals in the cupboard under Mr. Sonne's lab desk. It was nearly full and tested at 26% concentration which, according to Dr. Anderson, was more than sufficient to make TATP or HMTD. It is not a restricted product unless the concentration is over 30%, which was not the case here. According to the Edmonstone report, a concentration of 3-6% is typical of consumer products of hydrogen peroxide and up to 15% for hair bleach. A concentration of 26% is sufficient to cause chemical burns to skin. Although Dr. Anderson testified that hydrogen peroxide can also be used for cleaning, the labelling on the bottle in question shows green foliage and includes instructions as to how to use the product as a liquid fertilizer. Although Mr. Sonne obtained a quote from AlphaChem for 35% hydrogen peroxide on January 20, 2010, there is no evidence that he ever ordered or received this product. The way the bottle of hydrogen peroxide that was seized was labelled, and the percentage that it tested at, suggests that this bottle did not come from AlphaChem.

[84] Found on the shelves at the back of the garage was a 900 millilitre bottle in its original commercial container, still in plastic wrap, labelled "ro-tyme Liquid Drain Opener" for use in unclogging drains. It was nearly full of liquid that was identified as sulphuric acid which, according to Dr. Anderson, is the case for various brands of drain openers. Also found at the back of the garage was a 900 millilitre bottle in its original commercial container labelled "ro-tyme Muriatic Acid", which was identified as hydrochloric acid and labelled for use for, among other things, etching and descaling. This acid is an industrial cleaning agent which can be used as a degreaser, solvent or disinfectant. Dr. Anderson testified that one of the main uses is removing oil or fuel stains from a driveway or paving stones.

[85] Although both of these acids can be used as the acid component in producing TATP or HMTD, given where these chemicals were found and the way they were packaged, and considered on their own, it is just as likely that they had been purchased for their intended household uses.

[86] A 3.78 litre bottle in its original container labelled Methyl Hydrate was found on the floor of the garage near the shelves at the back. On the label of the bottle it states that this chemical is best for preventing gas line freezing and that it can be used for cleaning glass surfaces and thinning shellac and cleaning brushes. It is a solvent and Dr. Anderson explained how this chemical can be used to purify TATP through a process of re-crystallization. If TATP is not

purified it is in fact a little more explosive. Dr. Anderson agreed, however, that not all solvents are suitable for all uses and that depending on the substance that one might want to remove, one solvent might be better than another.

[87] In cross-examination Mr. Copeland reviewed the process to produce TATP with Dr. Anderson at length which included production, filtration, purification, and air drying. It is not necessary to review this evidence save for Dr. Anderson's observation that the process has to be controlled to avoid the risk of it getting out of hand and that one would make TATP in small batches; a small batch would be five grams and you would need to be courageous to make 200 grams at a time. The time to make a single batch of 200 grams would be four to seven hours although a few batches could be made at the same time, provided you dedicated yourself to this as one must actively monitor temperature.

Count 2 - HMTD

[88] Like TATP, HMTD is a very sensitive explosive substance. Based on the unchallenged evidence of Dr. Anderson, the ingredients to make HMTD are hexamine, hydrogen peroxide and an acid. The standard acid used is citric acid which was not found in Mr. Sonne's home. It is readily available in drugstores and, according to Dr. Anderson, hydrochloric acid or sulphuric acid will do. I have already reviewed the evidence with respect to those two acids and the hydrogen peroxide. Dr. Anderson testified that you would want to make HMTD in small batches of 20 to 50 grams and that it would take four to seven hours to do that.

[89] Two plastic jars with screw top lids, hand labelled "hexamine fuel tablets," were seized from Mr. Sonne's workshop. One jar contained 553 grams and the other 937 grams, for a combined weight of 1490 grams. I have no evidence as to the size of the jars, but they are larger than the gas fuel canisters for the camp stove found in the basement. The tablets are small discs. I have no evidence as to the number of tablets seized but it seems likely that they were at least the eight packages of "Coughlins" fuel tablets Mr. Sonne purchased from Canadian Tire on January 29th and March 22nd, 2010. Based on the photo of the product, they appear to come in a cardboard box, which is consistent with Dr. Anderson's evidence. The package states that there are 24 tablets in each box and that the tablets are for use with solid fuel stoves. They are described as "a safe, clean-burning fuel that is easy to ignite". It is admitted that these tablets are hexamine.

[90] It is significant that the two jars of hexamine tablets were not found with the other chemicals under Mr. Sonne's lab desk. It is not entirely clear where they were originally as they were moved by police by the time the photographs of them were taken. D.C. Albrecht admitted that he did not know exactly where the hexamine fuel tablets were found but he believed that they were on the floor between the shelving unit and the fridge in the basement workshop. However, in cross-examination, D.C. Albrecht was shown a photograph taken on the first day of the search and the jars of hexamine fuel tablets are not visible in the area between the shelving unit and the fridge. Everything in that area at this point was on the shelf that had camping equipment.

[91] Other photographs, presumably taken later, show a number of items on the floor including a pair of running shoes and various items for camping, including a plastic egg container, a metal bowl, and some camping equipment of some description in various nylon bags, one of which included a small camp stove, and gas canisters labelled "Primus Power Gas". Still on the shelves were two tall bottles labelled fuel of some description. D.C. Albrecht testified that they would typically have white gas or some other fuel in them for camping. The camp stove was one that D.C. Albrecht testified would be attached through a hose and valve to a gas filled container. He testified that these items were tucked into the shelving unit and were brought out onto the floor as part of the search. There is also a fishing rod in this area and there was also camping equipment in the storage room near the workshop. It seems most likely, based on this evidence, that before the search, the jars of hexamine fuel tablets were on the shelf with the camping equipment.

[92] When asked about the hexamine tablets by Detective Bui, Mr. Sonne responded that camp stove fuel tablets can be bought at Canadian Tire and are entirely legal. The tablets clearly do not appear to be the fuel of choice for the camp stove found near them. However, they could be used with this stove. D.C. Albrecht admitted in cross-examination that the hexamine tablets would fit in the small space in the middle of the burner of the camp stove but he was not sure if that was the design or not. Dr. Anderson agreed that you could put one hexamine tablet on the concave section of the camp stove that was found in Mr. Sonne's workshop, but that it wouldn't be as efficient a heat source as the gas. He agreed, however, that these tablets are a more flexible fuel in that you can use one or two of them to start a campfire that has wood in it or charcoal briquettes or lump charcoal. If hexamine tablets come into contact with water, they dissolve and would not be very useful as fuel.

Count 3 - Urea Nitrate

[93] Based on the unchallenged evidence of Dr. Anderson, urea nitrate is a secondary explosive as it is not as sensitive as TATP or HMTD. It will not detonate using a heated filament or a lit match. The ingredients for urea nitrate are urea and nitric acid.

[94] Urea was found in a plastic screw top jar that was hand labelled "Urea $(\text{NH}_2)_2\text{CO}$ " in the cupboard under the counter of the lab desk. A total of 842 grams was found in this container. No nitric acid was found in Mr. Sonne's home.

[95] Dr. Anderson testified that the ingredients for nitric acid are potassium nitrate and hydrochloric acid. Although making nitric acid from these ingredients is not a complicated chemistry procedure, Mr. Sonne did not have the distillation apparatus that would ordinarily be used. However, Dr. Anderson explained how it would be possible to produce nitric acid in solution by using these ingredients, without this equipment.

[96] I have already set out the evidence with respect to the hydrochloric acid that was found in the garage. A plastic screw top jar containing 974 grams of potassium nitrate and hand labelled " KNO_3 " was found, in the cupboard under the counter of the lab desk. Potassium nitrate is a

strong oxidizing agent. Dr. Anderson testified that potassium nitrate can be used as a fertilizer, as a food preservative, for pyrotechnics and in the United States as a stump remover (a low explosion is used to "pop" the stump).

[97] When asked, Mr. Sonne told Detective Bui that the urea was for use as a fertilizer in his garden.

Count 3 - HDN

[98] HDN is also a secondary explosive. The unchallenged evidence of Dr. Anderson is that the ingredients for HDN are hexamine and nitric acid. I have already set out the evidence with respect to the hexamine found in Mr. Sonne's workshop and the evidence of Dr. Anderson as to how Mr. Sonne might have been able to make nitric acid from potassium nitrate and hydrochloric acid.

Count 4 – Potassium Chlorate

[99] Potassium chlorate is a strong oxidizing agent that can be mixed with various fuels to form explosive or pyrotechnic mixtures. Potassium chlorate explosives are considered to be secondary explosives although there is some evidence that they are heat sensitive and will burn and, if confined, may transit to detonation.

[100] The unchallenged evidence of Dr. Anderson is that potassium chlorate based explosives are an explosive substance that involve a combination of potassium chlorate with an organic fuel that could be motor oil or items in one's kitchen like vegetable oil, sugar or even flour, including almond flour, or a combustible metal such as aluminum powder.

[101] At the time of the execution of the search warrant, a little over a kilogram of potassium chlorate was found in a large plastic container with calcium chloride hydrate, a drying agent, and two gauges measuring temperature and humidity, on a table in the furnace room. According to Dr. Anderson, you would not want to mix organic materials or metal powders with the potassium chlorate if it is wet as then it is very reactive and you could end up with a fire.

[102] On April 4, 2012, following the conclusion of the trial, including argument, the police located a five gallon Home Depot pail buried in the rear yard of 58 Elderwood Drive containing three plastic jars each labelled with various dates and the chemical nomenclature for potassium chlorate. The contents of these jars were tested to be potassium chlorate and the total weight of the three jars, less one to two grams taken from each jar for testing, was determined to be 1.745 kilograms. This evidence was admitted on consent as evidence in reply on April 13, 2012, after I had begun my deliberations. This brought the total of potassium chlorate Mr. Sonne had made to almost three kilograms.

[103] Mr. Sonne had the ingredients to make a potassium chlorate based explosive substance. Although Mr. Sonne admitted that there was almond flour in the basement fridge, he said it was for his wife's baking and there is no reason to disbelieve him given there was also Gatorade, pop and beer in the fridge. However, other possible fuels that could be combined with potassium chlorate to create an explosive substance were found in Mr. Sonne's workshop and the garage.

This includes 479 grams of aluminum powder in what appeared to be its original container labelled "Alumilite Aluminum Powder" in the cupboard under the counter of the lab desk. The label states that it is ground aluminum used to thicken or extend the volume of aluminate casting plastic and that it is used to make the finished parts heavier and gives them an aluminum look. It warns that a face mask should be worn when using the product. During a Hacklab chat on May 29, 2010, during a discussion about the Danvers explosion, someone mentioned dust explosions and, in particular, aluminum dust and Mr. Sonne responded that he had some for mixing with epoxy and that it was not to be treated lightly. This could provide an innocent explanation for why Mr. Sonne had aluminum powder. Clearly it was being marketed for legitimate uses.

[104] The issue then is what did Mr. Sonne intend to do with the potassium chlorate and the aluminum powder and, in particular, is there a reasonable inference to be drawn from the evidence that he intended to use the potassium chlorate to produce an explosive substance or was his intention to make rocket fuel for high powered rockets.

[105] Potassium chloride, which can be legally purchased as salt, can be converted to potassium chlorate using an electrochemical cell; also referred to in the evidence as an electrolysis cell. Simply put, an electrochemical cell involves an electrical current that is passed through a liquid between an anode and a cathode to cause chemical reactions to occur; which can include conversion of potassium chloride into potassium chlorate. Although Dr. Anderson was relying on photographs, based on his evidence and considering all of the evidence, including Mr. Sonne's posts and photographs as set out in the Chronology, I find that an electrochemical cell made from a large clear plastic container was found on a table in Mr. Sonne's furnace room¹³ and that it had been used to make potassium chloride.

[106] This process to make potassium chlorate is a repetitive one in that you do a run, stop the electrical current, filter off some of the powder that has been generated, put the liquid back, add more salt and then start the run again. This process is repeated until as much chlorate as possible is removed from the liquid. According to Dr. Anderson, the lab equipment on the lab desk had a clear use in relation to the production of potassium chlorate. At the time of the search, the filtration apparatus that would be used to filter the precipitate from the electrochemical cell solution was not assembled but it would not take too much time to put together. It is the middle step between taking the material from the cell and putting the material into the drying box.

[107] Dr. Anderson testified that there is a fair amount of trial and error in determining an electrochemical process to create a certain substance. There is however, a lot of information on the Internet from people who have already done it and recommended what processes are best and Mr. Sonne had bookmarked and downloaded files on this process. As set out in the Chronology, based on photographs Mr. Sonne uploaded to Flickr and his posts during Hacklab chats, it seems likely that he experimented with two electrochemical cells before the one found in the furnace

¹³ Exhibit 57 in Edmonstone's Report.

room at the time of the search. Only part of what Dr. Anderson described as a classic setup for a homemade electrochemical cell, namely a yellow lid for a pail with what could be a graphite rod through the middle and steel bolts for electrical leads and tubes for venting chlorine and sampling pH attached, was found and it appears to have been a larger unit than the different type of cell found at the time of the search. Only the lid of this larger electrochemical cell was found at the time of the search.

[108] What appears to be the smallest cell is shown in photographs that Mr. Sonne uploaded to his Flickr account on April 30, 2010. This was likely the first electrochemical cell given that it is shown as complete and in place on April 30, 2010, whereas the graphite rod for the larger electrochemical cell using a Home Depot pail, was not ordered until April 27, 2010 and even on an expedited basis, would not have arrived until the end of April. That electrochemical cell was shown in photographs on Flickr with links to the Hacklab chat on May 18, 2010. On the same day a photograph showing the electrochemical cell that was in place in Mr. Sonne's furnace room, at the time of the search, was also created on Mr. Sonne's computer. As it was still in place at the time of the search, presumably it was the third electrochemical cell that Mr. Sonne experimented with.

[109] In Mr. Edmonstone's report, the liquid from what I have determined to be an electrochemical cell found in the furnace room was evaporated and of the solid material that remained, potassium chloride was the major component and potassium chlorate the minor component. Dr. Anderson testified that this would indicate to him that either the experiment was over and the chlorate had been filtered off and the liquid returned to the cell or they were getting ready to do another run.

[110] According to the Material Safety Data Sheet for potassium chlorate prepared by Scienclab.com, Inc., a US company, potassium chlorate is clearly a very toxic chemical in that it is very hazardous in the case of skin or eye contact. Because it is a corrosive material, it should be stored in a separate safety storage cabinet or room. The product is noted as being stable and is considered non-flammable, with ratings as a fire hazard as zero, although it is extremely reactive with combustible materials and organic materials. In terms of various risks of explosion the data sheet simply states that information is not available.

[111] Potassium chlorate in quantities over one kilogram is a regulated substance but that is from the perspective of the vendor. Dr. Anderson testified that as a result it was not that easy to buy anymore but gave no evidence as to whether it can be purchased in small quantities in Canada. There is no evidence of any regulations that prohibit the simple possession of potassium chlorate although there are regulations that govern what you can do with the material when you have it.

[112] Mr. Sonne was asked by Detective Bui about the crystals that the police found with some kind of a liquid bucket that was dispelling gas. I believe this was a reference to what I have determined to be an electrochemical cell that was found on the table in the furnace room. Mr. Sonne told Detective Bui that this was a "saltwater electrolysis cell," that split it down into a chemical component that he would use when he got the proper licencing to make his own rocket engines. He told Detective Bui that if this chemical compound was mixed with sugar then it

would be called candy rockets, that it did not burn by itself and that he would need a proper model rocket igniter to cause it to burn. Mr. Sonne's description of what was happening with this electrochemical cell was completely truthful. The only thing is that Mr. Sonne did not say he was making potassium chlorate.

[113] A little later, Mr. Sonne explained his use of the electrochemical cell in the following way when Detective Bui showed Mr. Sonne a picture of what he called a chemical or liquid battery. Mr. Sonne said that by putting electricity in it, it split the two components and then when it was done you could get electricity back out of it or harvest the material to make *fuel for a rocket*. It is not clear what photograph Detective Bui was referring to but it appears that it was what I have determined to be the electrochemical cell in the furnace room. When asked about the voltmeters nearby, Mr. Sonne said that one measured current flow into the cell and the other measured voltage dropped across the terminal so he could tell how efficiently it was running. Although Mr. Sonne made no reference to potassium chlorate, these answers are factually correct and responsive to the questions.

[114] Detective Bui asked Mr. Sonne about crystals in a bucket next to what they had discussed as a liquid battery; what I presume was the electrochemical cell. Mr. Sonne advised Detective Bui that the crystals in the bottom were calcium chloride, which is a drying agent that you can buy at Home Depot. He advised Detective Bui that its purpose was for drying "stuff" and that the gauges were to monitor humidity and temperature so that he knew the dryer was drying and when the drying was complete. When he was asked what the purpose was he said he was "drying stuff" and he did not mention that he was drying potassium chlorate in this container but he was not asked and the rest of what he told Detective Bui is accurate.

[115] When asked about his diagram of the hydraulic jack, Mr. Sonne said it was a drawing of the press that would be used to press model rockets safely in a cardboard casing, if he ever managed to get it approved. He said that he had to stop because he heard back from the Rocketry Society who basically said that without a certain kind of licensing that he couldn't even begin to do that so the idea was dumped and he was stuck with an \$80 jack. He denied that any press had been built or that anything had been pressed. Again this is factually correct. Dr. Anderson explained how a press would be needed to make a rocket engine and there is no question that Mr. Sonne was told by CAR that he would need a licence to make rocket engines.

[116] A one kilogram bottle commercially labelled Aquarius Granular Pool Shock is alleged to have been purchased by Mr. Sonne from Canadian Tire which the Crown relies on as another way to get to a chlorate relevant to count 4. Dr. Anderson testified that this product is typically a hypochlorite that could be used to make a chlorate material using a different procedure than an electrochemical cell. However, no receipt for this purchase was entered into evidence and I have no evidence as to whether this product was found at the time of the search. Certainly it was not tested by Mr. Edmonstone. Furthermore, according to Dr. Anderson, this product is intended to sterilize swimming pools and kill bugs. There is no evidence that there was no swimming pool or pond in Mr. Sonne's backyard or at his cottage. I have therefore not relied upon this submission.

Count 4 - Ammonium Nitrate

[117] The unchallenged evidence of Dr. Anderson is that you can make ammonium nitrate fuel oil ("ANFO"), a secondary explosive, from ammonium nitrate and a fuel of the same nature as the fuels that can be used with potassium chlorate, although liquid fuel is better. In a plastic jar with a screw top lid, in the cupboard underneath the top of Mr. Sonne's lab desk, 2,461 grams of ammonium nitrate prills were found. The jar was correctly labelled by hand "NH₄NO₃". Accordingly, Mr. Sonne had in his possession the ingredients to make ANFO. However, Dr. Anderson confirmed that ammonium nitrate can also be used as a fertilizer.

[118] Ammonium nitrate is a regulated chemical in quantities above one kilogram. Again I presume this is from the perspective of the vendor. Dr. Anderson testified that he was not sure if ammonium nitrate was commercially available apart from cold packs. As part of a study Dr. Anderson was intending to do, he was going to see if you could still find small quantities of ammonium nitrate in various retail type outlets.

[119] Mr. Sonne told Detective Bui that the ammonium nitrate was for use as a fertilizer in his garden. When Detective Bui asked about the fact that the fertilizer was not in a bag under his back porch, Mr. Sonne responded that he had taken it from cold packs because you cannot buy ammonium nitrate in large quantities because of restrictions but that you can still buy it at Shoppers Drug Mart in cold packs. This appears to be true based on the evidence of Dr. Anderson. Mr. Sonne told Detective Bui that if he looked in his yard he would see how he had various plots of corn, beans and plants laid out and that each one of those was to be fertilized with a specific fertilizer so that he could see the difference it made for yet another paper or just his own edification. When Detective Bui pointed out to Mr. Sonne that ammonium nitrate was a key ingredient in the production of ANFO, Mr. Sonne responded that this was "completely bullshit because there is no fuel oil mixed into that at all. I would never do that." He was then asked whether or not there was fuel in his home and he said that he did not think that gas would qualify as a fuel oil.

[120] Dr. Anderson testified that each cold pack would yield 60-75 grams. That would mean Mr. Sonne used 32-33 cold packs to obtain the quantity of ammonium nitrate that was seized. There are only records of two purchases totalling five cold packs from Shoppers Drug Mart, both made in March 2010. I, therefore, have no evidence as to how and when Mr. Sonne purchased the other 25 or so cold packs; including whether he bought them at once or a few at a time and how he paid for them.

[121] On June 8, 2010, there was a Hacklab chat that included Mr. Sonne discussing the news about a province wide search for a man with 60 bags of ammonium nitrate. In the course of that discussion someone suggested that it was "the Goat" and thirty seconds later Mr. Sonne responded stating that he swore it wasn't him. He then went on to say he only has one kilo of it and that it was about 30 bags of insta-cool packs. Accordingly, what Mr. Sonne told Detective Bui about how he got the ammonium nitrate appears to be true, although he was substantially off in terms of the weight.

[122] As the discussion progress, Mr. Sonne referred to an "Oklahoma special" which according to Ms. Nadeau demonstrates that he knew that ammonium nitrate can explode. I heard no evidence about the Oklahoma City bombing involving Timothy McVeigh, but given its notoriety, I can take judicial notice of the fact that it involved ammonium nitrate and certainly based on Mr. Sonne's comments, both to Detective Bui and on this chat, it would be reasonable to infer that he knew ammonium nitrate could be used for an explosive substance.

Miscellaneous chemicals and materials

[123] Dr. Anderson agreed that a number of the chemicals in the jars in the cupboard under the lab desk had no application in the creation of explosives and that looking at the collection as a whole there are at least some things there that are not part of potential explosives. He also agreed that the collection of items and equipment might be there not as a unified collection for one purpose but for numerous purposes. Apart from the specific chemicals already mentioned, there were other chemicals, all in hand labelled plastic jars under the lab desk as follows:

- (a) "KMnO₄" potassium permanganate (445 grams); the chemical used by the Underwear Bomber. It has been known to chemically initiate the primary explosive in a detonator. In this form of detonation no metal wires are necessary. This chemical is also used to tan leather and as swimming pool purification and makes a deep purple color if mixed with liquid. It is not yet a regulated substance.
- (b) "Iron III oxide, Fe₂O₃"; could be used as a thermite in conjunction with aluminum powder. A thermite is an incendiary substance that burns with a very hot flame. It burns rather than expels gas and would not be used as a propellant. It is not an explosive substance either, as it neither detonates nor goes through the process of deflagration. According to the Edmonstone report, iron oxide is also used as a paint pigment and I note that when it was purchased on June 18, 2010, the invoice specified the color red which is consistent with the contents.
- (c) "Zinc Oxide, ZnO"; not relevant to explosives. Used to generate smoke in pyrotechnic mixtures, i.e. fireworks.
- (d) "Hexachloroethane, C₂Cl₆; not relevant to explosives. Used to generate smoke.
- (e) "Charcoal"; the container appears to contain charcoal powder but the substance was not tested. If it is charcoal, it could be used as a fuel to mix with ammonium nitrate to make ANFO or potassium chlorate to make an explosive substance but it could also be used as a fuel in a propellant.
- (f) "KCl" potassium chloride; this container was found empty. Potassium chloride is the starting chemical if using an electrochemical cell to produce potassium chlorate.
- (g) "Sulfamic acid"; not relevant to explosives but used for de-scaling metal surfaces, removing rust and possibly cleaning an electrode.

- (h) “K₂SiO₃” potassium silicate; not relevant to explosives but used as a drying agent.
- (i) “CuSO₄” copper sulphate; not relevant to explosives. Can be used to grow blue crystals. Dr. Anderson’s evidence confirms that the three beakers set up with a blue substance in them on Mr. Sonne’s lab desk were being used to produce blue crystals from copper sulphate and that the photographs posted on Mr. Sonne’s Flickr account appear to be blue crystals that one could expect to be made from copper sulphate. This confirms Mr. Sonne’s statement to Detective Bui that he was growing crystals to give to his friends as gifts, using copper sulphate, which is a root remover you can purchase at Home Depot.
- (j) “Dextrin”; is a powder used to thicken material and can be used to produce a type of glue. As it is a carbon source it could act as a fuel source when mixed with an oxidizer. If ammonium nitrate or potassium chlorate were being used to make propellants, they would be ground up into a fine powder and then dextrin could be used to hold that powder, together with a fuel.
- (k) “NaHCO₃” sodium bicarbonate; this is ordinarily called baking soda and was found in a plastic jar with a screw top lid and labelled with its chemical nomenclature. It is used to control acidity or basicity. Dr. Anderson testified that it is part of the control using electrochemical cell production of potassium chlorate and he described a process whereby sodium bicarbonate can be used to remove some of the acid left in TATP from the initial production. It can also be mixed with water to have nearby for safety in the event of a splash while working with an acid. Although it is odd that Mr. Sonne would transfer sodium bicarbonate into a plastic jar and label it with its chemical nomenclature rather than simply keep a box of baking soda in his lab, or for that matter in his kitchen, this is consistent with someone who likes to be organized.
- (l) “KOH”; this was labelled as potassium hydroxide but tested as potassium carbonate hydrate, which is a drying agent and not necessary for the explosives substances set out in the indictment. If a small residue of KOH were left in the container it could react with moisture and carbon dioxide to form potassium carbonate hydrate. It is, therefore, reasonable to conclude that this jar was correctly labelled by Mr. Sonne.
- (m) “Stearine”; not relevant to explosives. Used to make soap and candles.

[124] In addition, there were the following substances found in the cupboard under the lab desk:

- (a) Two plastic packages marked “brilliant crimson aniline dye.” The powder dissolves in water producing a bright red solution. Dr. Anderson agreed that these could be combined with the zinc oxide or the hexachloroethane to generate colored smoke.

- (b) A small Ziploc bag labelled "wax shaving." Dr. Anderson testified that they could be used as a fuel source, but a very inefficient one, when mixed with ammonium nitrate. Furthermore, they would need to be finely ground which is why flour, sugar or aluminum powder is a better fuel. Some recipes on the Internet require wax shavings to be blended with a chlorate such as potassium chlorate. They could also be used as a binding agent in a propellant.
- (c) Another Ziploc bag labelled "PVC and ABS shavings". Dr. Anderson said that PVC is not a good fuel as it does not like to burn but it could be used in the production of smoke. The ABS shavings could be used as a fuel source if mixed with ANFO and finely ground.

[125] The presence of chemicals in the cupboard under the lab desk that have no connection to explosive substances is important. They were generally stored in the same fashion as the chemicals relied upon by the Crown; in plastic jars hand labelled with their chemical name. This suggests the possibility that there were innocent purposes for the other chemicals that the Crown relies upon in support of these charges and that they were stored where they were for an innocent purpose consistent with some of the many and varied interests Mr. Sonne had.

Equipment and other items found in the workshop and garage

[126] On Mr. Sonne's lab desk there was what Dr. Anderson identified as a vacuum filtration apparatus used for extracting a liquid from a solid through a funnel such as the Buchner funnel, also found on the desk. It was not assembled when it was found but would not take long to assemble. Dr. Anderson testified that it could be used to filter the TATP, HMTD or potassium chlorate crystals from the liquid but agreed it could be used anytime you need to extract a solid from a liquid. Also found on the lab desk was a manual, hand-operated vacuum pump which could be used to generate vacuum in the vacuum filtration apparatus, pulling air and liquid through the Buchner funnel which would expedite the process.

[127] In the cupboard under the top of the lab desk, the top shelf contained various beakers and flasks as well as filters. There was a hydrometer in this location as well which is used to measure the densities of liquid including checking the strength of, for example, hydrogen peroxide or sulphuric acid in an older car battery.

[128] Next to the lab desk there was a tall white cabinet with eight sections inside that appeared to be carefully organized, with sections including brushes of various descriptions, various tools, various glues, small saws and another with soldering equipment and coils of solder. D.C. Albrecht testified that a soldering iron could be used to make any electronic circuitry to control the timing on a detonator. It is also used in making electronics and other electrical products in order to join the wires or attach a component to a circuit board, for example. Mr. Sonne referred to buying a soldering iron on his Toronto Goat blog for his magnetron/wave guide experiment.

[129] Generally speaking, in the workshop in addition to the chemicals, there were all sorts of electronics, power tools, hand tools, and even musical instruments. A plastic Ziploc bag labelled nichrome wire was found on the workbench, located in amongst miscellaneous electrical

components. Dr. Anderson testified that it is a very good wire to use as a filament for an improvised detonator as it is imbedded in the material that is the detonator and heats up quickly when a current is put across it. He testified it is easy to obtain and has other uses including heating elements. As set out in the Chronology the Hacklab chats repeatedly refer to nichrome wire as being necessary to keep the "Maker-Bot" 3D printer working. This could suggest that Mr. Sonne had nichrome wire for an innocent purpose.

[130] An antistatic bag was also found in a Ziploc bag in a drawer of the workbench. Although these bags may be used to store TATP and HMTD, as these explosives are very sensitive to static electricity, to avoid an unintended shock when handling the material, these bags can also be used to store electronic components or anything else that would be sensitive to static electricity. There is only evidence of one bag that was found and it does not appear very large. In a Hacklab chat on May 18, 2010, Mr. Sonne said that he was working on designing/building automated blending and fuel pressing gear for the potassium chlorate and was thankful that he already had a good antistatic setup from his electronics days.

[131] A temperature thermocouple was also found on the workbench. It is an electrical device for measuring temperature. Dr. Anderson explained that temperature control monitoring is essential to producing TATP and HMTD and so this device could be used in that process, although it can be used generally to monitor the temperature of other chemical reactions.

[132] A plastic bin containing a two-element electric hotplate, a glass dish and some oven mitts was found on the floor of the workshop near the workbench. Dr. Anderson described how the hotplate could be used to dissolve TATP in methanol to purify it by re-crystallization. The hotplate however, has obvious other uses. Dr. Anderson agreed that this hotplate could be used to heat copper sulphate to dissolve it in water which must be done in order to make blue crystals.

[133] On the shelves at the back of the garage the police seized an acrylic welding kit, a face shield, dust mask, safety goggles and what could be a vapour mask. Dr. Anderson testified that this type of protective equipment is standard use for some types of chemistry and would be needed when handling a very strong acid such as sulphuric acid for the production of TATP. It also would provide protection from sparks, dust, very fine particulate matter, and wood sanding. Dr. Anderson also referred to the steel wool that was seized from the shelves at the back of the garage and explained that a filament of the steel wool could be used as a source of heat in an improvised detonator. This, however, is also a common household item used for cleaning pots and finishing repair work to wood and metal.

[134] In summary, although some of the equipment Mr. Sonne had could have been used to make explosive substances, all of it could also be explained by his various other interests or the fact he was making potassium chlorate.

Statement of Mr. Sonne to Detective Bui concerning his intent and his interest in rocketry

[135] When asked about the jars of chemicals found by the police in the cupboard under the lab desk, Mr. Sonne told Detective Bui that they were all legal and labelled. Some of his response is unintelligible. He said that metal oxides were used for "degassing metal" because he wanted to

get into amateur foundry work and pouring; the baking soda was for fireproofing material; the hydrochloric acid was for cleaning concrete on the flagstone patio in the backyard; the sulphuric acid was for when their drains jam up, and the urea and ammonium nitrate were both fertilizers he intended to use in his garden. He agreed with Detective Bui that ammonium nitrate can be used in the construction of an explosive device but said that so could lighter fluid or the barbecue tank in your backyard or the cooking oil in your house.

[136] Mr. Sonne told Detective Bui that he had no intention of ever hurting anybody or doing anything and that he had no interest in assembling any kind of bomb in his house and risking his wife's life much less his neighbourhood. He denied any intent of ever combining any of these things. When asked if he had the elements that could be combined to create an explosive device, Mr. Sonne said no because he would not combine them into an explosive device. Detective Bui persisted, however, and said that was not exactly his question and that what he was asking was if they took a larger list of items out of his house, and combined them in a certain manner, could they create an explosive device. Mr. Sonne at this point, quite reasonably, said the interview might be over. He stated he was not going to have Detective Bui get him on tape admitting to something that "he didn't think so." Given his right to silence, and his denials of having any intent to combine any of these ingredients, I do not find Mr. Sonne's position at this point to be unreasonable.

[137] Mr. Sonne eventually did admit that he supposed that combining the chemicals in the right way could create an explosive device but insisted that that would be illegal and unlawful and not something he would want to be doing. He said he was innocent because he had no unlawful intent to do anything and referred to the fact that a crime takes both *mens rea* and *actus reus*. Mr. Sonne told Detective Bui that he had no intention of doing anything that would ever hurt anybody. If anything he had tried to make sure that in the hobbies he was interested in, he had all of the licencing and followed the law. He said there was nothing that he could not go out and buy.

[138] As I have already reviewed, although Mr. Sonne did not specifically mention that he was making potassium chlorate, what he told Detective Bui about the electrochemical cell found in the furnace room and the potassium chlorate that was drying there, was accurate. When Detective Bui told Mr. Sonne that he found it coincidental that as the G20 was approaching he became a member of CAR and was creating rocket fuel, Mr. Sonne responded: "Because I want to prove that I have no ill intent. You know, I want to prove that I'm aboveboard, that I follow regulations. And, that's why I've never assembled any of these things, any of these chemicals into a finished device. And that's what makes some of these charges so ridiculous, is that I don't actually possess anything that is a finished explosive..." Detective Bui said "you possess the precursors". Mr. Sonne responded "Yes, but that is not at all illegal. Not in those quantities."

[139] Mr. Sonne told Detective Bui that once the police had gone through his computer they would see correspondence that he had been making it very clear about wanting to follow the rules, asking for advice and finding out that what he was doing he could not proceed with any further without contravening laws like the Ministry of Natural Resources. He went on to say even if he got licencing for "that"; I presume a reference to rocket fuel, he still would not be able to move it anywhere because he would need the OK from Transport Canada. He said that the

police would see that he had actually downloaded the forms from the government to have it detailed exactly as to what he needed to have and that he would need land commercially zoned and space so he could continue with these “hobbies”. He said: “You’ll see all of this come out, that I’m interested in just being a good citizen and following the rules for these hobbies that seem to attract people’s attention when Obama comes to town.” When Detective Bui challenged him to say that all of this was just creating an alibi in case he got caught, Mr. Sonne said “I would say that’s absolutely not the case.”

Mr. Supinski’s evidence

[140] I heard considerable evidence from Mr. Supinski about his renewed interest in amateur rocketry which was intended to corroborate the other evidence which suggests Mr. Sonne has a similar interest and that they were going to build rockets together and perhaps even do a Hacklab presentation on the subject. This evidence is important as it could answer the Crown’s theory that rocketry was only an alibi for Mr. Sonne.

[141] Mr. Supinski described his interest in rocketry from the time he was a child and how it was renewed when he picked up a Linux magazine in April 2009 that described how to build a Linux powered large rocket from information including designs, programming and components provided for free in the article and through open sources on the Internet. Mr. Supinski described the work he had done in researching to build a smaller version of this Linux rocket and how he wanted to launch his own rockets and share this hobby with his son. He testified that he did not get to the design phases, although he did figure out the aeronautic systems; the way to track the performance of the rocket. Based on his research, Mr. Supinski found out about the certifications required for high powered rockets with CAR and NAPAS. He described the certification process which requires both written exams and demonstrations setting up and firing your own rocket for Levels 1 through 3 (which are similar except the increasing power of the rocket engine that is used) and for a Level 4 certification where you need to design a rocket from scratch and successfully launch it.

[142] Mr. Supinski testified that the first time he would have had a discussion at Hacklab about his interest in rocketry and had “it out in the open” was in April or May 2009. He said that he spent time at Hacklab on this interest and that other members became interested including Mr. Sonne. Mr. Supinski had done some mark-ups to the schematic of the Linux rocket but he was not sure when he did these mark-ups save that it was before Mr. Sonne’s arrest and that he would have worked on it at Hacklab. He presumed that Mr. Sonne saw this as did other Hacklab members. Although it may be that, as a result, Mr. Sonne was exposed to the idea of rocketry as early as the spring of 2009, Mr. Supinski eventually admitted that he and Mr. Sonne did not talk about getting involved in rockets together as a joint project until May 2010, around the time of the Hacklab chats that are set out in the Chronology. This is consistent with what is stated in those chats.

[143] Mr. Supinski testified that he didn’t know how to make rocket fuel and never asked Mr. Sonne to make a rocket engine nor was he told that Mr. Sonne was doing so. He was aware Mr. Sonne was doing research on ways to save costs on engine design and possibly the chemistry but thought the idea was shelved when he didn’t have the correct permits to pursue it. Mr. Supinski

testified that he wasn't working with Mr. Sonne on the design of rocket engines and that he did not understand what chemicals would be involved. He believed that a Hacklab chemist with the nickname "aonomus" was working with Mr. Sonne which was good enough for him.

[144] Mr. Supinski insisted that he never believed Mr. Sonne was making rocket fuel in his home, but that he was only researching the process and that he was not aware that Mr. Sonne had bought chemicals. He refused to concede that the Hacklab chats on May 18, 2010 make it clear that Mr. Sonne had started to produce potassium chlorate through electrolysis even though he warned Mr. Sonne to be careful on the chats. In this regard Mr. Supinski refused to admit the obvious. Despite Ms. Nadeau taking him through the various chats, he did not recall what the electrolysis cell was that Mr. Sonne referred to and he denied knowing what potassium chlorate is. On reflection, Mr. Supinski always appeared to be very precise in his answers and it may be that he was refusing to admit that Mr. Sonne was making rocket fuel. This would be accurate but at other times Mr. Supinski did not acknowledge even the obvious; that Mr. Sonne was making potassium chlorate. With respect to ammonium nitrate, Mr. Supinski testified that Mr. Sonne talked about measuring the yields of crops at some point before his arrest. I found his evidence about what he knew about Mr. Sonne's actual intent with respect to rocketry to be completely unreliable.

[145] When asked about explosives, Mr. Supinski said he didn't know if Mr. Sonne had an interest in them but that he did and he thought that they were "cool". When he was taken through nine different conversations about explosives over the course of three days on the Hacklab chats, that included Mr. Sonne's participation, Mr. Supinski conceded that Mr. Sonne was fascinated with explosives but denied he was obsessed with them.

Dr. Anderson's evidence concerning rocketry

[146] Dr. Anderson testified that you would not use TATP, HMTD or ANFO as rocket fuel. He acknowledged however, that potassium chlorate when combined with a fuel is used to produce propellants for rocket motors (also called rocket engines) in the United States, but he said that it is banned for use in fireworks and other propellant materials in Canada. You need a manufacturing licence to produce propellants in Canada under the *Explosives Act*. According to Dr. Anderson, the manufacture of propellants and fireworks gives rise to the *risk of explosion* even if that is not their intended use. Depending on the quantities mixed, this is a significant risk associated with any work with chlorates which is why a licence is needed to manufacture these materials.

[147] Ms. Nadeau asked Dr. Anderson whether a rocket engine could be used as a detonator. He answered that it could be used as a heat source to ignite material very sensitive to heat such as TATP or HMTD, but that he did not think that a rocket motor itself would be used as blasting cap in terms of providing the necessary shock, which I presume was a reference to setting off the main charge. If I understand this evidence correctly he was suggesting that a rocket engine could be used to ignite a detonator, but not actually be the detonation device to set off a main charge.

[148] Although the only place Dr. Anderson saw rocket motors was when he did some research on the Internet in terms of whether or not you can buy rocket motors and what size they would

be, he gave general evidence on making a rocket motor. Dr. Anderson explained that a rocket motor is a shaped press or cast solid composition that is ignited at one end and burns very rapidly generating a lot of gas directed out the bottom of the rocket providing the thrust to shoot the rocket up in the air. To make a rocket motor from the materials found in Mr. Sonne's workshop you could grind up the potassium chlorate and blend it with a fuel such as sugar or a little bit of aluminum powder and you could either roll it up in some sort of paste with wax or you could mix it with wax or dextrin or some sort of binder and press it so you could compact the material so it stays in shape. The inside interior core of the propellant would be designed to allow for the controlled burn rate that was necessary. The rocket motor could be pressed by hand or you could use a drill press (which was in the garage) to bring some sort of plunger down into the rocket and if you were ingenious enough you could modify the car jack that was found in Mr. Sonne's workshop to provide the force to pack down the propellant for a rocket motor. Dr. Anderson agreed that the sketch that Mr. Sonne posted on Flickr on June 7, 2010 appears to be a diagram for an improvised press.

[149] As I understood this evidence, the same principal ingredients are used to make a substance intended to explode or a substance intended for use in a rocket engine. The difference is that to make a rocket engine you must add the steps Dr. Anderson identified that are necessary to ensure a controlled burn and thrust instead of an explosion, which principally involves adding another substance to hold the mixture together so it can be pressed into the required shape to control the burn. Given the clear crossover in the chemicals used for either purpose, and given Dr. Anderson's expertise, I found this evidence to be reliable. When he was pressed beyond this fairly general level, he made it clear he was not sure of the answer and on one occasion at the request of Mr. Copeland, he consulted a colleague over the break on the subject of ammonium nitrate based propellants. No objection was made but that in my view could not result in admissible evidence. In any event, even if I were to accept as a fact that there are ammonium nitrate based propellants, there is absolutely no evidence in this case that Mr. Sonne had any intention of using the ammonium nitrate for this purpose.

[150] Dr. Anderson was not in a position to identify the largest size of rocket engine that might be used by a hobbyist other than what he had seen for sale, which he described as small hobby rocket motors. Dr. Anderson was asked, if one was making rocket fuel, would "this" be a lot or a little in terms of rocket fuel, after Ms. Nadeau had asked him about the aluminized ammonium nitrate mixture. It is not clear what the "this" referred to but I presume Dr. Anderson's response was with respect to the potassium chlorate. He answered that it would depend on the size of the rocket and he repeated that he did not have a lot of experience, but from what he had seen, most hobby rockets were not that big in diameter. He had not seen that many model rockets of the sort of amateur rocketry hobbyist that are in the order of six to ten inches in diameter. For what he believed to be an average size of four inches, he thought you would only need a maximum of 100 to 200 grams.

[151] In cross-examination Dr. Anderson was asked whether or not a little over a kilo of potassium chlorate is a small or large amount of potassium chlorate for the use in rocket motors. He said that it would depend upon the length and diameter of the engine, the number of motors that one was intending to create and how much other "stuff" you were adding to it. In re-examination Dr. Anderson testified that a thousand grams plus of potassium chlorate would

indicate either a significant sized rocket body or quite a few rocket motors to supply quite a few small rockets. Neither counsel specifically asked Dr. Anderson to consider quantities for high powered rockets.

Evidence relevant to the Counselling charge – Count 5

[152] It is the position of the Crown that because of comments made by Mr. Sonne on his Twitter account in connection to photographs he was posting on his Flickr account of what he perceived to be a design flaw in the G20 fence, that he committed the offence of counselling mischief not committed. The specific evidence relied upon by the Crown in support of this charge can be summarized as follows.

[153] As set out in the Chronology, Mr. Sonne posted many photographs of the G20 fence, including close-ups of how the fence had been constructed including the hole size in the fencing material. Mr. Sonne also had a YouTube¹⁴ account under the title “torontogoa” which hosted eight videos of the G20 fence line.

[154] The crux of the Crown’s case are the tweets Mr. Sonne posted to his Twitter account on June 18 and 19, 2010 with the #g20 report hashtag¹⁵, some with links to photographs on Flickr, that are set out verbatim in the Chronology. The photographs posted to Flickr include a close-up of the G20 fencing material and Mr. Sonne states in the tweets that there is a design flaw in the fence. He refers to the fact that the holes in the fence are small and that tree spikes for climbing trees or big bolts could be used to allow someone to get a good grip on the fence to go up or pull down the fence. A magnetic whiteboard in what appeared to be Mr. Sonne’s office had a printout of a G20 news article entitled “Downtown to become a fortress for G20 Summit”. There was also a map of the downtown core of Toronto with blue and green lines representing fences and security areas constructed for the Summit.

[155] When Detective Bui referred to the photographs of the G20 fence Mr. Sonne had posted on Flickr, he readily admitted that he had taken them. With respect to the photograph of the tree spikes, Mr. Sonne said that they are used for climbing trees when you go hunting or want to take

¹⁴ “YouTube” is a website that allows users to upload, manage and share videos. Each video uploaded to YouTube has a permanent web address, or “URL” commencing with the characters, “[http://www.youtube.com/...](http://www.youtube.com/)” By cutting and pasting this permanent link into emails, blogs, comments or otherwise sharing them on the Internet, other users of the Internet can be conveniently directed to a specific video on YouTube.

¹⁵ A hashtag is used to mark keywords or topics. Any tweet marked with a hashtag will be organized by Twitter together with other tweets of the same hashtag. Users can follow and read tweets relating to specific topics by viewing all tweets associated with a specific hashtag. In this manner, it is common for conversations to emerge between and among Twitter users on the basis of the hashtag as users respond and comment on other tweets posted with a given hashtag.

pictures off the ground. When asked whether or not by putting these photographs on Flickr he was suggesting that they should be used to climb the fence, Mr. Sonne said that was not his intent, rather his intent was to merely say that the possibility existed as someone could use them to do that. He claimed that he was not trying to educate people on how to do some of these things.

[156] The Crown also relies on Mr. Sonne's interest in the G20. As set out in the Chronology, Mr. Sonne posted many photographs of surveillance cameras that had been installed around the city for the G20 on his Flickr account in the days leading up to the G20; 71 photographs were posted on June 16, 2010. Only one photograph which referred to a "cable in joint" was relied upon by the Crown as suggesting intent to do damage to the cameras. However, having regard to the caption, this photograph was equally consistent with Mr. Sonne pointing out an obvious security flaw in that the location of the cable in the concrete was clearly labelled.

[157] In his statement to Detective Bui, Mr. Sonne denied that his running commentary was to encourage people to cause damage to those cameras, but rather that it was about how many cameras there were and where they were so that they would be taken down and the G20 would not be used as a reason to bring cameras into the city and leave them there. When Detective Bui commented that he had a lot of photographs of the cameras, Mr. Sonne responded "yes, cuz you guys put up a lot of cameras, and we just need to get them back down when they're done like you promised."

[158] This statement is consistent with some of the tweets by Mr. Sonne when he linked his Twitter account to his Flickr account where these pictures were posted and comments that he made with the photographs. For example, a couple of the photographs posted on June 16, 2010 are of a sign that gives notice of a CCTV camera with the caption "Gestapo." On the same date, Mr. Sonne tweeted: "now we have a record of most of the surveillance cameras just in case the Gestapo forget to take them down."

[159] In Mr. Sonne's first statement to Detective Bui, when asked about his Flickr page, he told Detective Bui that he did not know who came to visit it and that it was not established for G20 communication but rather a place for him to upload his photographs. That appears to be true as Mr. Sonne's Flickr account was in place before the G20. However, he did link photographs on his Flickr account to his Twitter account and into Hacklab chats. The photographs the Crown relies upon were shared with the public in this way.

[160] All tweets posted to Twitter are public and visible to anyone with a connection to the Internet. Mr. Sonne stated an intention to begin actively tweeting because of the G20 with his tweet on May 8, 2010 but he did not get that active until mid-June 2010 and then he was regularly marking his tweets with the hashtag for the G20 namely "#g20 report". Users of Twitter may "follow" other Twitter users by subscribing to their account. Once followed, any tweets posted by the account being followed will be displayed automatically in the main screen of the user who is following. On Mr. Sonne's Twitter account, he was following the G20 Mobilize Group which was providing updates and news from the Community Solidarity Network around the G20 meetings as well as MDCLegalUpdates providing activists legal updates from the Movement Defence Committee in Toronto.

[161] There is a serious issue as to whether or not the record of the tweets concerning the G20 security fence and the tweets that were made by Mr. Sonne is complete and whether or not the entire conversation thread is before the court. The Twitterpod file of tweets that was entered into evidence does not necessarily contain the complete record of any hashtagged conversation threads such as the #g20report that the torontogoa account/Mr. Sonne participated in. The only tweets available are those made either by Mr. Sonne on his torontogoa account or tweets from accounts that, at the time of the particular tweet, were being followed by Mr. Sonne on his torontogoa account. There are two types of replies to tweets by torontogoa that might be missing from the Twitterpod data in the court record. First of all, tweets to the #g20report hashtag thread from someone Mr. Sonne was not following would not appear in the Twitterpod data. Secondly, there is no evidence as to whether or not tweets that used the "@" symbol, in other words "@torontogoa," which would be public posts to Twitter by someone Mr. Sonne was not following, which would be brought to Mr. Sonne's account's attention and could be considered a reply directly to torontogoa, are contained in the evidence. If a response was made by someone that Mr. Sonne was following, he would see it and that would appear in the Twitterpod data.

ANALYSIS

[162] I now turn to my analysis of the evidence and consideration of the charges.

Application of W.D.

[163] The first issue is whether or not the principles set out in the decision of the Supreme Court of Canada in *R. v. W.(D.)*¹⁶ apply, given that Mr. Sonne did not testify. In this case, I have the evidence of Mr. Supinski who was called on behalf of the Defence, the statements given by Mr. Sonne to Detective Bui which were tendered by the Crown and contain both inculpatory and exculpatory statements and statements made by Mr. Sonne on his blog, in chats, on Twitter and Flickr, in emails and in correspondence relied upon by both the Crown and the Defence. In his closing submissions, Mr. Di Luca relied heavily on the statements Mr. Sonne gave to Detective Bui and he submitted that the principles of *W.D.* apply in these circumstances. Ms. Nadeau submitted that it was not a "true *W.D.* situation" and pointed out that Mr. Sonne wasn't asked about a lot of the purchases of the chemicals because Detective Bui didn't know about them at that point and that his statement, therefore, is incomplete. Neither provided any authority on the issue.

[164] With the assistance of my law clerk, I have determined that the case that is determinative of this issue is a recent decision of the Court of Appeal; *R. v. B.D.*¹⁷ Although there was some uncertainty in the jurisprudence about whether the *W.(D.)* requirement extends to such circumstances, the Court concluded at para. 114 as follows:

¹⁶ [1991] 1 S.C.R. 742.

¹⁷ 2011 ONCA 51.

What I take from a review of all of these authorities is that the principles underlying *W.(D.)* are not confined merely to cases where an accused testifies and his or her evidence conflicts with that of Crown witnesses. They have a broader sweep. Where, on a vital issue, there are credibility findings to be made between conflicting evidence called by the defence or arising out of evidence favourable to the defence in the Crown's case, the trial judge must relate the concept of reasonable doubt to those credibility findings. The trial judge must do so in a way that makes it clear to the jurors that it is not necessary for them to believe the defence evidence on that vital issue; rather, it is sufficient if - viewed in the context of all of the evidence - the conflicting evidence leaves them in a state of reasonable doubt as to the accused's guilt... In that event, they must acquit.

[165] For these reasons I conclude that the principles in *W.(D.)* apply to the statements given by Mr. Sonne to Detective Bui, the statements made by Mr. Sonne on his blog, in chats, on Twitter and Flickr, in emails and in correspondence and to the evidence of Mr. Supinski. If any of the evidence favourable to Mr. Sonne leaves me with a reasonable doubt then he must be acquitted. If that evidence does not leave me with a reasonable doubt, I must still assess whether the Crown has proven Mr. Sonne's guilt beyond a reasonable doubt. However, in assessing this evidence, I am entitled to consider it in the context of all of the other evidence.

[166] The statements given to Detective Bui by Mr. Sonne on June 23, 2010 and June 26, 2010 were not given under oath and, of course, there was no opportunity for cross-examination although Detective Bui certainly challenged some of Mr. Sonne's assertions. Neither counsel provided any law with respect to how the exculpatory and inculpatory elements of these statements should be assessed.

[167] Paciocco and Stuesser in *The Law of Evidence*¹⁸ clearly articulate the admissibility of the out of court exculpatory statements at p. 499:

If the Crown produces a statement made by the accused, however, it cannot edit the exculpatory part out and tender only the inculpatory material. The entire context of what was said must be admitted, and the entire statement will be available to the trier of fact as *proof of the truth of its contents*. [emphasis added]

[168] The Supreme Court of Canada affirmed this proposition in *R. v. Rojas*¹⁹ and added commentary on how such statements should be weighed. At issue in that case was whether it was appropriate for a trial judge to give the jury a "Duncan instruction",²⁰ which states as follows:

¹⁸ 5th ed. (Toronto: Irwin Law, 2010).

¹⁹ 2008 SCC 56, at paras. 30-31, 38.

²⁰ *R. v. Findlay Duncan* (1981), 73 C.R. App. R. 359 (C.A.).

The incriminating parts of the statement are likely to be true (otherwise why say them?), whereas the excuses do not have the same weight. The exculpatory portion of the statement only need raise a reasonable doubt even if the jury does not believe it to be true, whereas an inculpatory statement can only assist the Crown's case if the jury is convinced of its proof beyond a reasonable doubt.

[169] The Supreme Court of Canada held that trial judges should not give this instruction, but agreed that it was a correct statement of law.²¹ I conclude in light of this authority that the exculpatory portions of Mr. Sonne's out of court statements do not have the same weight as the inculpatory portions but that his exculpatory statements need only raise a reasonable doubt, in which case he is entitled to the benefit of any such doubt.²² This is consistent with the principle in *W.(D.)*.

Credibility assessments

[170] With these principles in mind, I shall turn first to a general consideration of Mr. Sonne's statements to Detective Bui that were admitted as part of the Crown's case. To the extent Mr. Sonne gave incriminating information, for example with respect to his purchase of chemicals, there really is no longer any dispute about this. In many cases the Crown has proven these purchases through records from Mr. Sonne's computer or his Visa. The primary issue is what weight I should give to the explanations Mr. Sonne gave for why he had certain chemicals in his possession. His statements are also relevant to the counselling charge.

[171] The statements to Detective Bui were videotaped. This has given me some opportunity to assess Mr. Sonne's demeanour during the course of these interviews. For the most part, Mr. Sonne was responsive to Detective Bui's questions although there were a few occasions when he refused to answer a question because he was clearly well informed of his right to remain silent.

[172] It is relevant to consider what Mr. Sonne knew about the charges as his statements were given a day or more after his arrest. By the time of the first interview on June 23, 2010, Mr. Sonne had had an opportunity to consult with counsel. At the outset of that interview, Mr. Sonne stated that after reading the charge list, "you guys make me look like I'm some kind of terrorist or something". He then went on to question what the various charges were about but by this time Mr. Sonne clearly knew that his house was being searched and that chemicals had been found, as he had had a conversation about the chemicals with Detective Hill on the evening of June 22, 2010. There is no evidence as to what, specifically, the charge list said in connection with the discovery of chemicals, other than possession of explosive substances, but Mr. Sonne did react to this and told Detective Bui that he was not in possession of any of these things and that he

²¹ *Rojas*, at para. 38.

²² *Ibid.*, at para. 47

thought the officers were "trumping this up, trying to nail me to the wall." He went on to say that he guessed that he had "pissed off some police officers taking photographs" but that when a once in a lifetime thing came to Toronto it was only fair to expect people to take photographs and have records and that there was no unlawful intent with any of these things.

[173] Ms. Nadeau submitted that when Mr. Sonne was arrested and then when he gave his statement to Detective Bui, he didn't look very surprised or concerned. When he was arrested, Mr. Sonne was mumbling out loud about why he had been arrested and, of course, at that time he had not been charged with any explosive charges. It is not clear if he knew then that his house was about to be searched but there is certainly no sign he was concerned about the arrest. As to whether he was surprised or not, he had been detained at least once before and so he might not have been surprised about that. It is true that during his first statement to Detective Bui, Mr. Sonne did not appear too concerned but that could also suggest that he knew he had not been making any explosive substances and that he had no intention of doing so. I, therefore, did not find this aspect of his demeanour to be of much assistance.

[174] Mr. Sonne's statement to Detective Bui does not touch on all the issues. He wasn't asked about what was on his computer because that was not yet in the possession of the police. He was not asked about all the chemicals and equipment because they had not been analyzed. However, Detective Bui did cover a lot of ground and Mr. Sonne answered most of his questions.

[175] Ms. Nadeau submitted that in his statement Mr. Sonne was trying to assist himself and that he was being pretty careful about what he should or shouldn't say and that he was saying things he wanted Detective Bui to believe. I would expect this from an intelligent man. It is true that Mr. Sonne wasn't forthright about everything. For example, Ms. Nadeau referred to the fact that when he was shown pictures of air piston discs, he did not volunteer what they were or that they were for his air rifles. He only told Detective Bui that it was a plastic washer after being used and that it was not related to the potato cannon. However, that is all he was asked and given his circumstances he cannot be faulted for responding only to the questions asked; he had the right to refuse to answer all of them. What he did tell Detective Bui was true. Furthermore, later on when Detective Bui was about to put the photograph of the air rifles to Mr. Sonne, he immediately volunteered that he had air rifles. There is no dispute that they were perfectly legal.

[176] Mr. Sonne was also not completely forthright about his magnetron experiment. He told Detective Bui that he was trying to find out how susceptible "homemade gear and stuff was to basically jamming", that he didn't want to interfere with other people because that was not a lawful use of airwaves and that it was only being designed to see if he could fry the wireless in his home. This is contrary to his stated intent in his first blog in late February 2009 when he stated that he wanted to see if he could make a device capable of burning out communication systems. He also told Detective Bui that the magnetron had no effect on the network at his house and that he never dropped a connection or lost anything, but that seems contrary to what he blogged on February 26, 2009, when he said that when he turned it on there was definitely some interference. However, his statement to Detective Bui denying that the magnetron/wave guide was an electronic countermeasure device because it did not work was true and there is no dispute that the experiment was found dismantled at the time of the search. There were a couple of times that Mr. Sonne could have volunteered information; for example, he did not tell Detective Bui

that the chemical he was making was potassium chlorate and that was what he was drying. However, he was not asked those questions and in the circumstances it would be unreasonable to expect Mr. Sonne to provide information that had not been asked.

[177] In assessing the weight to be given to the innocent explanations provided by Mr. Sonne to Detective Bui as to why he had certain chemicals or equipment, it is important to consider what Mr. Sonne said that I can determine was true. I have already made a number of preliminary findings that statements made by Mr. Sonne to Detective Bui concerning his various interests are supported by the evidence and that they appear to be true. This includes Mr. Sonne's stated interest in security issues, electronics, chemistry, air rifles, gardening, camping and fishing. I have also concluded that Mr. Sonne's stated interest in the G20 security cameras was consistent with his interest in keeping police and security monitoring under control and ensuring that the security cameras were taken down after the G20 and not used for new police monitoring.

[178] In addition, as Mr. Di Luca submitted, Mr. Sonne gave a number of answers to Detective Bui's questions that we now know are correct but that he would not have known the police would know the answer to. This enhances the reliability of his statement. Some examples are as follows:

- a) Mr. Sonne readily acknowledged his possession of the chemicals Detective Bui asked him about and the fact that he was using an electrolysis cell and everything he told Detective Bui regarding that cell was truthful except that he did not volunteer that he was making potassium chlorate.
- b) He told Detective Bui that he was making blue crystals from copper sulphate which was true.
- c) Detective Bui showed Mr. Sonne photographs of what he believed was a projectile launcher. Mr. Sonne stated it was a pipe and valve that you charge with air and that he used it up at the cottage to fling potatoes into the forest. Mr. Sonne acknowledged the photo of the particle board where he had shot an onion through it and admitted that the launcher had the ability to hurt someone if it was misused but he never intended that. He said that it was simply fun that a vegetable could do this kind of damage. Mr. Sonne provided this information even though he wondered if the weapons dangerous charge related to the potato cannon. He told Detective Bui that he had looked at the regulations and determined that it did not qualify as a firearm. This projectile launcher became known as a potato cannon and it appears to be exactly what Mr. Sonne said it was. The fact there is a photograph of a potato cannon on someone's shoulder is not significant in my view. There is no evidence it was an unlawful weapon or that anything Mr. Sonne said was not true.
- d) When Detective Bui told Mr. Sonne that the experts had seen pieces of what they believed to be some kind of detonating device, Mr. Sonne said he did not know exactly what they were talking about. Later in the interview, Mr. Sonne told Detective Bui that he did not think he actually had any detonating devices. Although the Crown took the

position that the thermocouple was a detonating device until not long before the trial, there was no dispute before me that Mr. Sonne had no detonating device in his home.

- e) He told Detective Bui that he had obtained a Possession and Acquisition Licence for a firearm but that he did not have one.

[179] Although I must assess the truth of each of Mr. Sonne's statements, there is no positive evidence that anything Mr. Sonne told Detective Bui was not true. I also found that Mr. Sonne was very fair in many of his answers, acknowledging why the police would have concerns. For example, when Detective Bui suggested that the police would be concerned about photographs of police officers and the American Embassy and the potato cannon and the damage to pieces of particle board, Mr. Sonne fairly confirmed he could understand the concern of the police but said that he only ever had lawful intent with these things and that he had no intent to cause fear.

[180] For all of these reasons, I find that I can place some weight on the statements made by Mr. Sonne to Detective Bui and consider them for their truth in determining these charges.

[181] All of the relevant statements made by Mr. Sonne on his blog, in chats, on Twitter and Flickr, in emails and in correspondence are set out in the Chronology. They are admitted to be authentic, i.e. statements in fact made by Mr. Sonne and others, for example members of Hacklab. Mr. Di Luca submitted that these chats that are public and recorded are the best evidence of what was going on at the time. That is usually a strong argument but in this case I must consider the position of Ms. Nadeau that at least to the extent Mr. Sonne was chatting about rocketry and potassium chlorate, that it was all part of an elaborate alibi. I will consider these submissions as I make my findings of fact.

[182] Turning to the credibility of Mr. Supinski, he is clearly a good friend of Mr. Sonne's. He is an intelligent man and seemed very concerned about saying something that would hurt Mr. Sonne's case. Ms. Nadeau did not suggest Mr. Supinski was dishonest but I accept her submission that he was so defensive in answering some of her questions that his answers were often not responsive or they stretched the truth. I am also of the view that he was very specific in his answers responding only to how he interpreted the question. Obvious examples were the questions asked of Mr. Supinski concerning the "Tickling the Dragon" email and whether or not he knew Mr. Sonne was making potassium chlorate with an electrolysis cell. He was also evasive as to when he and Mr. Sonne planned to make a rocket together. This, of course, undermines the reliability of Mr. Supinski's evidence. In any event he really could not add very much as to whether or not what Mr. Sonne stated on the Hacklab chats was true. Furthermore, as I have reviewed, although I accept Mr. Supinski's interest in rockets was real, his evidence did not satisfy me that he and Mr. Sonne shared an interest in rocketry before May 2010 or that they had discussed working together on rocketry projects before then.

[183] As for the Crown witnesses, there was really no challenge to the credibility and reliability of the witnesses called by the Crown for the purpose of the trial proper, with the exception of the submissions made by Ms. Nadeau that the evidence of Dr. Anderson on the subject of propellants and rocketry was not reliable as it was outside his expertise. I have already considered that submission.

Section 82(1) of the *Criminal Code* – Counts 1-4 - Definition of explosive substance

[184] The central issue in determining the charges against Mr. Sonne set out in counts 1 to 4 is the definition of explosive substance. The Defence concedes that Mr. Sonne possessed the chemicals that were seized from his home. The Defence further concedes that some of the chemicals could theoretically be assembled into a substance capable of causing an explosion. However, this does not amount to possession of an explosive substance unless Mr. Sonne intended to combine these ingredients to create one of the explosive substances identified in the indictment.

[185] Section 82(1) of the *Criminal Code* reads as follows:

Possession without lawful excuse

82. (1) Every person who, without lawful excuse, the proof of which lies on the person, makes or has in the possession or under the care or control of the person any explosive substance is guilty of an indictable offence and liable to imprisonment for a term not exceeding five years.

[186] In this case, the parties agree that none of the substances found in Mr. Sonne's possession are explosive substances in the sense that they could, without further action by Mr. Sonne, cause an explosion. The Crown relies on the expanded definition of explosive substance in s. 2 of the *Criminal Code* which provides as follows:

"explosive substance" includes

- (a) Anything intended to be used to make an explosive substance,
- (b) Anything, or any part thereof, used or intended to be used, or adapted to cause or to aid in causing an explosion on or with an explosive substance, and
- (c) An incendiary grenade, fire bomb, Molotov cocktail or other similar incendiary substance or device and a delaying mechanism or other thing intended for use in connection with such a substance or device [emphasis added]

[187] The Crown relies in particular on subparagraphs 2(a) and (b) of the *Code* and has advanced a broad definition of "explosive substance."

[188] There is very little authority considering the meaning of "explosive substance". While s. 2 of the *Code* indicates that the term explosive substance is to be broadly interpreted to include such things as the component parts of an explosive substance, it does not actually define the term. For example, subparagraph (a) explains that "anything" intended to be used to make an explosive substance is an explosive substance. This definition is circular and not helpful as the *Criminal Code* is silent as to what exactly the "anything" must be intended to be used to make in order to be classified as an explosive substance.

[189] The Nova Scotia Youth Court in *R. v. P.A.*²³ came across this problem as well. After providing a definition from *Black's Law Dictionary*, the court noted the difficulty in using the definition contained in s. 2 of the *Criminal Code* (para. 7):

The common meaning of explosive substance is material like gunpowder; *Webster's New World Dictionary* (2nd Ed. 1977). *Black's Law Dictionary* (4th Ed. 1968) defines "explosive" as:

"any substance by whose decomposition or combustion gas is generated with such rapidity that it can be used for blasting or in firearms; or a compound or mixture susceptible or explosive chemical reaction, as gunpowder or nitroglycerine, and has been construed not to cover specific things which do explode or contain explosive material."

I refer to these definitions because of the difficulty of interpretation with the one contained in the *Code*. That definition indicates it includes the component parts of an explosive substance or the component parts of a device to aid or cause an explosive to be made if an explosive substance is to be used. By referring to "explosive substance" within the definition itself means that some definition outside of what it includes must be provided.

[190] The Crown submits that the following definition of explosive substance from *Webster's Third New International Dictionary*, which was used by the court in *R. v. H.A.Y.M.*,²⁴ should be adopted in this case:

A substance that on ignition by heat, impact, friction, or detonation undergoes very rapid decomposition (as combustion) with the production of heat and the formation of more stable products (as gases) which exert tremendous pressure as they expand at the high temperature produced; esp: a solid chemical compound or mixture of compounds that is used to release energy for performing work (as in blasting or propelling projectiles).

[191] The Defence does not agree, noting that this definition would capture a number of common household items including common matches and other basic firestarters. Instead, the Defence prefers the following definition: "a device that bursts with sudden violence from internal energy." This definition is taken from *R. v. K.D.S.A.*²⁵ In that case, the accused was charged with "possession of an explosive substance to wit: an improvised explosive device". The New Brunswick Provincial Court ascribed the definition asserted by the defence to the word "explosive device". The court also defined "explosive" as "relating to, characterized by, or

²³ (1986), 72 N.S.R. (2d) 304.

²⁴ 2005 BCPC 45, at para. 18.

²⁵ 2009 NBPC 4.

operated by explosion." The court concluded that, for an accused to commit a crime under s. 82(1) of the *Criminal Code*, there must be an explosion. The court acquitted the accused because replicated devices created by Crown experts failed to explode. Instead, they only managed to create a very large fire.

[192] The New Brunswick Court of Appeal overturned the acquittal and ordered a new trial.²⁶ The court disagreed with the provincial court, finding that an explosive substance need not result in an explosion in order to be classified as such. The court concluded that the improvised explosive device seized from the accused fell within subparagraphs (b) and (c) of s. 2 of the *Criminal Code*.

[193] Ms. Nadeau took the position that rocket fuel is an explosive substance, relying on her proposed definition and the evidence of Dr. Anderson that, with respect to the burning of a rocket engine, the "flame is a very ... robust. It is burning very rapidly." However, when pressed she conceded that if a reasonable inference could be drawn from the evidence that Mr. Sonne was making potassium chlorate for the purpose of rocket fuel and that was his sole purpose, then he would not be guilty of count 4. It was her submission however, that even if he were making potassium chlorate for the purpose of rocket fuel, he could also be making it for an explosive substance to be used in setting off, for example, a main charge as part of an explosive train, i.e. a series of substances that when ignited would set off a main charge.

[194] Ms. Nadeau also referred to the fact that when Mr. Castellano from CAR responded to Mr. Sonne he told him that he needed a factory explosive licence to make motors and that in Canada, rocket motors are considered explosives just like fireworks. This statement was presumably based on the definition of explosives from the *Explosives Act*²⁷ and the *Explosives Regulation*²⁸ and is consistent with the evidence of Dr. Anderson but his evidence was that propellants were caught by this statute because of the risk of explosion, not because they are considered to be explosives.

[195] As Mr. Di Luca submitted, the Crown did not plead that Mr. Sonne was making rocket fuel or rocket engines and that those would be an explosive substance. He submitted that rocket engines can't be an explosive substance since you can buy them and, in fact, Ms. Nadeau did so during the trial. He distinguished between a propellant and an explosive. The difference is in the substance and in the intent. If you want the substance to act as a propellant and intend it to, that is not an unlawful purpose even if something goes wrong that creates an explosion.

[196] In my view, the definition suggested by the Defence is too narrow, and the definition suggested by the Crown is too broad. With respect to the Defence definition, I note simply that the definition from *K.D.S.A.* was for the term "explosive device" and not "explosive substance".

²⁶ *R. v. K.D.S.A.*, 2010 NBCA 24.

²⁷ R.S.C. 1985, c. E-17.

²⁸ C.R.C., c599.

Unlike an explosive device, an explosive substance does not require the presence of a device, i.e. a container. Moreover, the provincial court's decision was overturned by the New Brunswick Court of Appeal. Part of the reason for overturning that decision was the provincial court employed erroneous definitions of "explosive substance". Accordingly, the definitions used by the provincial court should be approached with caution.

[197] The Crown's suggested definition is also not appropriate, as it would capture such innocuous items like aerosol cans which are usually clearly labelled that if they are heated they may explode. In this regard, I respectfully disagree with Romilly J.'s definition of explosive substance in *R. v. Violette*²⁹ as "anything that is *capable* of exploding". [Emphasis added]

[198] Considering the evidence of Dr. Anderson, and the manner in which he distinguished between propellants which have a risk of exploding and explosives which, of course, are intended to explode, I have concluded that a proper definition of the term "explosive substance" is a substance that is intended to explode and cause damage. This definition would exclude from criminal prosecution the possession of aerosol cans and other items that may explode but were never intended to explode. It would also exclude rocket fuel and rocket engines as they are not intended to explode *if* they are made for hobby rockets and not part of an explosive train or for that matter weaponized. By adding a requirement that there be an intention to cause damage, this definition would also exclude fireworks. If making rocket engines or, for that matter, fireworks is the purpose when someone combines certain ingredients, that person may have committed a regulatory offence because there is a risk of an explosion but in my view that person would not have had intent to create an explosive substance.

[199] The requirement that a substance must be intended to explode and cause damage in order to be classified as an explosive substance finds some support in the definition provided in s. 2 of the *Criminal Code*. Subparagraph (b), for example, specifies that something must be intended to be used to cause an explosion in conjunction with an explosive substance in order to be an explosive substance itself. In addition, subparagraph (c) delineates objects that are intended to be used to start fires. It does not include objects that are capable of or could result in the starting of a fire. Accordingly, I find that a substance must be intended to explode and cause damage in order to be an explosive substance.

[200] This does not mean that the Crown must prove that Mr. Sonne intended to use explosive substances to cause an explosion. That is not part of the offence of possession of an explosive substance. There is a fine distinction between intending to cause an explosion in order to cause damage and possessing substances that are intended to explode and cause damage. The first focuses on the accused individual, while the second focuses on the impugned substance. An

²⁹ 2009 BCSC 421.

accused will be guilty of possession of an explosive substance if the purpose of that substance's existence is to explode and cause damage, regardless of what the accused actually intended to do with it.

Circumstantial nature of the Crown's case

[201] The central issue in determining counts 1 – 4 is whether or not the Crown has established beyond a reasonable doubt that Mr. Sonne had an intention to combine any of the chemicals found in the workshop or garage of his home to create any of the six explosive substances as pleaded in the indictment. As submitted by the Defence, on the question of intent, the Crown's case is entirely circumstantial. There is no evidence, such as a confession or other clear statement of intent, supporting Mr. Sonne's intention to make any explosive substance. The Crown urges the Court to draw a series of inferences based on a wide variety of circumstantial evidence. The Defence, meanwhile, points to a number of alternative inferences that it submits are supported by the evidence and point to Mr. Sonne's innocence.

[202] As Mr. Di Luca submitted, caution is required to ensure that the standard of proof beyond a reasonable doubt is maintained. After assessing and weighing the evidence, I may only enter a verdict of guilty if there is no other reasonable inference that can be drawn from the evidence other than those indicating that Mr. Sonne intended to make an explosive substance. If any of the Defence inferences raise at least a reasonable doubt about the Crown's theory, Mr. Sonne must be acquitted.³⁰

[203] This approach was confirmed by the Supreme Court of Canada in *R. v. Griffin*³¹ where an appeal was brought based on a trial judge's instruction to a jury during which he stated that they should acquit if they found that there was "an equally reasonable inference which would indicate an innocent purpose." The court upheld the finding of guilt primarily because the trial judge recalled the jury and offered a correction that read,

In order to render a verdict of guilt, based on circumstantial evidence, the guilt of the accused would have to be the only rational inference that you could draw from the circumstantial evidence.

If there's any other rational inference you can draw from the evidence that would mean that you would not be able to render a verdict of guilty based on circumstantial evidence, because there would be – at best you would have reached maybe a probability or a likelihood of guilty, but not have reached that higher standard of proof beyond a reasonable doubt. (at paras. 28-34)

³⁰ *R. v. Fleet*, [1997] O.J. No. 5443 (Ont. C.A.) at para. 20.

³¹ [2009] S.C. J. No. 28.

What were Mr. Sonne's intentions generally with respect to the chemicals found in his home?

[204] Before turning to the specific explosive substances it is alleged that Mr. Sonne intended to make, I shall consider first the submissions of counsel that relate to the explosive substances charges as a whole. Although each of the charges against Mr. Sonne must be considered separately, I must consider the totality of the evidence in determining what his intentions were with respect to the chemicals and equipment that were found in his workshop and the garage. This analysis must be done with the important reminder that the burden is on the Crown to prove beyond a reasonable doubt that Mr. Sonne intended to combine chemicals in his possession to create an explosive substance.

[205] For the reasons already stated, I have concluded that Mr. Sonne had a legitimate interest in security issues and that given the considerable effort involved to obtain a certification as a CISSP, it would have been reasonable that Mr. Sonne would want to maintain this certification and that his interest in writing papers for TASK presentations was legitimate to further his employment prospects. I have also concluded that Mr. Sonne is an intelligent and methodical man with a large number of varied and wide ranging interests and hobbies. I have also concluded that although Mr. Sonne had the necessary knowledge and skill to make the explosive substances pleaded in the indictment, that there is nothing from the evidence concerning Mr. Sonne's many interests, hobbies and political views that would suggest that he had any particular inclination or motive to combine any chemicals in his possession into any explosive substances. I have also found that there is no evidence that Mr. Sonne had any intention to break the law at the G20 or that any negative feelings he had about holding the G20 in Toronto and turning Toronto into a "prison camp" were strong enough to give him a motive to do actual damage at the G20 or to use an explosive substance at the G20 to damage the security fence or worse, cause injury.

[206] The strongest evidence in support of the Crown's case is that Mr. Sonne had many different chemicals in his workshop and the garage that can be used to make explosive substances and some of the necessary equipment. Although many of the chemicals would likely be found in anyone's garage, many others would not.

[207] As I review the individual charges, I will consider each charge individually but clearly the most troublesome charge is count 4 as Mr. Sonne had extracted almost two and one half kilograms of ammonium nitrate from cold packs and had about three kilograms of potassium chlorate that he had made using a homemade electrochemical cell. Either of these chemicals could have been combined with various types of fuel that Mr. Sonne had in his possession to create an explosive substance. As Ms. Nadeau submitted, in addition to the chemicals there was also specialized equipment, such as a filtration system and an interest in explosives and instruction manuals as evidenced by the documents Mr. Sonne had bookmarked or uploaded to The Pirate Bay such as Ragnar's Guide to Home and Recreational Explosives which gave instruction as to the various explosive substances that could be made.

[208] For the reasons already stated, I have concluded that Mr. Sonne had the necessary chemicals and equipment to make most of the explosive substances named in the indictment. Ms. Nadeau acknowledged that there are no plans or drawings connected to a plot to use any of the

chemicals for the purpose of making an explosive substance. However, as Ms. Nadeau submitted, the Crown does not have to prove that Mr. Sonne had a particular plan with respect to any explosive substances or as she put it the "what, where and when" of a possible plan to use explosive substances to cause an explosion. The Crown does not need to prove that Mr. Sonne intended to use any explosive substance. It is sufficient if the Crown has established beyond a reasonable doubt that Mr. Sonne had assembled some or all of these chemicals for the purpose of making any of the explosives substances set out in the indictment.

[209] Looking at the indictment as a whole, I agree with Mr. Di Luca that it seems unlikely that anyone would intend to produce six different explosive substances, as alleged. If someone intended to produce an explosive substance, one would expect one, possibly two. The fact six are pleaded reflects the fact that many of the chemicals relied upon by Dr. Anderson as ingredients to produce explosive substances could be found in many homes as they have common household purposes. I, therefore, do not consider it necessarily suspicious that Mr. Sonne would have chemicals commercially packaged as drain cleaner and various cleaning products in the garage. Furthermore, Mr. Sonne admitted to Detective Bui that he had an electrochemical cell, or as he called it an electrolysis cell, and that he was using it to make potassium chlorate. If his purpose was only to make an ingredient for rocket fuel, that in my view would not be for the purpose of making an explosive substance. Rocket fuel may result in an explosion, but it is created to propel a rocket and not to explode. As such, it is not an explosive substance for the purposes of the *Criminal Code*.

[210] The filtration apparatus that Mr. Sonne had on his lab desk was likely used to convert potassium chloride to potassium chlorate, which makes it less likely that there was an intention to use it to make an explosive substance like TATP or HMTD. In the same vein, the hotplate in Mr. Sonne's workshop was needed to make the blue crystals that Mr. Sonne was making as gifts. It was, therefore, not necessarily bought for purifying TATP as suggested by Dr. Anderson. Dr. Anderson even found a possible nefarious reason for why Mr. Sonne might have steel wool at the back of his garage and personal protective equipment such as face shields, dust masks and safety goggles, all of which would not be uncommon in the garage or workshop of someone who works with wood. Stripping away from the evidence all of the chemicals and equipment that might be found in anyone's workshop or garage, particularly someone with a broad range of interests and hobbies like Mr. Sonne, one is left with a much shorter list of chemicals of concern including the potassium permanganate, possibly the hexamine tablets and hydrogen peroxide, the urea, ammonium nitrate and the fact that Mr. Sonne was making potassium chlorate. In addition to the physical evidence, there is the considerable volume of evidence from Mr. Sonne's computer that raises questions about his intentions that I have already considered.

Testing the System

[211] Ms. Nadeau made a number of submissions as to why the Court ought not to accept the Defence submission that Mr. Sonne was simply assembling these chemicals to "test the system". She pointed out that there is no evidence as to who Kate Milberry really is, apart from her stated credentials at the bottom of her email that she is a post-doctoral research fellow at the University of Toronto. Ms. Milberry was not called as a witness and there is no evidence that Mr. Sonne knew Ms. Milberry personally. The Defence, however, had no obligation to call Ms. Milberry as

a witness as the email exchange was admitted to be authentic. The truth of Ms. Milberry's statements are not material to this case, only the truth of what Mr. Sonne said he had done and why.

[212] Mr. Di Luca submitted that if Mr. Sonne was, in fact, building bombs or collecting chemicals to build bombs he would not email anyone let alone Kate Milberry telling her this on a public web server. He submitted that Mr. Sonne was telling the truth about exactly what he was doing and that it would be interesting from a security culture perspective to see how far you could go before you raised red flags.

[213] Mr. Di Luca also relied on the Tickling the Dragon email Mr. Sonne sent to Hacklab members on November 4, 2009, before anyone knew the G20 was coming to Toronto. He submitted that this was another example of Mr. Sonne wanting to test the system. He was in a "civilly disobedient mood" and wanted to come up with something that would provoke a response from the government. I accept that this email is another example of Mr. Sonne as a person who wanted to push the limits of authority, even to the point of provoking a response from government, which is consistent with him wanting to test the system.

[214] Apart from these emails and other statements of Mr. Sonne to the same effect in various chats, I have no evidence from Mr. Sonne that he was "testing the system" with the purchase of any of the chemicals relied upon by the Crown. He was not asked if he was testing the system when he was asked questions by Detective Bui and to the extent he was asked about chemicals, his defence was that he had them for innocent purposes. He was not asked about the potassium permanganate by Detective Bui.

[215] Ms. Nadeau submitted that Mr. Sonne's comment to Ms. Milberry could have been about the rifle scope that Mr. Sonne had ordered that was stopped at the US border on February 22, 2010. I find that unlikely as it does not fit the description of what Mr. Sonne told Ms. Milberry that he was purchasing to raise flags. I presume this purchase was related to Mr. Sonne's interest in air rifles.

[216] Mr. Sonne does not identify in his email to Ms. Milberry what he has purchased in order to raise flags. I agree with Mr. Di Luca, however, that there would be no reason at this stage for Mr. Sonne to make such a statement in an email unless it was true. He had obtained his CISSP designation and had an interest in security matters. Although I do not know if Mr. Sonne was working at this time, for reasons I have already stated, Mr. Sonne might have been looking for ways to enhance his reputation in the security field. A reasonable inference could be drawn, considering all of the evidence, that the purchase or attempted purchase of some of the chemicals by Mr. Sonne was likely to "test the system," possibly for a paper he intended to write on the subject and present, perhaps at TASK.

[217] Ms. Nadeau submitted that if Mr. Sonne was acquiring chemicals in order to raise flags it would follow logically, and Mr. Sonne's a logical man, that at some point he would push far enough in "tickling the dragon" that the "dragon" would come to his door. One would expect Mr. Sonne to want to protect his wife, his reputation and liberty. Ms. Nadeau submitted that as an intelligent man Mr. Sonne would not actually purchase chemicals to test the system without

having some protection in place, such as a document explaining what he was doing and why, in order to provide what she described as a clear-cut alibi to establish that if he caught the attention of the police, he did not have any criminal intentions.

[218] Ms. Nadeau also submitted that if Mr. Sonne was making purchases of chemicals to test the system one would not expect him to keep them and if he did, one would not expect him to take them out of whatever commercial package that was used for sale and put them in plastic jars with the correct chemical name on the label. She argued that if Mr. Sonne was only attempting to raise flags he would have stopped after the first response when he tried to purchase potassium permanganate and not kept going until he actually got it.

[219] There is some merit in Ms. Nadeau's submissions. The email to Ms. Milberry is the only record of Mr. Sonne stating his intention to raise flags, and that email was by chance in that it was a response to an inquiry Ms. Milberry made for people with an interest or expertise for cyber surveillance. For someone like Mr. Sonne, who based on the magnetron experiment researched his projects online and documented them in a blog, it is strange that there is no other record of this intention to raise flags. One would think Mr. Sonne would document the fact that he was ordering chemicals, nothing was happening and no flags were raised not only to protect himself but also to start on a presentation on the subject, if that was his intent. Similarly if rocketry was a legitimate interest there would be more evidence suggesting such an interest in the form of bookmarks on his computer, or even starting a blog, before Mr. Sonne started to make potassium chlorate in April 2010. There is no evidence of any record that was started of any purchases of chemicals that would support the inference that Mr. Sonne was doing so for a presentation.

[220] Furthermore, there is merit to Ms. Nadeau's submission that Mr. Sonne appeared knowledgeable in the wording of s. 82(1) of the *Criminal Code*, including what he believed to be the *actus reus* and *mens rea* of an offence related to explosive substances when he spoke to Detective Bui. As I have already reviewed, when Detective Bui told Mr. Sonne that he found it coincidental that as the G20 was approaching he became a member of CAR and was creating rocket fuel, Mr. Sonne responded that he wanted to prove that he had no ill intent, that he was aboveboard and that he followed the regulations and that this was why he had never assembled any of these chemicals into a finished device and that he did not possess anything that was a finished explosive. When Detective Bui responded that he possessed "the precursors," Mr. Sonne answered "Yes, but that is not at all illegal. Not in those quantities." At the very least this exchange shows that Mr. Sonne was alive to the issue of whether or not what he was doing was legal or not.

[221] Mr. Di Luca submitted however, that if I have a concern about Mr. Sonne's interest in rocketry and wonder whether it is way too convenient, that I have to question whether it's part and parcel of his testing the system. He relied on the same portion of Mr. Sonne's statement to Detective Bui to support this submission.

[222] Although I do not find this portion of Mr. Sonne's statement to Detective Bui to be consistent with the Defence theory that he was testing the system, I doubt Mr. Sonne was trying to tell Detective Bui that rocketry was just a cover to prove he had no ill intent. I believe it more likely that Mr. Sonne was trying to explain that if the police reviewed his correspondence with

CAR that they would learn that he had no intention of making rocket fuel without a licence. This is something Mr. Sonne appreciated would not have been legal and would be something he might explain in this way to Detective Bui.

[223] In my view it is important to consider the fact that all of the chemicals Mr. Sonne had in his possession were legal from the perspective of the purchaser, and so if he had no intent to combine them into an explosive substance he may well have believed he would not need the type of alibi suggested by the Crown. There is no evidence that it is illegal to make potassium chlorate and simply have possession of this chemical. It certainly does not make sense that Mr. Sonne would have the bulk of the chemicals in a cupboard under his lab desk, labelled and in plain view, if the chemicals were being assembled for a nefarious purpose as submitted by the Crown. The electrolysis cell was in plain view in the furnace room. Even if I were to accept Ms. Nadeau's submission that the public chats and posting of pictures was part of an elaborate alibi, one would expect some effort to hide the chemicals if Mr. Sonne had some intent to use them for a nefarious purpose.

[224] As I will come to, there is a great deal of evidence that was publically available through chats concerning Mr. Sonne's possession of some of the chemicals including the ammonium nitrate and potassium chlorate and his interest in rocketry. Most of this evidence starts in early May 2010. Although it is of concern that these chats took place after many of the chemicals have been obtained and after Mr. Sonne began to make potassium chlorate, they start well before he began to focus on the G20 in mid-June 2010 and attract the attention of the police. This means that if the Crown theory is correct, that Mr. Sonne decided he needed an alibi before he began to focus his attention on the G20. Even if there was a reason for him to be concerned about an alibi at that time, the Crown's theory that all of the chats were an elaborate cover or alibi begs the question of why Mr. Sonne became focused on taking photographs of police, police cameras and security fences particularly after he had caught the attention of the police once to the point of being detained on June 15, 2010 and again, according to his tweets, on June 20, 2010, when he was stopped and questioned. By these actions he clearly knew he was drawing the attention of the police which is not consistent with the actions of someone who has assembled chemicals in his lab for a nefarious intent.

[225] Dr. Anderson admitted that if someone were interested in testing the system to see whether they could raise flags, with people in authority or people who regulate chemicals, that might be a reason for acquiring some of the chemicals, but he thought it would be a bad idea. That said, he had himself tried to purchase hydrogen peroxide and he knew of one colleague who went in to make a purchase of a large quantity of hexamine tablets in order to see whether or not any flags were raised.

[226] I will deal with the potassium permanganate as Ms. Nadeau submitted that the purchase of this chemical was the start of Mr. Sonne assembling chemicals for nefarious purposes. Although it is not a chemical relied upon in the indictment, the Crown relies on the evidence of Dr. Anderson that potassium permanganate is a chemical initiation device for an explosive.

[227] In early January 2010, within days of the man dubbed the “Underwear Bomber” attempting to detonate an explosive device onboard a commercial flight using potassium permanganate, Mr. Sonne used his Visa credit card and home address to make an online purchase of two pounds of potassium permanganate from a retailer in the United States. When he was told it could not be shipped he wrote to another retailer and was told he could not purchase the product because it was a regulated product. He finally used his Visa credit card to purchase a pound of potassium permanganate from a water garden and fishery store in Bradford, Ontario.

[228] Ms. Nadeau submitted that the inference that should be drawn from this purchase of potassium permanganate is that Mr. Sonne got the idea of using potassium permanganate as an explosive from this incident with the Underwear Bomber and that this would explain why he actually bought the chemical, removed it from its original packaging, and put it in a container labelled as such.

[229] There is no doubt that Mr. Sonne is an intelligent and sophisticated man. Had he had a nefarious purpose for the potassium permanganate in mind, his decision to take steps to buy this chemical immediately after all of the news attention the Underwear Bomber received, and to attempt to do so online from a US store, using his own credit card with his own home address, would have been foolhardy in the extreme. This is particularly so given that based on Mr. Sonne’s chats, for example his chat with Shaz on June 5, 2010, he said that he knew how to hook into someone else’s wireless to upload, as he called it, “sketchy stuff” so it would be hidden. That is what one would expect if Mr. Sonne was ordering chemicals to make bombs; orders that could not be traced back to him. Furthermore, as Ms. Nadeau submitted, Mr. Sonne’s interest in documents such as the Security Culture Handbook suggests he appreciated the need for things to be hidden if the activity is illegal. For these reasons I find that the purchase of the potassium permanganate is more consistent with what Mr. Sonne said to Ms. Milberry about wanting to test the system. This could also explain the request for quotes from AlphaChem which were received January 20, 2010 for hydrogen peroxide at 35% and three types of nitric acid. Those chemicals were not found at the time of the search nor was the equipment that would be used to make nitric acid.

[230] Mr. Di Luca submitted that given the type of person Mr. Sonne is, he might purchase a chemical to test the system and then think of a perfectly legitimate way to use it for another purpose. He pointed out that Mr. Sonne joked in one of the chats that his interest in rocketry would put him on the terrorist list if he wasn’t already on it. He submitted that it is possible that even though Mr. Sonne had a legitimate interest in rocketry, it was also seen by him as a way to raise flags. That, however, would be speculation on the evidence given there is no suggestion from Mr. Sonne that making potassium chlorate was for anything other than rocket fuel.

[231] Mr. Di Luca submitted that the other chemicals including the hexamine tablets and the ammonium nitrate were also purchased to test the system. Ms. Nadeau submitted the opposite; that by buying these chemicals in small quantities Mr. Sonne was trying to avoid “tickling the dragon”. These chemicals were commercially available for innocent purposes; the hexamine as camp fuel and the ammonium nitrate in cold packs. The only records available to the Court of purchases of these chemicals are for small quantities in January and March 2010 which is before Mr. Sonne’s email to Ms. Milberry. As Mr. Di Luca submitted, it is possible that the bulk of

these chemicals were purchased all at once, with the aim to raise flags, and that we simply don't have a record of that. It is also possible that Mr. Sonne bought all of these chemicals in small quantities under the radar to establish that this could be done without raising flags. That might have been part of a future presentation. Dr. Anderson, in fact, expressed concern about the fact that ammonium nitrate could be obtained from buying cold packs. However, when Mr. Sonne was asked about these chemicals by Detective Bui, that is not the explanation that he gave for why he had them. Given the competing inferences, I shall consider these particular chemicals in the context of the statement from Mr. Sonne as to why he had them and the rest of the evidence.

The Public Nature of his Actions

[232] In considering Mr. Sonne's intent generally with respect to the chemicals relied upon by the Crown, it is relevant that for many of the purchases the Crown relies upon, he used his Visa credit card, rather than cash. Furthermore, as set out in the Chronology, he often posted pictures of what he bought or posted comments about it on the Hacklab chat. If you build a bomb and set it off people are going to come to your door and in Mr. Sonne's case that would happen given he used his own name, credit card and home address and he had a lab in his house with the chemicals in plain view. Mr. Di Luca submitted that had Mr. Sonne felt he needed a cover, a better cover would be not to tell anyone and do this somewhere other than your home. I agree that this is what would make sense.

[233] Mr. Sonne stated in the Hacklab chats that he had been subject to RCMP checks three times. I have no evidence as to whether that would have been true when Mr. Sonne obtained his licence as a private investigator and his CISSP designation although that would not be surprising. There is no doubt, however, that he would have expected to have a police check when he applied for his licence to acquire a firearm in around April 2010. This is not what I would expect from someone who, on the Crown's theory, had begun to assemble chemicals for nefarious purposes.

[234] It is of concern that in September 2009, when Mr. Sonne ordered the Ragnar's Guide to Home and Recreational Use of High Explosives, he also uploaded various maps of the United States including maps showing the location of what appear to be nuclear sites, oil refineries, chemical depots and gas pipelines. The timing of these events could also have been consistent, however, with "testing the system" and Mr. Sonne's disposition to test the limits of authority. Around the same time, he commented on The Pirate Bay that "the second they start throwing us in jail for posting stuff like this (a reference to his uploading US nuclear sites onto The Pirate Bay) I arm up and start the revolution".

[235] The concern in connection with the charges before the Court is obvious given the possible suggestion Mr. Sonne now had both possible targets and a book explaining how to make certain explosives. However, this is also consistent with his somewhat extreme form of exercising one's right to freedom of speech. Although posting this type of information on a public forum on the Internet is not illegal, it certainly could be considered irresponsible. However, in terms of the charges before the Court, if Mr. Sonne had, in fact, purchased Ragnar's Guide for the purpose of actually making explosives, one wonders why he would go public with having it. Why even buy it at all? According to Dr. Anderson, there are lots of recipes for explosive substances on the Internet.

[236] Posting Ragnar's Guide to The Pirate Bay could have been part of what Mr. Sonne said to Kate Milberry on April 26, 2010, and his statement that he kept torrents going of interest to countersurveillance and activist security culture and other "sketchy stuff" and that he monitored those torrents to see how active they would get as various political situations arose, including when government IPs popped up. This could be part of "testing the system" and might tie into a paper on security issues.

[237] Again, there are competing inferences from this evidence which I shall consider as I consider the charges before this Court.

The Risk

[238] Ms. Nadeau also submitted that if Mr. Sonne was in fact intending a legitimate purpose with the chemicals, it is unreasonable to think that he would bring such volatile, dangerous chemicals into a residential neighbourhood and into a home that he shared with his wife. However, Ms. Nadeau also took a contrary position and submitted that Mr. Sonne was confident that even though the bombs he was intending on building were dangerous, he was following the necessary safety regulations to be safe.

[239] There was no evidence from Dr. Anderson that anything Mr. Sonne was doing in the workshop would cause a risk of harm to him or his wife. He did not suggest any of the chemicals themselves could explode nor did he suggest there was any risk in making potassium chlorate. As I will come to, Mr. Sonne had become concerned about the potassium chlorate, possibly because of posts by other Hacklab members, and he decided to bury that substance in a pail in the backyard. Apart from the fact that potassium chlorate is toxic, there is no other evidence that it would have posed a danger to Mr. Sonne or his wife, had he kept it in his basement.

[240] It is, however, clear from the evidence of Dr. Anderson, that there would have been significant risk if Mr. Sonne had started to combine these chemicals to make at least some of the explosive substances pleaded in the indictment, such as TATP. That would have put not only himself but his wife and no doubt his neighbours at risk. Although I am not able to ascertain how sincere Mr. Sonne was when he told Detective Bui that he would be concerned for his neighbours, I have already found in my ruling on the admissibility of his statements that he felt very strongly about his wife. I do not believe that he would have done anything to risk injury to her or worse. The information Mr. Sonne had on making explosive substances such as the Ragnar's Guide, talked about the risks involved. There is no evidence that Mr. Sonne had any other place where he could safely assemble these chemicals into an explosive substance. I find it highly unlikely that he would have put his wife, let alone the home they shared, to the risk that is inherent in making an explosive substance in his home.

[241] There is no evidence that the required ingredients for any particular explosive named in the indictment were set out and separated on top of the workbench or some other workspace. It was not as if it appeared that Mr. Sonne was ready to start combining any of the chemicals into an explosive substance. There is also no evidence that anything had been done to get any of the ingredients ready to be combined into an explosive substance. The only active step that appears to have been taken is the production of potassium chlorate. Although the Crown does not have to

prove that Mr. Sonne intended to use an explosive substance to disrupt the G20, the fact that nothing was found ready to go at the time of the search would suggest otherwise in any event. In fact, given the time Mr. Sonne was obviously devoting to photographing security cameras and the G20 fence line, it would seem unlikely that he would have very much time to work in his lab.

[242] I do not have any evidence as to how difficult it would be to combine some of the oxidizing agents Mr. Sonne had, such as the potassium chlorate and ammonium nitrate, with a fuel and do that away from his home and create an explosive substance. I am not able to conclude on the evidence that Mr. Sonne would have had to put his wife and home at risk to proceed to the next stage of assembling some of these explosives.

[243] With these general comments in mind, I turn to the individual charges.

Findings of fact/conclusion – Count 1 – TATP

[244] Turning to count 1, the Crown must establish beyond a reasonable doubt not only that Mr. Sonne had in his possession the ingredients required to make TATP; namely acetone, hydrogen peroxide and an acid, which can be either sulphuric acid or hydrochloric acid, but also that he had the intention to combine those ingredients into TATP. There is no dispute that TATP is an explosive substance.

[245] This count can be quickly disposed of in Mr. Sonne's favour as the Crown has not proven that the two bottles commercially labelled "acetone" and found in the garage of Mr. Sonne's home, in fact, contained acetone. Indeed, the Crown has not proven that the bottles contained any liquid at all. This in my view is a fatal flaw to the Crown's case on count 1.

[246] Ms. Nadeau submits that it was unnecessary to test the contents of the containers and that the fact that the bottles were labelled as acetone is sufficient to establish that the bottles contained acetone. Ms. Nadeau relies on *H.A.Y.M.* as authority for this proposition. However, *H.A.Y.M.* does not support the Crown's argument. In that case, the accused was charged with possession of an explosive substance. Numerous chemical substances were found in his possession, but no chemical analysis was done on any of them. The trial judge did not find this necessary because some of the chemical substances were found to explode upon testing by police. This was sufficient for the trial judge to conclude that the accused was in possession of an explosive substance.

[247] Ms. Nadeau seeks to extend the conclusion of the trial judge in *H.A.Y.M.* beyond its intended meaning. The chemical identities of the substances in that case did not need to be found because the substances were found to be explosive substances. That is not the case here. The chemical identity of the liquid in the bottles labelled as "acetone" is essential to the Crown's case, since its theory is that Mr. Sonne had all the requisite ingredients to make TATP. If the liquid in the "acetone" bottles was not, in fact, acetone, then the Crown's theory on this count fails.

[248] The fact that the cans were labelled as acetone is some evidence that the liquid inside, if any, was acetone. However, I cannot be sure that Mr. Sonne had any acetone in his possession let alone acetone that was suitable for TATP production. As mentioned already, there is no evidence that the bottles contained any liquid. In addition, one of the bottles was labelled "used acetone". Dr. Anderson admitted that acetone could become unsuitable for TATP production if it is adulterated through combination with other chemicals. Lastly, there is the possibility that the liquid inside, if any, was something other than acetone.

[249] However, I will still consider the other relevant evidence with respect to this count since overall the Crown's case requires proof of intent to combine these various chemicals into explosive substances. As such, the other chemicals Mr. Sonne had might shed some light generally on his intent.

[250] A four litre original commercial container, "Optimum Hydrogen Peroxide 29%" was found on the same shelf as the other bottles of chemicals in the cupboard under the lab desk. It was tested and could have been used to make TATP or HMTD. Although I do wonder why this bottle was kept with the other chemicals, rather than, for example, out in the garage, based on the labelling it was sold as a liquid fertilizer. Although Mr. Sonne obtained a quote from AlphaChem for 35% hydrogen peroxide on January 20, 2010, there is no evidence that he ever ordered or received this product and I have already found this purchase may have been an attempt to "test the system". I have already made a finding that Mr. Sonne's statement to Detective Bui that he has an interest in farming and gardening could well be true. He was not asked about this chemical by Detective Bui, but in light of its commercially intended purpose, I could not conclude that Mr. Sonne purchased the hydrogen peroxide for the purpose of making TATP or HMTD. A reasonable inference can be made from all of the evidence that the hydrogen peroxide was bought for its intended purpose as fertilizer. It may have been stored in this cupboard because that is where the urea and ammonium nitrate were found and Mr. Sonne told Detective Bui that these chemicals were intended to be used as fertilizer for his vegetable garden.

[251] As for the acids relied upon to make TATP or HMTD, they were found on the shelves at the back of the garage and both were in their original commercial container; one labelled "ro-tyme Liquid Drain Opener" for use in unclogging drains and tested as sulphuric acid and the other "ro-tyme Muriatic Acid", which was identified as hydrochloric acid and labelled for use for, among other things, etching and descaling. In addition, a commercially labelled container of Methyl Hydrate was found on the floor of the garage near the shelves. Although this solvent could be used to purify TATP the fact remains it is a solvent and on the label of the bottle it states that this chemical is best for preventing gas line freezing and that it can be used for cleaning glass surfaces and thinning shellac and cleaning brushes. Dr. Anderson confirmed the household uses for these three products and given where they were stored and the fact they were in their original containers, it is certainly likely that they had been purchased for their intended household uses. These are the kinds of chemicals anyone could have in their basement or garage. There was no admission that everything in the garage belonged to Mr. Sonne and not his wife, but in any event, even if these products belonged to Mr. Sonne, I am not satisfied on the evidence that they were purchased for the purpose of making TATP or HMTD or any explosive substance.

[252] For these reasons, I find that the Crown has not proven beyond a reasonable doubt that Mr. Sonne is guilty of count 1.

Findings of fact/conclusion – Count 2 – HMTD

[253] Turning to count 2, the Crown must prove that Mr. Sonne had the ingredients and the intention to make HMTD; namely hexamine, hydrogen peroxide and an acid. The standard acid used is citric acid, which was not found in Mr. Sonne's home even though it is easily available in a drugstore. That suggests there was no intent to make such an explosive although, according to Dr. Anderson, hydrochloric acid or sulphuric acid will do. I have already reviewed the evidence with respect to those two acids and the hydrogen peroxide which were found in the garage of 58 Elderwood Drive and have concluded that the Crown has not proven that they were for anything other than their intended commercial purpose.

[254] The central issue on this count is for what purpose Mr. Sonne had the hexamine tablets that were found in two screw top plastic jars in his workshop. Although I have the weight of these tablets, I do not know the number of tablets in those containers. All that has been established is that Mr. Sonne purchased four packages of hexamine tablets on January 29, 2010 and another four packages on March 22, 2010. Given the number of tablets in each container, this would mean that he had purchased 240 tablets which could well be what is seen in the plastic containers.

[255] Although Mr. Sonne used his Visa credit card both times, given that these packages are available in the camping section of Canadian Tire, I fail to see how he could have expected to raise flags with these purchases, unless he wanted to establish that such a chemical is not regulated and easily available. Dr. Anderson did testify that the ability of someone to acquire a large quantity of hexamine tablets without anyone having to report it is something that raises a security concern for him. However, when asked about the hexamine tablets by Detective Bui, Mr. Sonne responded that camp stove fuel tablets can be bought at Canadian Tire and are entirely legal. Implicit in this statement is that he bought these tablets for their intended purpose.

[256] In my view, the question then is whether or not the hexamine tablets were purchased for use by Mr. Sonne for camping or intended to be a main ingredient in the production of HMTD and / or HDN. It is significant that the two containers of hexamine tablets were not found with the other chemicals under Mr. Sonne's lab desk. Although it is not entirely clear where they originally were, as they were moved by police by the time the photographs of them were taken, given the evidence that items on the floor shown in the photographs had been moved off the shelves, it seems most likely that before the search, the jars of hexamine fuel tablets were on the shelf with the camping equipment.

[257] It is significant that Mr. Sonne labelled the fuel tablets as being "hexamine" fuel tablets, clearly indicating he knew what chemical they were made from. On the other hand, the fact that he included the words "fuel tablets" suggests that that was the intended purpose for these tablets. In the case of the other chemicals, there was no stated or intended purpose in the labelling itself.

[258] I find it unlikely that the hexamine tablets were intended for use with the camp stove found with the camping equipment as the fuel canisters that were also present are clearly the type of fuel that stove is intended for. However, Dr. Anderson did testify that these tablets can be used to start a campfire or charcoal briquettes or lump charcoal; all activities associated with camping.

[259] Ms. Nadeau submitted that it would not make sense for Mr. Sonne to purchase these tablets in January and March nor have so many tablets and move them into large jars which would be unwieldy for camping. It is true that certainly the January purchase was not at a time when I would expect Mr. Sonne to need these tablets for camping, but he appears to be a very organized person, judging from how things were stored in his workshop and he told Detective Bui that he had brought the air rifles home to work on over the winter. The fact he purchased the tablets when he did is not inconsistent with Mr. Sonne getting organized early for the cottage and camping season; obviously the tablets were still on the store shelves. As for moving the tablets to jars, this would likely be a more efficient way of transporting these fuel tablets to the cottage, than eight individual boxes. Furthermore, Dr. Anderson agreed that the jars appear to be watertight, which is a useful feature considering that hexamine tablets that are dissolved in water become useless as a fuel source.

[260] For these reasons, I find that a reasonable inference can be drawn from this evidence that the hexamine tablets were purchased by Mr. Sonne for their intended use for camping and, in particular, for starting campfires. For these reasons, the Crown has not proven beyond a reasonable doubt that the hexamine tablets were purchased by Mr. Sonne with an intention to create HMTD. In addition, as I have already stated, a reasonable inference can be drawn from the evidence that Mr. Sonne had the other chemicals the Crown relies upon in support of count 2 in his possession, for their stated purposes, as commercially labelled. Accordingly, I find that the Crown has not established beyond a reasonable doubt that Mr. Sonne had these ingredients in his possession for the purpose of making HMTD.

[261] For these reasons, I find that the Crown has not proven beyond a reasonable doubt that Mr. Sonne is guilty of count 2.

Findings of fact/conclusion – Count 3 – Urea Nitrate

[262] Turning to count 3, the Crown must prove beyond a reasonable doubt that Mr. Sonne had the ingredients to make urea nitrate and the intention to combine those ingredients into that explosive substance. There is no dispute that Mr. Sonne had one of the necessary ingredients, namely urea, but he did not have the other; nitric acid.

[263] The urea was found in a plastic screw top jar that was hand labelled "Urea" in addition to the correct chemical nomenclature, in the cupboard under the lab desk. The quantity was 842 grams. No nitric acid was found in Mr. Sonne's home. Dr. Anderson was not asked about the January 20, 2010 quote Mr. Sonne obtained from AlphaChem for nitric acid using different product numbers. There is no evidence that any of these products were ever ordered or shipped.

It is significant that this quote was obtained for Mr. Sonne's company using his own name and home address. This quote was obtained in the same timeframe as when the potassium permanganate was purchased, which I have already found suggests it was a chemical that was being sourced to "test the system".

[264] Dr. Anderson did give evidence that it would have been possible for Mr. Sonne to make nitric acid using hydrochloric acid and potassium nitrate. I have already set out the evidence with respect to the hydrochloric acid that was found in the garage and why I am not satisfied that it was purchased in order to make an explosive substance. There is some significance to the fact that the potassium nitrate was found with the other chemicals in the cupboard under the counter of the lab desk, but Mr. Sonne did not have the distillation apparatus that would normally be used to make nitric acid. There is no evidence from Dr. Anderson to suggest that purchasing such an apparatus would have been difficult and certainly Mr. Sonne had access to online lab equipment suppliers. Dr. Anderson explained how nitric acid could be made without this type of apparatus and I accept that Mr. Sonne would have been sufficiently skilled to do so. However, it seems less likely that Mr. Sonne would have intended to make nitric acid without the distillation apparatus. If he had such an intention, judging from all of the lab equipment he did have, I would have expected him to have bought distillation equipment. The absence of this equipment certainly raises a reasonable doubt as to whether or not Mr. Sonne ever had an intention to make nitric acid.

[265] When asked, Mr. Sonne told Detective Bui that the urea was for use as a fertilizer in his garden. Dr. Anderson did not suggest that the quantity Mr. Sonne had was at odds with such a purpose. Mr. Sonne was not asked about the potassium nitrate but Dr. Anderson testified that it too could be used as a fertilizer, for pyrotechnics, as a food preservative, and as a stump remover.

[266] I have already concluded that it is reasonable to infer from the evidence that Mr. Sonne did, in fact, have an interest in gardening. It is perhaps unusual that the urea was in a plastic jar with the other chemicals, but as I have already said, the hydrogen peroxide which was marketed as a liquid fertilizer was there as well. It is possible that the potassium nitrate was also for fertilizing a garden. The urea and ammonium nitrate were in the same cupboard and Mr. Sonne told Detective Bui that these chemicals were also intended as a fertilizer. As I will come to, he gave Detective Bui an explanation for why he had more than one kind of fertilizer for his vegetable garden.

[267] Given Mr. Sonne's interest in gardening and his statements to Detective Bui, I find that a reasonable inference can be drawn from the evidence that what Mr. Sonne told Detective Bui is true and that he had the urea in his possession for use as a fertilizer ~~or that he intended to make nitric acid, in order to make urea nitrate.~~

[268] For these reasons the Crown has not proven beyond a reasonable doubt that Mr. Sonne had urea in his possession for the purpose of making an explosive substance and as such has not proven count 3 as it relates to urea nitrate.

Findings of fact/conclusion – Count 3 – HDN

[269] Count 3 also alleges that Mr. Sonne had the ingredients to make HDN; namely hexamine and nitric acid. I have already set out my conclusions with respect to the other reasonable inference that could be drawn from the evidence as to why Mr. Sonne had hexamine tablets and I have concluded that I have a reasonable doubt as to whether or not Mr. Sonne ever intended to make nitric acid from potassium nitrate and hydrochloric acid and my conclusions with respect to why Mr. Sonne may have had those chemicals.

[270] Given my conclusion that a reasonable inference can be drawn from the evidence that Mr. Sonne may have had hexamine, hydrochloric acid and potassium nitrate in his possession for reasons other than the manufacture of an explosive substance, the Crown has not proven beyond a reasonable doubt that Mr. Sonne intended to make HDN.

[271] For these reasons the Crown has not proven beyond a reasonable doubt that Mr. Sonne is guilty of count 3 as it relates to HDN.

Findings of fact/conclusion – Count 4 – Potassium Chlorate

[272] Turning to count 4, the Crown must prove beyond a reasonable doubt that Mr. Sonne intended to make an oxidizer-based explosive substance using potassium chlorate.

[273] In light of the definition for the term “explosive substance” in s. 82(1) of the *Criminal Code*, I have concluded that rocket fuel is not an explosive substance if it is not intended to explode and cause damage. However, as Ms. Nadeau submitted, it might be possible to use a rocket engine to ignite a detonator which, in turn, could set off a main charge. If a rocket engine were intended to be used in that way, then it could meet the definition of an explosive substance as set out in s. 2(b) of the *Code*. Accordingly, if I am left with a reasonable doubt as to whether or not Mr. Sonne intended to use the potassium chlorate that he had made for rocket fuel, for a recreational rocket, or if I am unable to determine what his purpose was in making potassium chlorate, he must be acquitted of this charge.

The physical evidence

[274] Potassium chlorate is a strong oxidizing agent that can be mixed with various fuels such as sugar to form explosive substances. It is clear from the evidence that Mr. Sonne had learned the process for using an electrochemical cell to turn potassium chloride into potassium chlorate. Potassium chloride can be legally purchased as salt and although Mr. Sonne posted frustration at being able to buy it, there is no suggestion from the evidence that any “red flags” would be raised if one purchased this salt in large quantities as it is used for water softening. Dr. Anderson testified that potassium chlorate is a restricted chemical substance in quantities over one kilogram and is, therefore, difficult to accumulate, which would explain why Mr. Sonne needed to make it.

[275] It is clear from the evidence that Mr. Sonne had the ingredients to make a potassium chlorate based explosive substance. He had almost three kilograms of potassium chlorate at the time of his arrest; a little over a kilogram in his workshop found at the time of the initial search

and 1.7 kilograms buried in a pail in his backyard that was found after the conclusion of the trial. He also had many possible fuels available to him including aluminum powder. This raises serious questions. However, it is also clear from the evidence of Dr. Anderson, that potassium chlorate can be used as rocket fuel when mixed with a fuel. As already stated, the regulations that prohibit the sale of potassium chlorate in quantities over one kilogram govern the vendor and there is no evidence of any regulations that prohibit the simple possession of potassium chlorate. In any event, breach of a regulation would not assist in determining what Mr. Sonne intended to do with the potassium chlorate.

[276] Most of the fuels that could be used with potassium chlorate would be found in anyone's home and so their presence in Mr. Sonne's home could not suggest they were going to be used for a nefarious purpose. However, 479 grams of aluminum powder in what appeared to be its original container labelled "Alumilite Aluminum Powder" was found in the cupboard under the counter of the lab desk and Dr. Anderson explained how it could be used in combination with the potassium chlorate and other chemicals to create an explosive substance. The label on this jar states that it is ground aluminum used to thicken or extend the volume of aluminate casting plastic and that it is used to make the finished parts heavier and gives them an aluminum look. During a Hacklab chat on May 29, 2010, during a discussion about dust explosions and, in particular, aluminum dust, Mr. Sonne stated that he had some for mixing with epoxy and that it was not to be treated lightly. This could provide an innocent explanation for why Mr. Sonne had aluminum powder. Clearly it was being marketed for legitimate uses.

[277] Ms. Nadeau submitted that Mr. Sonne had advanced to full scale home production of potassium chlorate with a great deal of effort, time and money. There is evidence of three different electrochemical cells that Mr. Sonne made which is detailed in the Chronology. There are photographs of what appears to be a fairly small cell which Mr. Di Luca suggested was likely Mr. Sonne's first. It seems that he then built a much larger electrolysis cell with what appears to be a graphite rod in a yellow bucket lid and likely that is the one that did not work so well; pictures of this were posted and Mr. Sonne posted on the Hacklab chats that he had tried one and it didn't work well as it resulted in bleach. It appears that he then made a third cell which is the version that was in place in the furnace room and was seized by police.

[278] I have considered whether or not what appears to be the largest electrochemical cell, namely the one with a yellow bucket lid, is evidence that Mr. Sonne was ramping up for a larger electrochemical cell. I have concluded that this is not likely the case. There are photographs Mr. Sonne posted to Hacklab on May 18, 2010, that show it assembled but by the time of the search the bottom of the bucket was not located. Although the order of the cells does not really matter, the fact Mr. Sonne experimented with three different cells would certainly suggest considerable effort and time had been expended in experimenting with how to make potassium chlorate. It does not appear, however, that there was a great deal of expense involved with making the potassium chlorate. In fact, in one of the Hacklab chats on May 29, 2010, Mr. Sonne outlined the various costs and claimed to have spent \$160 for the rig to make potassium chlorate, not including the cost of the salt.

Was there a real interest in rocketry or was rocketry an elaborate cover?

[279] It is the Crown's position that all of the chats Mr. Sonne posted about rocketry in May and June 2010 and his decision to join CAR and NAPAS and his email correspondence to National Resources Canada ("NRC") were an elaborate cover and that his real intent was to use potassium chlorate to make an explosive substance.

[280] In the Chronology, I detail all of the posts Mr. Sonne made on the Hacklab chat about making potassium chlorate for rocket fuel that were entered into evidence by the Defence. Although I have no evidence that there were no earlier posts, that would certainly be a reasonable assumption as the posts I do have, for the most part, seem to introduce the topic, rather than continue a dialogue from before.

[281] Although the chats have been admitted to be authentic in that they accurately record what Mr. Sonne and others were saying on the days in question, I have very little evidence from Mr. Supinski corroborating what Mr. Sonne was saying, in that he distanced himself from what Mr. Sonne was doing as expressed in the chats. Furthermore, for reasons already given, I did not find his evidence of assistance in determining what Mr. Sonne's real intentions were.

[282] Ms. Nadeau submitted that there is no evidence of any interest in rockets; no model rockets or model rocket parts were found at the time of the search. D.C. Albrecht testified that in his search of the house and observations of the house he did not find anything that resembled a rocket or that he thought could be made into a rocket. D.C. Ouellette did not see anything related to model rockets on Mr. Sonne's computer. There was, however, nothing in the search warrant that specified searching for items or documents relating to rockets. However, although items related to rockets were not listed in the search warrant as items to be seized, it is reasonable to infer that the police would have seized items related to rocketry had they been present given the search was in part related to explosive substances. They did, for example, seize the hydraulic jack Mr. Sonne had purchased for the purpose of pressing rocket engines. The Defence introduced photographs of the search of the house and garage and it would seem photographs were taken of all of the rooms. There is no other obvious evidence of rocket parts or books on rockets.

[283] Ms. Nadeau also submitted that if Mr. Sonne really intended to build his own rocket he would not start with making the fuel when he had not yet designed and finished a rocket. He wouldn't know the shape or size of the rocket or what size the rocket engine would have to be. However, as Mr. Di Luca submitted, it cannot be assumed that you would build the rocket first and then the motor. It is just as likely you would build the motor first and determine its capabilities before designing the rocket. He also suggested that it could be that Mr. Supinski was working out the aeronautic systems while Mr. Sonne worked on the rocket fuel. The problem with that theory is Mr. Supinski disavowed any knowledge of what Mr. Sonne was doing. Nevertheless, I would not conclude that it is unreasonable for someone with Mr. Sonne's interests to start by making ingredients for the rocket engine first.

[284] The earliest possible reference to hobby rocketry in Mr. Sonne's computer appears to be January 10, 2010, when he created a folder in his bookmark history called "The Chlorates and Perchlorates" which was later moved into a folder created on January 19, 2010 called "Chemistry, Distilling, Rocketry, Energetics". This document relates to the use of electrolysis to make chlorates. The next possible addition is a bookmark for a bucket cell adapter which was added May 2, 2010 which describes a bucket cell adaptor as a standard bucket with a flat bucket lid with holes drilled in and an opening to allow for electrodes, venting, and sampling. This article discusses the use of graphite anodes but there is a picture that shows a cathode made of mesh referred to as "MMO" which is similar to the Ziploc bag found in Mr. Sonne's workshop labelled "TI-MMO". This suggests this article was used by Mr. Sonne for experimenting with his homemade electrochemical cells. Both of these bookmarks related to electrochemical cells but again this begs the question of whether the interest in making chlorates was for the purpose of explosive substances or rocketry.

[285] No photographs possibly related to rocketry were uploaded to Flickr until April 30, 2010, when Mr. Sonne posted a photograph of what appears to be graphite rods and another that was likely his first electrochemical cell. Again this was not specific to rocketry.

[286] It was not until May 29, 2010, when Mr. Sonne bookmarked the Richard Nakka's Experimental Rocketry Site, that there was a bookmark specific to rocketry. However, by the first Hacklab chats in evidence made on May 18, 2010, Mr. Sonne was clearly well into the process of using an electrochemical cell in that his first batch of potassium chlorate of 135 grams was likely made some time in April 2010. Although that potassium chlorate was not pure, Mr. Sonne had successfully used an electrochemical cell to produce potassium chlorate.

[287] The lack of research on the computer, written notes or logs dealing with the chemicals, schematic drawings, and comments on blogs or chats related to the production of potassium chlorate and its connection to an interest in rocketry is at odds with what I would have expected of Mr. Sonne based on the information I have about him. For example, he started a blog for his magnetron experiment, and was clearly active on Hacklab both in chats and emails and he had a Twitter and Flickr account. He posted a picture of the car jack and a sketch of how he proposed to modify it and talked about this on the Hacklab chats. It is also significant that there are no Hacklab chats about designing a rocket or even a dialogue about the fuel; only fairly constant warnings from Mr. Supinski that Mr. Sonne ensure he was doing things properly. I agree with Ms. Nadeau that this all of this is odd given the type of person that Mr. Sonne appears to be. This lack of evidence supports the Crown's theory that Mr. Sonne's expressed interest in rocketry was an elaborate alibi that he developed after he began to produce potassium chlorate.

[288] It is clear that at least on May 17, 2010, Mr. Sonne was attempting to buy 20 kilogram bags of potassium chloride salt. Although he suggested it was for use in water softeners, it is a reasonable inference on the evidence to conclude that he wanted this salt to make more potassium chlorate. He said as much on the Hacklab chats on May 18, 2010. Although I have no evidence as to whether or not there were any chats before this, what Mr. Sonne said during this chat is significant. He stated that he had only started "small scale electrolysis which had worked OK but that the medium scale was not working as well". It is not clear which electrolysis cell Mr. Sonne was referring to by "medium scale", although it was likely the cell using the yellow

bucket lid. On the same date, Mr. Sonne posted on the Hacklab chat that to that point he had “mostly just made cheap bleach.” He made no reference to the first batch of potassium chlorate that he had presumably already made, although he had said that the small scale had worked “OK” which is consistent with the first small cell producing the potassium chlorate that was Mr. Sonne’s first batch.

[289] On May 29, 2010, Mr. Sonne made posts on the Hacklab chat again about making potassium chlorate. He said that he had all the potassium chlorate needed to make motors and that after the current run he was stopping production “since I don’t like having this much of an oxidizer around the house”. A little later he went on to say that he was stopping after “this run as I will have a lot by that point, too much for comfort level”. He went on to talk about the storage magazine buried in his backyard as he was not going to store the potassium chlorate inside. A post on this day just a few minutes later, however, seems to be at odds with this as Mr. Sonne stated that he had only done “a gram or two of this kcl03 and stuff for a characterization test”. At this point, however, what must have been his first batch of 135 grams of potassium chlorate had already been made and he stated that he had “a lot”.

[290] Although I am troubled by these inconsistencies, the fact remains that Mr. Sonne stated in a public chat that he had made a lot of potassium chlorate and that he was stopping after the run that was in place on May 29, 2010. This is consistent with the other two batches found buried in the Home Depot pail in the backyard, one labelled “Batch # 2 June 2010” containing a little over 415 grams of potassium chlorate and the other labelled “Batch # 3 13-June-10” containing a little over 1195 grams of potassium chlorate. Presumably both were made in June.

[291] Ms. Nadeau submitted that Mr. Sonne’s statement on May 29th that he was stopping after that run was clearly not true. I do not accept that submission. With respect to the electrochemical cell found in the furnace room, based on the evidence of Dr. Anderson, it is certainly as likely that the production of potassium chlorate had been completed and the potassium chlorate had been filtered off. This would explain the potassium chlorate found in the furnace room that was still being dried. This is also consistent with the fact that at the time of the search, the filtration apparatus that would be used to filter the potassium chlorate from the electrochemical cell solution was not assembled. I, therefore, conclude that a reasonable inference can be drawn from the evidence that Mr. Sonne’s statement on the Hacklab chat on May 29th that he was stopping after the run that was in place on May 29th was true.

[292] Furthermore, based on the photographs posted on Flickr and what was found at the time of the search, it seems that, for the most part, what Mr. Sonne stated in the public Hacklab chats as to the method of making potassium chlorate is consistent with what he, in fact, was doing in his workshop. Although the Hacklab chats on the subject of rocketry start after Mr. Sonne had already started to make potassium chlorate, they are detailed and provide some support for his position as stated to Detective Bui that he was making potassium chlorate in order to make rocket engines.

[293] When the case was reopened, Ms. Nadeau submitted that the fact that Mr. Sonne had buried three containers of potassium chlorate in a Home Depot pail in his backyard, and then hidden it under military camouflage netting, suggested a nefarious purpose. She also submitted

that the specific method of storage was suggested by military manuals found on Mr. Sonne's computer that were about explosives and not rocket fuel and that the storage method is specific for explosives, not hazardous materials or rocket fuel. She also submitted that Mr. Sonne's failure to tell police about the storage containers during the two years since his arrest countered the Defence argument that he had been open and honest about his rocketry hobby all along.

[294] Mr. Di Luca's submission was that what the police found corroborated what Mr. Sonne stated on the Hacklab chats and that the storage method proved Mr. Sonne's commitment to safety in that potassium chlorate is toxic but not an explosive. He also submitted that the idea that Mr. Sonne should have notified police about the chemicals while facing these charges violates his right to silence and the presumption of innocence. I accept that submission. Mr. Sonne did tell Detective Bui what he was doing with the electrochemical cell. He had absolutely no obligation to advise the police about the storage magazine. Furthermore, for reasons already stated, I reject the argument that the potassium chlorate posed any danger to anyone, beyond the fact that it is a toxic substance.

[295] The Hacklab chats suggest that Mr. Sonne became concerned about the danger of having a large amount of potassium chlorate in his home although there is no evidence from Dr. Anderson that suggests that the electrochemical cell or potassium chlorate on its own could cause an explosion. Nevertheless, if Mr. Sonne had made potassium chlorate for a nefarious purpose and was, as the Crown alleges, using these chats as part of an elaborate cover, it would certainly make absolutely no sense that he would state in a public chat that he was going to put this potassium chlorate in a storage magazine and bury it in the backyard. The ideal cover would have been to say nothing about that and hide the potassium chlorate there. Despite an extensive search of the home and garage over the span of several days at the time of Mr. Sonne's arrest, the police never located this storage magazine. It was only discovered because the Defence introduced the Hacklab chat that referenced it. As Ms. Nadeau submitted, in the Hacklab chats Mr. Sonne expressed sensitivity to the possibility of someone listening in. The fact Mr. Sonne chatted about this storage magazine is very compelling evidence in my view that Mr. Sonne did not intend anything nefarious with the potassium chlorate.

[296] I have already found that I am not satisfied that Mr. Sonne and Mr. Supinski had reached any detailed agreement to make rockets together and to the extent they had discussed it, certainly Mr. Supinski professed not to be aware of the fact that Mr. Sonne was, in fact, making potassium chlorate for the purpose of pressing his own rocket engines. There is, however, some evidence to support Mr. Supinski's evidence that he and Mr. Sonne were going to make a presentation on the subject of rocketry. In the Hacklab chat on May 29, 2010, Mr. Sonne told Mr. Supinski that they should work on a "project/presentation about rocketry and how to follow all the laws and shit, and do it right ... like the different class licences, transport canada authorization for building engines, etc.". On June 20, 2010, during another Hacklab chat with Mr. Supinski, Mr. Sonne commented that "dude we are gonna blow people away with this presentation!" I presume this would have been a presentation for Hacklab members. I accept the evidence of Mr. Supinski, as corroborated by these chats, that at least by the end of May he and Mr. Sonne had discussed doing a presentation on rocketry. Although this could still be part of Mr. Sonne's idea of an elaborate alibi, there was no need to make any alibi this elaborate.

[297] There is no evidence that Mr. Sonne took any steps to actually make rocket fuel, using potassium chlorate or any other substance. The first reference in the evidence to making rocket fuel was on May 29, 2010 when, as set out in the Chronology, Mr. Sonne had a discussion with Mr. Supinski. On that day Mr. Sonne suggested he might spend some time designing a rig that would press tubes of rocket fuel remotely. He asked for information about where to get worm drive gears to make an electrically driven press and someone on the Hacklab chat suggested an electric car jack to retrofit. On June 6, 2010 Mr. Sonne uploaded a photograph of a manual press that was in his workshop to his Flickr account and the following day, June 7th, he uploaded a photograph of an electric hydraulic jack and a schematic drawing which Dr. Anderson agreed could be a sketch of a modified car jack to press rocket motors, to his Flickr account. A twelve volt floor jack was found on the floor of the workshop. On the Hacklab chats, Mr. Sonne said that he bought this to press rocket motors.

[298] There is no evidence from Dr. Anderson that a press would be used in any way to make explosives. However, as he explained, it is necessary to press a rocket motor to ensure it burns properly. Accordingly, this evidence concerning the design, purchase and modification of a press supports an inference that Mr. Sonne had a real interest in making rocket engines with the potassium chlorate that he was making. Although in theory this could still be part of an elaborate alibi, it seems to go well beyond what Mr. Sonne might have decided was necessary to do and chat about if creating an alibi was all that he intended.

[299] Mr. Sonne was first given information about the CAR and NAPAS websites from Mr. Supinski on May 18, 2010. On May 29, 2010, Mr. Sonne asked on the Hacklab chat for Mr. Supinski and stated that he wanted to ask him about the link about the “canadian rocketry thing, and all the regulations”. Mr. Supinski came online and repeated the link to CAR. Ms. Nadeau submitted that it was odd that Mr. Sonne made a point of telling anyone who was listening to the chats as to why he wanted Mr. Supinski and that it would have been easy for someone like him to find these websites. She also queried why Mr. Sonne would not simply pick up the phone, email or text Mr. Supinski if he was looking to him for that information. She submitted that if Mr. Sonne legitimately wanted to join CAR he would have checked the website much earlier. She submitted that Mr. Sonne did this as part of his cover.

[300] Mr. Di Luca referred to the Hacklab chat on June 7th at 18:14 hours when Mr. Sonne was chatting with Mr. Supinski and referred to the CAR website and asked him if he had the right site and stated that he had lost the bookmark for it. Mr. Supinski confirmed that it was and gave him the NAPAS site again. Mr. Sonne created bookmark for both sites at 18:15 hours.

[301] I agree with Ms. Nadeau that it is strange that someone who is computer literate like Mr. Sonne would need to ask Mr. Supinski for these websites three times. One would have expected that Mr. Sonne would have looked at the websites for CAR and NAPAS much earlier. He was inclined to research projects and this is another instance of where the lack of evidence provides some support for the Crown’s theory. However, Mr. Sonne may not have paid that much attention to these websites earlier if he, in fact, did not start working on making rocket engines until May 29, 2010. In any event, I do not know why repeated requests for the websites would be a way of creating an alibi. It would make more sense, if that was Mr. Sonne’s intent, that he would simply join both CAR and NAPAS earlier in May, when on the Crown’s theory, Mr.

Sonne decided he needed an alibi. What is clear is that on June 7th, once he created the bookmarks, he began his email exchange with Mr. Castellano, the president of CAR seeking advice on how to safely manufacture his own rockets.

[302] In his email to Mr. Castellano on June 7th Mr. Sonne stated that he was quite versed in synthesizing the necessary chemicals and that before he even thought of starting to press his own motors and grains he wanted to ensure he stayed within the law. He was told by Mr. Castellano in a responding email that he needed a factory explosive licence to make rocket motors. On June 8, 2010, Mr. Sonne sent an email to NRC asking what he would need to do to get a Factory Explosives Licence as he wished to make his own model rocket motors in “very small quantities”.

[303] Since there is no evidence that Mr. Sonne had done anything more than make potassium chlorate and consider methods for pressing rocket engines, it cannot be said that the email to Mr. Castellano is necessarily late in the Chronology. What is significant, however, is that although Mr. Sonne did not tell Mr. Castellano that he had made potassium chlorate, he was making his intention to press his own rocket motors known both to CAR and the NRC which seems at odds with someone intent on using the potassium chlorate for nefarious purposes. It would not make sense if Mr. Sonne was trying to create an alibi that he would email CAR, and particularly NRC, and tell them about his desire to make rocket engines. This would simply be too risky and, in fact, when Mr. Sonne told Mr. Supinski that he had emailed NRC, Mr. Supinski told him that he should do a background check on himself in a year to see if he showed up on any terrorist lists. These emails are at odds with the Crown’s theory that rocketry was an elaborate cover.

[304] I also find it strange that if rocketry was intended to be a cover, that Mr. Sonne would put as much information on the Hacklab chats as he did. Setting aside the conclusion I have drawn from his public disclosure of the storage magazine, although I accept that Mr. Sonne was smart enough to create such an elaborate alibi, posting detailed chats online in this kind of forum does not seem to be the ideal way of creating an alibi as these are public posts that Mr. Sonne believed could be monitored. There would have been more obvious methods of creating an alibi such as buying some other rocket parts, doing some design sketches, becoming a member of CAR and NAPAS earlier, and that sort of thing.

[305] I have considered the significant quantity of potassium chlorate that was found. Mr. Sonne’s stated intention in the Hacklab chats on June 7, 2010 in making rockets was to launch a video camera and be able to film with it. According to Mr. Supinski they were talking about high powered rockets. I have considered Dr. Anderson’s evidence on this subject as I found his evidence on the use of potassium chlorate as a propellant to be reliable. Dr. Anderson testified that a thousand grams plus of potassium chlorate would indicate either a significant sized rocket body or quite a few rocket motors to supply quite a few small rockets. Obviously he did not comment on the total quantity of almost three kilograms of potassium chlorate that was ultimately found. However, essentially his evidence was that the quantity needed would depend on the size of the rocket motor and he did not suggest he had any familiarity with high powered rockets. Obviously the kind of rocket that Mr. Sonne was talking about is quite different than the model rockets one would purchase in a hobby store. There is no evidence to suggest that almost three kilograms of potassium chlorate is a ridiculous amount for one or more high powered

rockets that could launch a video camera or, for example, that the potassium chlorate had a limited lifespan. It is impossible to conclude on the evidence before me that the amount of potassium chlorate that Mr. Sonne had accumulated was simply too much for any plan to legitimately use it as an ingredient for rocket fuel.

[306] Ms. Nadeau submitted that after the expense and effort Mr. Sonne made to get almost two and one half kilograms of ammonium nitrate, he decided to switch to making potassium chlorate, both being strong oxidizers. This begs the question, however, why Mr. Sonne would even bother as he already had a substantial amount of ammonium nitrate which combined with any fuel would create an explosive substance. The ammonium nitrate with aluminum powder would result in an enhanced blast formulation and although Dr. Anderson was not prepared to say what level of enhancement there was, he said it would be a lot more than one kilo of TATP or HMTD and in a confined or semi-confined area, would do a lot of damage. It begs the question of why, if Mr. Sonne intended to make explosive substances and he had this much of ammonium nitrate, not to mention urea, he would go to all this trouble to make potassium chlorate, if it was not for the purpose of making rocket fuel.

[307] I have also considered whether or not Mr. Sonne was in breach of any regulatory offence by making potassium chlorate. He is not charged with any such offence, but it does become relevant as to whether or not he was trying to stay on the right side of the law. In that regard, the distinction made by Mr. Di Luca is an important one. Mr. Sonne only had potassium chlorate in his possession and he had started working on some designs as to how to mix potassium chlorate with a binding agent to press and make the actual rocket engine. Potassium chlorate on its own would not be rocket fuel or a rocket engine. It would need to be mixed with a fuel such as sugar and something to bind the two together to allow the solid fuel to be pressed into the desired shape. There is no evidence that any of this had ever been done save for one comment Mr. Sonne made online as to his attempt to determine how volatile potassium chlorate was. Without further evidence, in my view that comment would not be sufficient to form the basis of a conviction on count 4. It also does not appear that Mr. Sonne was in breach of any provincial regulations as he had not yet taken any steps to make rocket motors as such. There was no evidence before me that simple possession of potassium chlorate is an offence of any kind.

[308] Ms. Nadeau submitted that Mr. Sonne knew in late January 2010 that he needed a licence to manufacture rocket fuel and relied on the fact that on January 7, 2010 he created a bookmark for the Precursor Control Regulations. She argued that this bookmark was, in fact, the same reference that Mr. Supinski was telling Mr. Sonne about in May and June 2010 and that this strengthened the Crown's argument that Mr. Sonne knew all along that this regulation existed and that the rocketry was simply a cover. As I discuss in Schedule "B" however, this is not a document relevant to potassium chlorate or potassium permanganate as an explosive but rather deals with the use of potassium permanganate to make drugs governed by the *Controlled Drugs and Substances Act*. It was likely obtained in connection with some research Mr. Sonne did around the time he decided to buy potassium permanganate and was not obtained as a result of any search for its use as an explosive.

[309] Ms. Nadeau also argued that even though Mr. Supinski warned Mr. Sonne about needing a licence, he proceeded to buy a 20 kilogram bag of salt on May 18, 2010. Although the Crown failed to prove this purchase, the fact Mr. Sonne posted a picture of such a bag does suggest he bought this quantity then. However, although Mr. Supinski was warning Mr. Sonne, as I have already found, Mr. Sonne had not started the process of making the actual rocket fuel, only one of the ingredients. There is no dispute that it is only once you start to combine potassium chlorate with a fuel that you need a licence.

[310] Mr. Di Luca submitted that if Mr. Sonne's intention was only to make potassium chlorate and he had not yet formed the intent to mixing potassium chlorate with a fuel to make rocket fuel, it would not matter if I concluded that rocket fuel is an explosive substance. Given my conclusion that rocket fuel for a recreational rocket is not an explosive substance, it is not necessary for me to consider this distinction. Had that been necessary that distinction would have been difficult to make. Mr. Sonne was very clear in his statement to Detective Bui and in the Hacklab chats that the reason he was making potassium chlorate was for the purpose of making rocket fuel for a rocket engine. In fact, he had begun to design the press for making a rocket engine. Although there is no evidence that he had taken any steps to actually make a rocket engine, he was very clear in his chats that the potassium chlorate was for rocket fuel.

[311] I have already commented on the fact that the kind of research and documentation that I would expect from Mr. Sonne if he were proceeding to research and then make potassium chlorate appears, for the most part, to come after Mr. Sonne had, in fact, made potassium chlorate. This provides some support for the Crown's theory that the expressed interest in rocketry was intended as a cover. I have already set out my reasons, however, why in certain respects, in light of the evidence, the Crown's theory of an alibi does not make sense. Furthermore, considering the extent to which Mr. Sonne was posting and chatting about this online, it would certainly amount to a very elaborate alibi. It does appear that Mr. Sonne's interest in rocketry came late and that he immediately moved to an interest in making fuel for high powered rockets. However, the Hacklab chats provide a fair amount of credence to the fact that Mr. Sonne was legitimately pursuing the necessary process to press rocket engines. He had the potassium chlorate, he had some of the other ingredients he would need such as wax, he had worked out a way of pressing the engines using an electric car jack and he had researched what he needed in terms of licencing. Once he knew he needed a licence, there is no evidence he continued. His statement to Detective Bui is further evidence of a legitimate interest in rocketry. Mr. Sonne did not expressly mention potassium chlorate but he did readily acknowledge how the electrochemical cell that was found in his furnace room worked and told Detective Bui that its purpose was for making rocket fuel. In considering all of the evidence, there is some support for concluding that that statement was true.

[312] Considering all of the evidence, and for these reasons I have stated, I find that a reasonable inference can be drawn that Mr. Sonne's expressed interest in amateur high powered rockets was real and that he was making potassium chlorate for use as an ingredient for rocket fuel in a rocket engine.

[313] For these reasons the Crown has not proven beyond a reasonable doubt that Mr. Sonne was making potassium chlorate as an ingredient for an explosive substance and that he is guilty of count 4 as it relates to potassium chlorate.

Findings of fact/conclusion – Count 4 – Ammonium Nitrate

[314] Count 4 also alleges possession of ammonium nitrate and to prove this aspect of the charge the Crown must prove beyond a reasonable doubt that Mr. Sonne intended to make an explosive substance using the ammonium nitrate found in his workshop, namely an oxidizer-based explosive substance.

[315] Mr. Di Luca's primary position is that the purchase of ammonium nitrate in cold packs by Mr. Sonne was the buying of a precursor for an explosive substance to raise red flags. Mr. Sonne bought 32-33 cold packs and we do not know whether or not he bought 26 of them all at once or not as we have only the evidence of the purchase of six bought in January and March 2010, which is not gardening season. Mr. Di Luca submitted that the fact that Mr. Sonne then put the ammonium nitrate into a jar and came up with an alternative use for it as a fertilizer does not undercut this.

[316] However, although arguably Mr. Sonne could have used the fact that he was able to get almost two and a half kilograms of ammonium nitrate without setting off any alarm bells in a presentation criticizing the security of the system, as I have already stated, Mr. Sonne did not tell Detective Bui that he bought ammonium nitrate to test the system. He told Detective Bui that it was to fertilize his garden.

[317] Ms. Nadeau submitted that I should consider the reasonableness of buying over 30 cold packs to extract ammonium nitrate for one's garden. Mr. Sonne went to the trouble of removing the ammonium nitrate from the cold packs and then put the contents in a specially marked container in his lab as opposed to somewhere with gardening equipment or other fertilizers. Ms. Nadeau also referred to the fact that even though at the time of the search it was June, the fertilizer was still sitting in Mr. Sonne's lab desk.

[318] Based on the evidence, since two cold packs cost Mr. Sonne \$9.99 that would mean he spent approximately \$160 to obtain this quantity of ammonium nitrate. This would make for pretty expensive fertilizer. Although I have found that Mr. Sonne had an interest in gardening, I agree with Ms. Nadeau that his stated intention to use the ammonium nitrate for fertilizer does seem odd given the expense, not to mention the effort to extract the ammonium nitrate from the cold packs. However, the evidence suggests that Mr. Sonne and his wife enjoyed a very comfortable lifestyle, living in Forest Hill, and so there is no reason to believe that Mr. Sonne would not have had the financial resources to make such a purchase. He certainly appears to have had sufficient financial resources to pursue many interests and hobbies. I have already referred to the other evidence that supports the fact that Mr. Sonne had a legitimate interest in gardening.

[319] As for the effort involved, I have already reviewed the evidence of Dr. Anderson who testified that ammonium nitrate is a regulated chemical in quantities above one kilogram and that

he was not sure if it was commercially available apart from cold packs and that this evidence corroborates what Mr. Sonne told Detective Bui about why he bought the cold packs to get the ammonium nitrate for use as a fertilizer in his garden. Mr. Sonne had time on his hands, at least in the weeks leading up to his arrest and so the time to extract the ammonium nitrate would likely not have been an issue.

[320] Although almost two and a half kilograms of ammonium nitrate seems like a lot for use as a fertilizer, I have no evidence to suggest that it is an inordinate amount as compared to any garden Mr. Sonne may have had. Dr. Anderson was not able to comment on the quantity of ammonium nitrate that Mr. Sonne had, as to him a lot would be a ton. As I have already stated, Mr. Sonne also had urea which he claimed he was using for fertilizer and it, along with the ammonium nitrate, was in the same cupboard as the hydrogen peroxide that was commercially labelled as a fertilizer. I have also considered it possible that the potassium nitrate could have been intended as a fertilizer.

[321] There is no evidence to suggest that as fertilizers all of these products would work in the same fashion with all types of plants and so I cannot conclude that all these products might not be useful as fertilizer. In fact, Mr. Sonne told Detective Bui that if he looked in his yard he would see how he had various plots of vegetables laid out and that each one of those was to be fertilized with a specific fertilizer so that he could see the difference it made for yet another paper or just his own edification. That would support an inference from the evidence that Mr. Sonne might have had more than one type of fertilizer.

[322] I have already reviewed the evidence of what Mr. Sonne told Detective Bui about the ammonium nitrate and the discussion about this chemical on the Hacklab chat on June 8, 2010. Although Mr. Sonne claimed on that chat to only have a kilogram of ammonium nitrate, when he presumably had substantially more than this, he stated that he had obtained the ammonium nitrate from about 30 cold packs, which is consistent with the evidence of Dr. Anderson. Despite the inaccuracy in the quantity, this chat begs the question of why Mr. Sonne would make this comment at all on a public forum if he had the ammonium nitrate for a nefarious purpose.

[323] Mr. Sonne's possession of a significant quantity of ammonium nitrate is of concern and is some evidence of intent to make an explosive substance using this chemical given the effort and expense to obtain this quantity. However, I find that Mr. Sonne's statement to Detective Bui that his intention was to use it as a fertilizer, combined with the fact that he referred to his possession of this substance on a public Hacklab chat, and given his sensitivity to those types of communications being monitored, raises a reasonable doubt with respect to this count. I am not satisfied beyond a reasonable doubt that Mr. Sonne had the ammonium nitrate in his possession in order to make an explosive substance.

[324] For these reasons the Crown has not proven beyond a reasonable doubt that Mr. Sonne is guilty of count 4 as it relates to ammonium nitrate.

Section 464 of the *Criminal Code* – Count 5 – Counselling to commit mischief not committed

[325] Turning to count 5, Mr. Sonne is charged with counselling to commit an indictable offence that was not committed. It is the position of the Crown that tweets made by Mr. Sonne and pictures that he posted to Flickr on June 18 and 19, 2010 counselled persons to commit the offence of mischief by scaling or pulling down fencing for the G20.

[326] Section 464 of the *Code* reads as follows:

Counselling offence that is not committed

464. Except where otherwise expressly provided by law, the following provisions apply in respect of persons who counsel other persons to commit offences, namely,

- (a) every one who counsels another person to commit an indictable offence is, if the offence is not committed, guilty of an offence and liable to the same punishment to which a person who attempts to commit that offence is liable; and
- (b) every one who counsels another person to commit an offence punishable on summary conviction is, if the offence is not committed, guilty of an offence punishable on summary conviction.

[327] Section 22(3) of the *Criminal Code* defines “counsel”:

For the purposes of this Act, “counsel” includes procure, solicit or incite.

What must the Crown prove to establish the actus reus of this offence?

[328] I turn then to what the Crown must establish in order to prove the *actus reus* of this offence.

[329] In *R. v. Sharpe*³², McLachlin C.J. stated that “counsel” in the criminal law context means “actively inducing”. The question is whether the actions of the accused, viewed objectively, must be seen as actively inducing or encouraging the described offences. This is the *actus reus* component of the offence of counselling an indictable offence that is not committed.

³² [2001] 1 S.C.R. 45, at para. 56.

[330] McLachlin C.J. went on to provide some helpful commentary on the distinction between descriptions of illegal acts and counselling illegal acts in the context of the offence of counselling sexual activity with a person under eighteen years of age at para. 57:

Without suggesting that the distinction is easy to apply in practice, a purposive approach appears to exclude many of the alleged examples of the law's overbreadth. For instance, works aimed at description and exploration of various aspects of life that incidentally touch on illegal acts with children are unlikely to be caught. While Nabokov's *Lolita*, Boccaccio's *Decameron*, and Plato's *Symposium* portray or discuss sexual activities with children, on an objective view they cannot be said to advocate or counsel such conduct in the sense of actively inducing or encouraging it. Nor would the section catch political advocacy for lowering the age of consent because such advocacy would not promote the commission of an offence but the amendment of the law. Likewise, an anthropological work discussing the sexual practices of adolescents in other cultures and describing such adolescents as well-adjusted and healthy would not be caught because it would be merely descriptive as opposed to advocating or counselling illegal acts.

[331] In *R. v. Hamilton*,³³ Fish J. for the majority simply described the *actus reus* of the offence as "the deliberate encouragement or active inducement of the commission of a criminal offence" (para. 29). It is important to note that "deliberate encouragement" does not mean that the encouragement must be intended by the counsellor. This would introduce a *mens rea* element to the *actus reus* component of the offence. If "deliberate encouragement" were taken to mean that the counsellor must have intended to encourage someone to commit an offence, there would be two *mens rea* components to the offence: the intention to encourage the commission of the offence, and the intention or conscious disregard of the unjustified risk that the offence counselled was likely to be committed as a result of the accused's conduct. Indeed, the trial judge in that case³⁴ described the offence as a "dual *mens rea* offence" but Justice Fish expressly held that the "dual *mens rea*" analysis should not be used. He stated at para. 20, "In my respectful view, a judicial determination of the fault element for counselling should not be made to depend on whether the required *mens rea* is characterized as 'dual'."

[332] Perhaps the most helpful description of the *actus reus* of this offence is another passage from the *Hamilton* case interpreting the phrase "deliberate encouragement", where at para. 15, Fish J. held, "The *actus reus* for counselling will be established where the materials or statements made or transmitted by the accused *actively induce* or *advocate* – and do not merely *describe* – the commission of an offence". [Emphasis in original]

³³ [2005] 2 S.C.R. 432.

³⁴ *R. v. Hamilton*, 2002 ABQB 15 at para. 39.

[333] The question, then, is not whether the accused deliberately encouraged a person to commit the offence or intended to induce the commission of an offence but whether the communication can be seen as actively inducing a person to commit the crime. As a result, the fact that Mr. Sonne told Detective Bui that he did not intend that anyone act on these tweets, and my finding that he personally did not intend to do any damage to the G20 fences or cause any damage at the G20, is not relevant at this stage of the analysis.

[334] This understanding of the *actus reus* of the offence was recently applied by the Court of Appeal in *R. v. Jeffers*.³⁵ In that case, the accused put up posters showing a photograph of a city counsellor with the word “murder” written on it. The court characterized the components of the offence as follows at para. 24:

Thus, to establish Mr. Jeffers' guilt, the Crown had to prove that: (a) an ordinary reasonable person viewing the poster objectively would take it as an invitation to kill Councillor Thompson; and (b) Mr. Jeffers either intended or knowingly counselled Councillor Thompson's murder while aware of the unjustified risk that murder was likely to be committed.

[335] In summary, I conclude that in order to establish the *actus reus* of this offence the Crown must prove beyond a reasonable doubt that the tweets by Mr. Sonne, viewed objectively, would actively induce a person to commit an indictable offence, in this case the offence of mischief. Mr. Sonne's intent in making the tweets is irrelevant. Instead, the focus is on whether an ordinary reasonable person viewing the tweets objectively would take them as an invitation to commit the offence of mischief.

Findings of fact/conclusion - Count 5

[336] The crux of the Crown's case with respect to count 5 are the tweets Mr. Sonne posted to his Twitter account on June 18 and 19, 2010 with the #g20 report hashtag, some with links to photographs on Flickr. I have set those out verbatim in the Chronology. The photographs posted to Flickr include a close-up of the G20 fencing material and Mr. Sonne stated in the tweets that there was a design flaw in the fence, he referred to the fact that the holes in the fence were small and that tree steps for climbing trees or big bolts could be used to allow someone to get a good grip on the fence to go up or pull down the fence. He posted a picture of the tree steps.

[337] The first tweet on June 18th is at 10:35:42 p.m. and refers to the tree steps that would fit the smaller grid fence. Given how this tweet is worded, it could be a response to a tweet that is not in evidence. The next two tweets on that day are at 10:37:28 and 10:37:44 p.m. and because they are so close in time are likely one comment made by Mr. Sonne without an intervening tweet from someone else. These tweets likely refer back to the tree steps and state that they could

³⁵ 2012 ONCA 1.

probably be fabricated cheaply and quickly from bolts from Home Depot or Rona and repeat the fact that they would help people get a good grip on the fence for bringing it down. Again, it could be that these two tweets are in response to a tweet or tweets that are not in evidence.

[338] On June 19, 2010 Mr. Sonne posted further tweets concerning the fence at 12:28 and 12:44 p.m. The first tweet, again, could be a response to a tweet that is not in evidence given the way it is worded. The second tweet follows about 16 minutes later and so again, there could have been intervening tweets not before the Court.

[339] Ms. Nadeau submitted that the purpose of these tweets was to facilitate the commission of the offence of mischief in that the conversation was clearly about design flaws and ways in which the fence could be pulled down or scaled. She argued that the only reasonable inference to draw was that this information was posted so someone would take advantage of it. It was a public forum and a particular interest group was tweeting about the G20. Mr. Sonne knew people were intending to disrupt the G20 and had referred to the potential for riots at the G20. He was aware that people involved with the TCMN were intent on attending the Summit and protesting and not just in a peaceful way. Mr. Sonne had cautioned people with respect to the Security Culture handbook.

[340] Ms. Nadeau submitted that Mr. Sonne's interest in countersurveillance is not an explanation for the posts that he made and I accept this submission. As Mr. Supinski testified, at most you might publically identify that there was a security flaw, not how the flaw could be taken advantage of, and that to do so would be irresponsible. Ms. Nadeau argued that there is no other reason to make these posts unless Mr. Sonne was trying to incite someone to act upon them. Most of these submissions, however, in my view go to the *mens rea* element of the offence.

[341] Dealing first of all with the tweets that are before the Court and the photographs posted to Flickr along with the comments associated with those photographs, I conclude that Mr. Sonne described how the offence of mischief could be committed. The tweets very clearly pointed out that there was a design flaw in the G20 security fence, in that the holes in the fence were small enough that tree steps or bolts could be attached to the fence and used to scale the fence or get a grip on the fence to pull it down. However, there is no tweet or comment that in my view actively induced or advocated that persons commit the offence by using tree steps or bolts to pull down or scale the fence. There is, for example, no statement that suggests that taking advantage of the design flaw in this way should be done. As Charron J. stated in *Hamilton* (she dissented on the *mens rea* element not the *actus reus* element) at para. 74:

...the scope of targeted activity is not extended to the *mere possibility of planting a seed in the recipient's mind*; it is limited to those communications that are *likely to cause that seed to sprout*, creating a resolve to commit the crime. It is only then that the potential risk justifies the criminal prohibition. However, it is well established that it is not necessary that the person counselled be in fact persuaded. [Emphasis added.]

[342] Elsewhere, at para. 76, Charron J. added that “it is not sufficient that the communication simply raise the possibility of affecting its recipient; it must *actively seek to persuade* that person to commit the crime.” [Emphasis added.]

[343] In this case, the tweets that are before the Court described how you would go about committing the offence of mischief in connection with the G20 security fence but I find that Mr. Sonne did no more than perhaps plant a seed. There is nothing in the tweets before the Court or the pictures that were posted that actively sought to persuade anyone to scale or pull down the G20 fence.

[344] Even if I had concluded otherwise on the tweets before the Court, I would have to consider the impact of the Crown’s concession that it was unable to retrieve all the tweets made by other individuals before and after those made by Mr. Sonne. In particular, as I have stated, there may have been tweets responding to Mr. Sonne’s tweets, which are not in evidence. It is the position of the Defence that missing tweets could change the context of what was stated by Mr. Sonne and must result in his acquittal of this charge in any event.

[345] In this regard, the Defence relies on the decisions of *R. v. Ferris*³⁶ and *R. v. Hunter*.³⁷ In *Hunter*, Goudge J.A. summarized the problem of missing context as follows at para. 19:

In my view, Sopinka J.’s reasoning is anchored in the important role that context can play in giving meaning to spoken words. Where an overheard utterance is known to have a verbal context, but that context is itself unknown, it may be impossible to know the meaning of the overheard words or to otherwise conclude that those words represent a complete thought regardless of context. Even if the overheard words can be said to have any relevance, where their meaning is speculative and their probative value therefore tenuous yet their prejudicial effect substantial, the overheard words should be excluded.

[346] In *Hunter*, the Crown sought to call a witness who overheard the accused speaking with his lawyer in an open area of a courthouse. That witness overheard the accused say “I had a gun, but I didn’t point it.” The witness acknowledged that there might have been conversation between the accused and his lawyer before and after the overheard utterance. The Court of Appeal found that the accused may have meant a number of things, depending on the context. For example, he may have said, “I could say I had a gun, but I didn’t point it, but I won’t because it is not true”, or “What if the jury finds I had a gun but I didn’t point it – is that aggravated assault?” The court excluded the evidence, finding at para. 21, “Since its meaning is highly speculative, its probative value is correspondingly tenuous. However, the substantial prejudicial effect is obvious.”

³⁶ (1994), 149 A.R. 1 (C.A.) A.J. No.19 at para 27; aff’d [1994] 3 S.C.R. 756.

³⁷ (2001), 54 O.R. (3d) 695 (C.A.).

[347] Similarly, in *Ferris*, a police officer overheard a fragment of a conversation while the accused was on the telephone. The officer heard the accused say, "I've been arrested", and later, "I killed David". He admitted that he heard conversation before, after, and in-between the two sets of words he heard. The Court of Appeal excluded the evidence, finding that "because the Crown case makes it clear words were spoken before and after, and the utterance was incomplete, it is impossible to ascertain the meaning of the words." [Emphasis in original.]

[348] The Defence submitted that, in this case, it was not a fragment of a verbal conversation that was overheard but, instead, a fragment of an online dialogue that was captured. The tweets were made with the hashtag #g20report and it is common for conversations to emerge along a hashtag. However, in this case, as the Defence submits, the record may be inadequate to contextualize the relevant tweets and establish what, if anything, was said before or after the tweets in question made by Mr. Sonne.

[349] Given the way the tweets are worded and the fact there are these gaps where there could have been other tweets not before the Court, it is possible, for example, that Mr. Sonne was responding to a single person, pointing out what he perceived to be a design flaw in the fence and how easily it could be taken advantage of. For example, as the Defence submitted, had a tweet appeared immediately prior to Mr. Sonne's tweets along the lines of "that cheap-looking fence doesn't look so hard to climb to me" then the tweets by Mr. Sonne would lose much of their incriminating character. Certainly the context of what Mr. Sonne stated could well change if there were other tweets not before the Court that he was responding to.

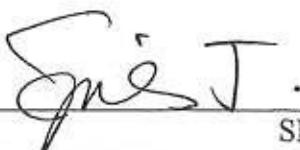
[350] For these reasons I conclude that even if the tweets before the Court could result in the Crown establishing the *actus reus* of the offence, the fact the Court does not necessarily have the entire dialogue would require an acquittal on count 5 in any event.

[351] For these reasons it is not necessary for me to consider the *mens rea* element of this offence.

DISPOSITION

[352] Mr. Sonne would you please stand.

[353] For the reasons I have given I find you not guilty of all five counts set out in the indictment.



SPIERS J.

SCHEDULE "A"

Chronology

Note: The entries that were found to be particularly relevant have been underlined and on some occasions findings of fact have been included which are italicized.

DATE	DOCUMENT/EVENT
Sept. 23, 2008	Two graphics were created on Mr. Sonne's computer in his pictures folder of a map of the Gulf of Mexico area, one purportedly showing refineries and the other oil platforms.
Oct. 7, 2008	The calendar associated with Mr. Sonne's user account on his computer had an entry for a SectOr conference in Toronto from October 7, 2008 to October 9, 2008. <i>There is no evidence as to whether or not Mr. Sonne attended this conference, although this would suggest an intention to do so.</i>
Jan. 1, 2009	Mr. Sonne uploaded a torrent file called the "Security Guide for Activists" (this is the same document which is referred to in the evidence as " <u>Security Culture: A Handbook for Activists</u> ") which he described as a handbook for activism; a file called "Assassination Politics" and a file called "Setting Fires With Electrical Timers PDF Earth Liberation Front" to The Pirate Bay. He commented: " <u>Please, educational purposes only ...don't be one of these idiots that goes out and hurts people. Support Freedom of Speech!</u> " Schedule "B" sets out a summary of these files.
Jan. 5, 2009	As set out in Schedule "B", a large number of documents were first created on this date on Mr. Sonne's computer.
Feb. 1, 2009	Mr. Sonne received an email from the student activist network (SAN) welcoming him to their mailing list ("SAN Mailing List").
Late Feb. 2009	Mr. Sonne commenced his Toronto Goat Blog by blogging about his intention to build a Magnetron (the Wave Guide). He stated that he had just written the CISSP exam and had a lot more free time on his hands, that boredom was creeping back into his life and that he wanted to do something a "little dangerous" but that serious thought had gone into safety and protection, that he was not a novice in this area and had an education in matters of high voltage, microwaves and wave guide designs. Mr. Sonne solicited contribution of parts that he needed from those who might read his blog. At the end of the first blog he asked the questions: "How far, how easily, how cheaply and how much energy can be focused on a target using of the shelf gear? <u>Can a dude in a garage make a cheap device capable of burning out expensive communication systems from safe, convenient distances? How vulnerable are satellites?</u> Can common magnetrons have their geometry modified to take them to higher frequencies, or if not, what could an average "hacker" fab themselves?"

	The blogs that follow detailed the steps that Mr. Sonne took to build a wave guide and include references to advice from Hacklab members. As part of the process Mr. Sonne blogged that he picked up a powerful soldering iron.
Feb. 22 & 23, 2009	Files of two articles and some schematics relating to the wave guide were created on Mr. Sonne's computer.
Feb. 25, 2009	Mr. Sonne blogged on his Toronto Goat blog that he turned on the magnetron and nothing happened; the chocolate didn't even seem to melt.
Feb. 26, 2009	<u>Mr. Sonne blogged on his Toronto Goat blog that when the magnetron was turned on he was surprised to "hear a loud rushing noise from upstairs ... I had left my stereo on. Definitely some interference there!"</u>
Mar. 1, 2009	Mr. Sonne blogged on his Toronto Goat blog about the essay titled "Assassination Politics" by Art Bell, which appears to be one of the files he uploaded to The Pirate Bay on January 1, 2009. Mr. Sonne sets out an extract from the essay which he described as a "gem" and stated "Just for shits and giggles, let's see if we can think about how to implement this in our day and age." <i>This is an example of what could be considered a taboo publication that Mr. Sonne had an interest in reading. His comment about the article does not suggest that he took the ideas in this publication seriously.</i>
Mar. 4, 2009	Mr. Sonne blogged on his Toronto Goat blog that he passed his CISSP exam.
Mar. 20, 2009	<u>Mr. Sonne blogged on his Toronto Goat blog that he was a member of this "very cool thing called Hacklab.to." He referred to the fact that two members of Hacklab got a "busted laser etcher" to work and how they had posted a blog of this. He described it as a "mothafuckin' tour-de-force of hackery. It doesn't get too much better!"</u>
Apr./May 2009	Mr. Supinski picked up a copy of the Linux Journal magazine which had an article on how to build a Linux high powered rocket. The article sets out how to use open sources on the Internet for software and hardware designs to make your own rocket.
Apr. 2, 2009	Mr. Sonne blogged on his Toronto Goat blog that he was a little annoyed by cops in general and especially when they have tasers. <u>He asked if anyone had a taser so he could see if there is a way to construct a taser-proof or taser-resistant shirt and pants that could be handed out at rallies and demonstrations eliminating being shot with a taser as a concern.</u> A few blogs follow with some ideas on this subject and it appears Mr. Sonne made some attempt at making a fabric that could be used for this purpose.
May 10, 2009	Mr. Sonne tweeted "fuck the tamils, get off my fockin' [sic] roads you pricks".
May 11, 2009	Mr. Sonne blogged that that day he would start the "microwave/herf/death ray experiments again: yay money."

	Mr. Sonne tweeted that he was vaguely disappointed there were no Tamil protests downtown and that "I like messing with protesters".
June 21, 2009	Mr. Sonne's final blog on his Toronto Goat blog with respect to the magnetron/wave guide is headed "No Magnetron Death Ray" and detailed why he had "shelved" the idea for now. He stated "I know thermal fax paper will ...turn black when exposed to the ones in my kitchen microwave. But it's just not working with the rig in the garage. And, inexorably, I've arrived at this conclusion: <u>It is not a simple matter to turn a microwave into a "death ray"</u> or something that will mess things up. Duh. I'll store the rig away if any other ideas come up in the future, but this idea is flat-lined for now. <u>Might be good for causing interference in the -2.4 GHz area, but that's about it.</u> "
June 22, 2009	Mr. Sonne posted 16 photographs of antennas on his Toronto Goat blog and his Flickr account. He asked if anyone knew what frequencies the antennas were and what type of signals/modulation they use.
June 26, 2009	The file called "Metro Toronto Police Frequencies" as of March 25, 1995 was created on Mr. Sonne's computer. D.C. Ouellette confirmed these are radio frequencies and codes for police.
July 1, 2009	Mr. Sonne uploaded maps of US nuclear sites to The Pirate Bay.
July 29, 2009	Mr. Sonne attended the DefCon conference in Las Vegas.
Aug. 15, 2009	The final blog on the Toronto Goat blog is headed "Chemically Removing Thin Plastic Cases". It includes photographs of a proximity key card and a PayPal token that Mr. Sonne stated he got at the DefCon conference and had soaked in methylene chloride solvent. At the time of the search, on the bulletin board above the workbench, the police found a plastic bag containing two plastic pieces labelled "tokens removed using methyl chloride August 15, 2009".
Aug. 16, 2009	Mr. Sonne uploaded a file titled "The Turner Diaries" onto The Pirate Bay.
Sept. 2009	Ontario confirmed it was holding the G8/G20 Summit to be held in Canada.
Sept. 3, 2009	A file on Mr. Sonne's computer was created for a document that had Toronto Police radio codes and terms.
Sept. 20, 2009	In response to a comment on The Pirate Bay torrent site re US nuclear sites, Mr. Sonne stated "We have all been flagged by the cia, fbi and homeland security as possible terrorists..." and that " <u>the second they start throwing us in jail for posting stuff like this is the second I arm up and start the revolution.</u> "
Sept. 22, 2009	Mr. Sonne ordered a book from the Amazon online bookstore, titled " <u>Ragnar's Guide to Home and Recreational Use of High Explosives</u> "; see Schedule "B" for summary. Five graphics were created on Mr. Sonne's computer in his pictures folder of maps of the United States each titled "refineries, oil and gas production, rail and freight traffic, nuke, bio, chem"; the first with the additional label

	<p>"nuke.routes.sign.rail", the second with the additional title "chemical.weapons" showing chemical depots, the third with the additional title "bio.labs", the fourth with the additional title "USgas" showing a map titled: "National Natural Gas Pipeline Network 2000" and the fifth with the additional title: "Texas_freight_traffic".</p> <p><u>Mr. Sonne uploaded maps of "bio. chem and nuclear sites in USA" onto The Pirate Bay. Presumably these were some or all of the five maps created on his computer on this date.</u></p>
Sept. 30, 2009	<p><u>Mr. Sonne uploaded a file titled "Ragnar's Guide to Home and Recreational use of High Explosives" onto The Pirate Bay. Presumably this was the book he had bought from Amazon. He commented "Rumour has it this book is out of circulation. I don't believe it's illegal." He uploaded a photograph onto his computer of the first page of Chapter 6 from this book "Ammonium Nitrate".</u></p>
Oct. 2009	<p>The "MiniSoOnCon 2009" conference hosted by "hackerspaces" was held in the Toronto-Hamilton-Niagara region. <u>Mr. Sonne was listed on a "wiki" website as a speaker at this conference for a 20-minute talk entitled "RF Countersurveillance / A primer on monitoring police and security frequencies using a trunk-tracking scanner, and how it can assist in penetrating a target".</u></p> <p><i>Apart from a calendar entry on Mr. Sonne's user account for this conference there is no other evidence that Mr. Sonne attended this conference, but it is reasonable to infer that he made his presentation on this topic as there was a document with this title which appears to be speaking notes.</i></p>
Oct. 6, 2009	<p><u>Mr. Sonne had a calendar entry on his computer for a SecTor conference at the Metro Toronto Convention Centre. There is no evidence as to whether or not he attended the conference but clearly he intended to.</u></p>
Nov. 4, 2009	<p><u>Mr. Sonne sent a mass email to the members of the Hacklab discussion group on the subject of "tickling the dragon". He stated in part as follows:</u></p> <p style="padding-left: 40px;">"... I feel in a <u>civilly disobedient mood, but what's new about that</u> ... In any case, I got to thinking that sometimes an agent provocateur can be a handy thing. Provoke the gov't & security forces into some kind of response that will blow up in their face later, etc.</p> <p style="padding-left: 40px;">To this end, what could we create that either: a) software or b) hardware that meets the following requirements: a) that would piss the people and gov't off; b) <u>almost guaranteed to be illegal right off the bat</u> and c) <u>relatively morally 'clean'</u>.</p> <p style="padding-left: 40px;"><u>...Either you're free to traffic in the worst shit imaginable or you're not free at all.</u></p>

	<p>...The gov't ought not to expect that they can pass stupid laws that will be obeyed – because we'll make them too hard to enforce."</p>
Nov. 25, 2009	<p><u>Mr. Sonne had a calendar entry on his computer for presenting a RF CounterSurveillance presentation at TASK. Although there is no other evidence that Mr. Sonne made this presentation, it is a reasonable inference that he did as he presented on the same topic in October 2009 at the MiniSoOnCon 2009 conference and speaking notes on this subject were found on his computer.</u></p>
Dec. 2009	<p><u>Toronto is announced as the location for the G20 event following the Summit in Huntsville.</u></p>
Dec. 9, 2009	<p>Mass email to SAN Mailing List received by Mr. Sonne on the subject of G8/20 callout to gather in Toronto from June 25 - 27, 2010, the dates of the Summit. It stated that the G8/20 was a "symbol of the ecological destruction, economic havoc and social injustice that has primarily hit people of colour and indigenous people; women and queer folk; unemployed and the underemployed.</p> <p>The call is for those that organize against these injustices every day: "To come together. To teach. To learn. To further build a movement."</p>
Dec. 10, 2009	<p>Mr. Sonne uploaded a file titled "TSA Screening Manual", an airport security manual, onto The Pirate Bay.</p>
Dec. 11, 2009	<p><u>Mr. Sonne uploaded a file titled "TrueCrypt6.3a" onto The Pirate Bay. It was not proven that this file or information was used to encrypt Mr. Sonne's computer although there are two files on Mr. Sonne's computer that Mr. Letch is still trying to access.</u></p>
Dec. 14, 2009	<p>Mr. Sonne was engaged in a Freenode chat with someone by the name of Ojacobson who asked if he had any read on how badly the G20 protests were going to go. Mr. Sonne responded he didn't know for sure being Canada but said to "half expect total anarchy and politeness at the same time." <u>He went on to say that he read somewhere that there's some anarchists planning on some "militant confrontation" so there will "deffo be some beat downs".</u> Ojacobson expressed some concern about going down with his camera for fear of damage/jackboot to his lens for his trouble.</p>
Dec. 15, 2009	<p>Mr. Sonne used his Visa credit card to purchase an asp baton from an online retailer located in Markham, Ontario called "911 Gear."</p>
Dec. 22, 2009	<p>There was an exchange between members of the Hacklab discussion group by email that included Mr. Sonne that discussed the repair of the "Maker-Bot" 3D printer and the fact that it was working well with <u>nichrome wire</u>.</p>

Dec. 23, 2009	<p><u>Mr. Sonne joined the Toronto Community Mobilization Network ("TCMN") mailing list</u> and received a welcome email confirming that he had been added to the mailing list. Mr. Sonne sent an email in response looking for more information and to find out about open meetings. <u>He stated he would like to attend some of the meetings or at least pursue the information and be of some use.</u> <u>He advised that he was currently working on a project with several/symbol textual, visual and logistical information about the locations and locales of the G8 and G20 to be released as a package at a public domain.</u> <u>In addition he was working on setting up a communications network to assist protestors in staying safe and to help ensure that police and security monitoring are under control.</u></p> <p>A further email from TCMN to Mr. Sonne welcomed him to the general planning and organizing list. This email stated a few notes about community mobilization including that there would be days of action led by organizations of various people, that the next steps were to join and encourage members to join organizing subcommittees and that the next general planning meeting will be January 19, 2009 (sic). The committees included education and outreach, community and communication, action and logistics headed by Leah Henderson.</p>
Dec. 25, 2009	<u>A man attempted to detonate an explosive device onboard a commercial flight over Detroit Michigan using potassium permanganate; coined by the media as the "underwear bomber".</u> Mr. Supinski believed he discussed this event with Mr. Sonne.
Dec. 26, 2009	A calendar entry was created on Mr. Sonne's computer summarized as the TO Community Mobilize at 489 College, 3rd Floor. The start time was January 19, 2010. This calendar entry was either entered by the computer user or automatically although D.C. Ouellette believed that the entry was created by the user, Mr. Sonne. <i>There is no evidence as to whether or not Mr. Sonne attended the meeting on the 19th, although the calendar entry suggests that he intended to.</i>
Jan. 1, 2010	Mr. Sonne created a bookmark for Efston Science, an online store for lab equipment.
Jan. 4, 2010	<u>Mr. Sonne used his Visa credit card and his name and Halvdan Solutions and home address to make an online purchase of 2 lbs. of potassium permanganate from a retailer called "The Chemistry Store" located in South Carolina.</u>
Jan. 6, 2010	<u>A representative from The Chemistry Store sent Mr. Sonne an email that explained that potassium permanganate is classified as hazardous material and could not be shipped into Canada and that the order was cancelled.</u>

	<p>Mass email from TCMN received by Mr. Sonne. This email attached what was described as a “draft internal document not for circulation” entitled “What you need to know to about the G8/20” which criticized the Summits and their purpose and calling people resisting the “anti-people” policies of the G8/G20 to “take to the streets.” No violent action is advocated in this document.</p>
Jan. 7, 2010	<p><u>Mr. Sonne wrote to Canadawide Scientific, an online retailer of laboratory supplies and equipment to inquire about their policy governing the sale of potassium permanganate “given that it is a regulated product”. The response was that he needed a Class A precursor licence and would need to fill out an end user declaration. Mr. Sonne replied that he did not have a licence, that he was under the impression that it was only required for quantities in excess of 50 kg and that he would contact the appropriate government ministry and get the paperwork started.</u></p> <p><u>Mr. Sonne used his Visa credit card to purchase 1 lb. of potassium permanganate from Hydrosphere Water Gardens and Fisheries in Bradford, Ontario.</u></p> <p>Dr. Anderson testified that potassium permanganate is not a regulated substance but it is “on the radar” because an attempt to use it was made by the “underwear bomber”-it may be that he was referring to large quantities.</p> <p><u>Mr. Sonne created two bookmarks on his computer after 15:55hrs, “Guidance Documents for the Precursor Control Regulations: Application for Class A Precursor Licences (Health Canada, 2002)” and “Home Distiller - Index Page”. See Schedule “B” for a summary.</u></p> <p>Mr. Supinski purchased an avionics component for a rocket he intended to build.</p>
Jan. 10, 2010	<p><u>Mr. Sonne created a folder in his bookmark history called “The Chlorates and Perchlorates” which was later moved into the folder called “Chemistry, Distilling, Rocketry, Energetics”. (See Schedule “B”) This seems to be the earliest evidence of research that could be related to rocketry as it relates to the use of electrolysis to make chlorates.</u></p> <p>Mass email from Leah Henderson of TCMN received by Mr. Sonne which invited people to a logistics committee meeting on January 14, 2010.</p>
Jan. 11, 2010	<p>Mr. Sonne created two bookmarks on his computer: “RCMP firearms licensing” and “Firearms Safety Course”.</p> <p>Email from Mr. Sonne to <u>c3h8workshops@googlegroups.com</u> that advised he was interested in learning to weld.</p>

Jan. 13, 2010	Mr. Sonne sent an email to the Hacklab discussion group advising that he grabbed a piece of gear from his brother's company, namely an 8-inch bag sealer, which needed a little work. He wanted anyone who would like to use this device or to assist in its repair to let him know.
Jan. 14, 2010	<p>18:31hrs - Mass email from TCMN received by Mr. Sonne. Referred to second open planning meeting for G8/20 Summit scheduled for January 19, 2010: "Community based organizers and activists from across Ontario and Quebec are invited to an open planning meeting focusing on Toronto's responses to the G8/20 Summit." Stated TCMN was organizing, among other things, "days of action". <i>There is no evidence as to whether or not Mr. Sonne attended this meeting and/or that it was put in his calendar.</i></p> <p>19:03hrs – Mr. Sonne emailed Natalie Cantaine, the head of the media and communications committee of TCMN and asked if there were any particular skills they were in need of. <u>He advised he had been working on teaching people about various technical communication issues and that with the G8/G20 there might be an opportunity to apply some of it:</u> "Whether it's as simple as making sure police abuses are documented and communicated or helping word get around, etc."</p> <p>Mr. Sonne and someone by the name of aonomus, were engaged in a Freenode chat about various topics including the possibility of a banking system collapse. Mr. Sonne's idea was having assets in land preferably near a provincial park and that then "if shit hits the fan and the zombies strike, you poach the deer and rabbits". The discussion then turned to talk of Iran having "nukes" and what might happen in a nuclear attack, followed by a discussion about firearms. Mr. Sonne referred to the fact that he had gotten a private investigator's licence which entailed a pretty solid police background check. He told aonomus that there were some 'amazing air weapons out there' that could take out a deer. <u>Mr. Sonne referred to the fact he wanted to get a supersonic one and that that was part of what he meant by "pushing the limit"</u> as he wanted to see if because he had anxiety issues they would hold that against him. It would also give a synergetic effect with his private investigator's licence since, as aonomus pointed out, he might be required to handle firearms during an investigation. Mr. Sonne then said he was thinking about specializing in high-powered air rifles that could take down wild boars and buffalos.</p>
Jan. 15, 2010	Ms. Cantaine from TCMN responded to Mr. Sonne's email and stated it was great he was interested in communications work. She invited him to a meeting that night. <i>There is no evidence as to whether or not Mr. Sonne attended this meeting.</i>
Jan. 19, 2010	Mr. Sonne created two bookmark folders on his computer: "IMG_3387JPG Distillation setup" and "Chemistry, Distilling, Rocketry, Energetics".

Jan. 20, 2010	Mr. Sonne created three bookmarks on his computer: "Chemicals – H – K", "Lab Glassware – Efston Science" and "Lab Equipment – Efston Science". Mr. Sonne received by email an online quote from Alphachem for Halvdan Solutions at 58 Elderwood Drive, Attention Byron Sonne for <u>hydrogen peroxide (35%)</u> , and <u>3 prices for nitric acid using different product numbers</u> . A hard copy of the quote was the only piece of paper found in a folder labelled "chemicals, common chemistry" in what appears to have been Mr. Sonne's office.
Jan. 25, 2010	A number of files were created on Mr. Sonne's computer relating to a variety of different firearms topics including rifles, ammunition, air pistols and how to convert an air pistol to a fully automatic one.
Jan. 27, 2010	Mr. Sonne's calendar on his computer had an entry for presenting on "reversing" at TASK. There is no further evidence as to what this presentation was about or if it was, in fact, made.
Jan. 29, 2010	Mr. Sonne used his Visa credit card to purchase four packages of "Coughlins" fuel tablets at Canadian Tire located at 825 Eglinton Ave. East in Toronto. <u>It is admitted that these tablets are hexamine</u> . It was alleged that he also bought the hydrometer, hotplate and pool shock on this date but that was not proven ¹ .
Jan. 31, 2010	Mass email from TCMN to SAN and sent to the SAN Mailing List and received by Mr. Sonne. Notice re third community mobilization network open planning meeting for G8/G20 Summit scheduled for February 21, 2010. Stated that there are four "themed days of resistance" from June 21 to June 24, 2010 and set out the various themes such as climate justice. "People are encouraged to host meetings, film screenings, panel events, performances, marches, rallies, direct actions in cities across the world." In addition, days of action are shown as June 25-27, 2010. For each day there is a period of "open space for actions which includes mass civil disobedience and medium and high risk of arrest". <i>There is no evidence that Mr. Sonne attended this meeting or that it was in his calendar.</i>

¹ An email was sent to counsel after the case was closed which advised that there appeared to be faxed pages missing from the relevant tab of the ASF and asked whether or not this was deliberate. The response from Ms. Nadeau was that the receipts at the tab totalling 7 pages were those relevant to the trial and that not all faxed pages had been included.

Feb. 1, 2010	Mass email re "Toronto Anarchist Assembly and Book Fair Callout" forwarded to Mr. Sonne from san@masses.tao.ca which invited him to participate in a Toronto Anarchist Assembly on April 9-11, 2010 to "bring together folks who identify with anarchism." <i>There is no evidence that Mr. Sonne attended this meeting or that it was in his calendar.</i>
Feb. 4, 2010	Email from Mr. Sonne to the c3h8workshop@googlegroups.com looking for platinum or platinum wire in small amounts because he wanted to try its reputed catalyst ability and had heard it could ignite natural gas by just placing a little loop of wire in the gas stream. Dr. Anderson did not comment on platinum wire and whether it could be used in making explosive substances.
Feb. 22, 2010	A rifle scope destined for Mr. Sonne originating in the US was stopped at the border because a required export form had not been filed and, consequently, the scope was seized pending filing of the form. Mass email from a member of Hacklab.to which was received by Mr. Sonne. The member queried how many people had up-to-date first aid/CPR certification and what people thought of using Hacklab funds to send volunteering members on training for it. Mr. Sonne responded that he would be interested and that he would be happy to front any of the funds himself. He thought it was quite acceptable if Hacklab funds were used to get a few members certified and that they should pick members who were at the lab the most. <i>This exchange seems to be related to safety in the lab, not anything to do with the G8/G20.</i>
Mar. 1, 2010	Mr. Sonne uploaded 3 photographs of a potato cannon to his Flickr account. Mr. Sonne was engaged in a Freenode ² chat with "readabil#1ty". There seems to have been a comment about an article in the <i>Toronto Star</i> about the downtown becoming a fortress for the G20. <u>Mr. Sonne stated in this chat that he had been following this a bit already and was trying to figure out some way to help other than to film it "to make sure the security doesn't get too kent-state on people".</u>
Mar. 2, 2010	A member from the Hacklab discussion group responded to the Hacklab discussion group to earlier emails discussing the fact that the Maker-Bot was not working again. He recommended a number of things including having a "good amount" of <u>nichrome wire</u> available and that it was pretty inexpensive.

² Freenode is an Internet Relay Chat network which permits users one-on-one chats with other users or participation in chat rooms with groups of users.

	<p>Email from Kate Milberry to the Hacklab discussion group advising that the next meeting of the Surveillance Club is May 5, 2010. <u>The Surveillance Club is described as a “gathering of artists, academics activists, and ascetics who are interested in the democratic regulation of surveillance technology and practice.” There is no evidence that Mr. Sonne attended this meeting or that it was in his calendar.</u></p> <p>Mass email from TCMN which was forwarded to Mr. Sonne by san@masses.tao.ca which stated he was receiving this message because he subscribed to announcements, lists for G8/G20 mobilizations to take place in Toronto. Announced the fourth community mobilization network meeting on March 14, 2010. <u>There is no evidence that Mr. Sonne attended this meeting or that it was in his calendar.</u> Set out present plans for various actions that were being considered although TCMN was not organizing these actions but rather providing a networking space to coordinate different interests and ideas; “communities in resistance everywhere are encouraged to disrupt and dismantle capitalist and colonial institutions in their neighbourhoods on these days.”</p>
Mar. 5, 2010	Mr. Sonne purchased a new air rifle piston seal. On the same date he uploaded a photograph of the damaged piston seal to his Flickr account.
Mar. 9, 2010	Mr. Sonne used his Visa credit card to purchase four Life Brand Cold Compresses from Shoppers Drug Mart at 550 Eglinton West, Toronto. <u>It is admitted that these were a source of ammonium nitrate.</u>
Mar. 13, 2010	Mr. Sonne created two bookmarks on his computer: “Benson Chemicals Limited, Freelton, Ontario” and “Bustan – Toronto Hydroponics Grow Lights Nutrients Hydroponic Supplies Canada”.
Mar. 15, 2010	Mr. Sonne created a bookmark on his computer: “[kno3] Potassium Nitrate Synthesis from Ammonium Nitrate”. Dr. Anderson did not comment on making potassium nitrate from ammonium nitrate.
Mar. 19, 2010	Mr. Sonne used his Visa credit card to purchase two Life Brand Instant Cold Compresses from Shoppers Drug Mart at 550 Eglinton West, Toronto. <u>It is admitted that these were a source of ammonium nitrate.</u>
Mar. 22, 2010	Mr. Sonne used his Visa credit card to purchase four packages of “Coughlins” fuel tablets at Canadian Tire located at 825 Eglinton Ave. East in Toronto. <u>It is admitted that these tablets are hexamine.</u> Mr. Sonne was engaged in a Freenode chat with someone named Kiwano. He was discussing the fact that he had ordered a 2 long 10/22 ruger muzzled brake (presumably for his air rifle). He described himself as a “gun-toting liberal” and then he added that <u>he was “less liberal nowadays, more anarchist ... ‘An armed discussion group is a polite discussion group’ to paraphrase.”</u> Mr. Sonne told Kiwano that he was still waiting on the paperwork (presumably his licence for a firearm) and that he wanted “a nice shotty ... just a good utility one that’s quick to load for when I’m in bear country”. He

	said that if the “shit goes through” he would join a club/range up near the cottage. He said he had talked to the CFO of Tiny Township where the cottage is and it seems that he could shoot in the backyard of the cottage.
Mar. 24, 2010	Mr. Sonne uploaded two photographs of particle boards showing the holes created by a potato cannon to his Flickr account, one stated to be by an Ikea candle and the other by a shallot.
Apr. 2010	<u>A plastic jar labelled “KClO3 Batch #1 April 2010” containing 135 grams of potassium chlorate with traces of potassium chloride was found inside a Home Depot pail buried in the backyard of 58 Elderwood Drive on April 4, 2012. This suggests that by sometime in April 2010 Mr. Sonne had used an electrochemical cell to produce a relatively small amount of potassium chlorate although it is not as pure as the other batches that he made later.</u>
Apr. 9, 2010	Mass email from TCMN which Mr. Sonne received gave notice of a meeting to be held April 10 at 1:45 p.m. when Mandy Hiscocks and Leah Henderson would discuss “the black bloc and diversity of tactics”. <i>There is no evidence that Mr. Sonne attended this meeting or that it was in his calendar.</i>
Apr. 13, 2010	Mass email from TCMN which Mr. Sonne received re: Resist G8/G20 convergence. The email was “a call to disrupt and shut down the places, the systems and the ideas that exploit and exclude us.” The email included recognition of the fact people may have different needs regarding safety, including the need to be supported if arrested.
Apr. 19, 2010	<u>Payment for Mr. Sonne’s application for a Possession and Acquisition Licence for firearms was processed. This application would have subjected Mr. Sonne to a police check.</u> It is agreed that sometime before May 19, 2010 a Possession and Acquisition licence for firearms was issued to Mr. Sonne and that at the time of his arrest he had no firearms registered to him.
Apr. 22, 2010	Email from Mr. Sonne to Hacklab discussion group which stated that with the G8/G20 meetings/riots coming to Toronto he was wondering if Hacklab members might be in a position to help with things. <u>He was hoping to partner with people to help monitor the police “visually and RF wise and to document and disseminate the results.”</u> He stated he would be videotaping and monitoring but the process of doing that would be pretty intense and that he would like to know if anyone would like to help out with processing video and audio and retransmitting it, tweeting it out, etc. <u>“This is not without risk, so no half-milers please”.</u> Mr. Sonne received a response from Matt, a member of the Hacklab discussion group asking what encryption the police would be using and what could still be monitored. Matt included a link to a <i>Star</i> article about the police moving towards expensive encrypted radios.

Apr. 23, 2010	<p>Mr. Sonne responded to Matt from Hacklab that he expected the police would not have a new “set of comms” up and running and that if they did then they would drop RF monitoring and <u>“stick to feet-on-the-streets stuff then.”</u></p> <p>Mr. Sonne received a response from Matt which was copied to the Hacklab discussion group which suggested that small wireless “mics” could be planted ahead of the conference near where the command post would be and that he betted most incriminating things the police would discuss would be behind the barricade lines.</p> <p>Mr. Sonne purchased one 1-inch by 24-inch <u>carbon graphite rod</u> (\$79.95 USD) from Competitive Automotive, an online store. It was shipped that day by USPS Priority so presumably it was received by Mr. Sonne within a few days of the order. <i>This is likely the black rod that is shown passing through the yellow pail lid that was clearly part of an electrolysis cell; likely the largest Mr. Sonne made.</i></p>
Apr. 26, 2010	<p>Matt from the Hacklab discussion group sent a mass email that was received by Mr. Sonne that referred to remote control helicopters which would make “sick footage” but he was not sure how well they would be received by security forces.</p> <p>An email on behalf of a Christopher to Matt and copied to the Hacklab discussion group stated that <u>he thought the police need a “watchdog” but “we should be very careful here. Just because we haven’t broken the law doesn’t mean this [link to YouTube] won’t happen to us. Especially if they know we’re watching them; there’s no shortage of stories of people being beat up because they film the police doing something illegal”</u>. There is no response from Mr. Sonne to these emails.</p> <p><u>Kate Milberry sent an email to the Hacklab discussion group which stated that she is an “activist/scholar researching tech activism and (anti)-surveillance digital technologies.</u> I recently finished my phd on tech activism in the global justice movement,” that she was currently researching surveillance/counter-surveillance techniques and technologies being used for the upcoming G8/G20 Summits and that she was mostly concerned with what kind of cybersurveillance activists were experiencing and how they were responding/resisting. <u>She asked if anyone had an interest/expertise in cybersurveillance and would be willing to talk to her for a paper that she was writing.</u> She signed off as having a PhD, a Post-doctoral Research Fellow with the Faculty of Information at the University of Toronto.</p> <p><u>Mr. Sonne responded to Kate Milberry by email</u> and told her that he was happy to see that this sort of topic was suitable for a thesis and that it <u>“is very much up my alley given my interests and education”</u>. He continued:</p>

"I've been monitoring most of the social action lists such as OCAD, SAN, etc. and to be honest ... I'm not very impressed. There isn't a lot of conversation, and it's mostly people disseminating information top down with the standard half thought-out leftist rhetoric. (I should mention that my politics are strongly anarchist and I'm an ex-commie).

I also question the technical merits and skills of the people involved in these groups; I've tried to volunteer to educate and train people and the responses have been depressing. I wonder if these folks are just so grassroots and back-to-the-earth that they're too busy pressing tempeh to get up to speed technically.

Or ... everything of import is discussed in other forums or under the table where it can't be monitored by authorities. Or... perhaps I come out too strong such that I'm suspected of being an agent provocateur or a plant.

One amusing thing I have done, however, is to keep torrents going of matters of interest to counter-surveillance and activist security culture, and some other sketchy stuff. I monitor to see how active it gets as various political situations arise. It's amusing to see how there is such a global interest in these things, and even more amusing when gov't/security/etc IPs pop-up. Without a doubt gov'ts survey the net to see what's out there and who might be looking at it.

Talking here and there with people, I've never come across anyone who is aware that they are the subject of surveillance... that isn't paranoid or of questionable mental status. Thus I've concluded that if you're truly being watched by 'the powers that be' you simply aren't going to notice it. Of course, it's a different matter entirely when you start taking part in demos/riots and get photographed or arrested. Good times.

On another note, I've ordered all sorts of lab equipment and chemical precursors in an attempt to purposefully raise flags and get 'the man' to take a look at me... but no luck. Everything's arrived with minimal delay, I've successfully passed several police and RCMP background checks for various licenses, crossed into the USA multiple times with zero hassle... so draw your own conclusions.

	I'd be happy to talk, I've done some presentations and writings myself on these matters."
Apr. 27, 2010	An email Mr. Sonne received as a result of being on the Hacklab discussion list that commented that it is illegal to operate a radio controlled helicopter outside of designated areas. <u>Another email as part of the same discussion queried whether flying a camera to monitor the police would be possible and a discussion followed on that subject over that day and the next day.</u> There is no response from Mr. Sonne to any of these emails.
Apr. 29, 2010	Mr. Sonne created a bookmark on his computer: "Toronto Public Safety Trunking System, Toronto, Ontario – Scanner Frequencies".
Apr. 30, 2010	Mr. Sonne created two photographs on his computer; one of which D.C. Ouellette believed was of three graphite rods, based on the colour and the other he believed was a distillation process that appeared to be on the lab desk in Mr. Sonne's workshop. This photograph shows a clear plastic container with clear liquid that has a blue lid with two openings in the lid with wires and two voltmeters next to the container. The container seems relatively small when compared to the voltmeters. <u>This appears to be the smallest of the electrochemical cells made by Mr. Sonne.</u>
May 1, 2010	Mr. Sonne used his Visa credit card to purchase two 6 inch MMO Coated Titanium Mesh Anodes from an Internet retailer called American Pyrotechnic Supply. He gave his home address for billing and shipping. <u>It appears these were the objects found during the search in a Ziploc bag labelled "Ti-MMO."</u> <u>According to Dr. Anderson, these could have been used as a cathode for the production of chlorates in an electrochemical cell.</u>
May 2, 2010	Mr. Sonne created a bookmark on his computer: "Bucket Cell adapter". Mr. Sonne received a mass email from the Hacklab discussion group authored by Kate Milberry giving notice again of the second meeting of the Surveillance Club on May 5, 2010.
May 5, 2010	Mr. Sonne used his Visa credit card to purchase a vacuum pump set from the Canadian Tire store located at 839 Yonge Street, Toronto.
May 8, 2010	Mr. Sonne tweeted that he should get back in the swing of "this Twitter thing, G8/G20 coming up, should be fun". Mr. Sonne sent an email to the Hacklab discussion group advising that the following week he was making a trip to both metal supermarkets and PlasticWorld and that he could take a few people with him and haul a bit of stuff. He asked if anyone was interested in joining him.
May 9, 2010	Mr. Sonne received an email confirming registration at www.surveillanceclub.ca and joining their mailing list.

	Credit card records reflect bookings by Mr. Sonne for a hotel and flight to a DefCon conference to be held from July 30 to August 1, 2010 in Las Vegas, Nevada.
May 12, 2010	Mr. Sonne sent another email to the Hacklab discussion group advising that he was making a run to PlasticWorld the next day and asked if anyone needed acrylic.
May 17, 2010	<p><u>Mr. Sonne made a number of efforts to purchase potassium chloride salt. It would seem based on the Hacklab chats that it was intended for his electrochemical cell and the production of potassium chlorate:</u></p> <p>At 18:49hrs: Mr. Sonne emailed "The Water Shoppe" to ask if they sold potassium chloride salt or just sodium chloride salt for use in water softeners.</p> <p>At 18:59hrs: Mr. Sonne emailed "Toronto Salt" and stated that he was having trouble locating 20 kg bags of potassium chloride salt for use in a water softener. He asked for a price for "SoftTouch Potassium Chloride".</p> <p>At 19:03hrs: Mr. Sonne emailed "Windsor Salt" and stated that he was having trouble locating a business that sold potassium chloride salt and he asked if this was a discontinued product.</p>
May 18, 2010	<p>Hacklab chats:</p> <p><u>11:48hrs: Mr. Sonne stated that he could not believe that he was "jumping through all these telehoops just for some goddamn salt."</u></p> <p><u>13:13hrs: Mr. Sonne was engaged in a Hacklab chat that included Mr. Supinski. Mr. Sonne stated that he wanted to use electrolysis to get potassium chlorate which, when mixed with sugar, would make "cheapo rocket fuel for model rockets...nothing too dangerous." He acknowledged that rocket fuel was not very expensive but said that large engines were hard to find and that he wanted to launch video cameras and film it. He was advised by Mr. Supinski that he needed certification for larger engines and his response was "It's only illegal if you get caught". Mr. Supinski warned him that he would get caught and that he should go through certification and Mr. Sonne responded that it was probably a good idea. Mr. Supinski gave him the websites for CAR and NAPAS. Mr. Sonne commented that he had had three RCMP background checks in the last year. He said that he still had to perfect the synthesis and manufacture of the propellant grains. Mr. Supinski warned him to watch for the limitations on licenced rocket fuel and engines. Mr. Sonne stated that the next material to find was real bentonite clay for pressing nozzles and that there was some "crazy science" that went into nozzle design. To this Mr. Supinski responded that it sounded like Mr. Sonne was going for Level 4 already, a reference to the highest level of certification. Mr. Supinski suggested that Mr. Sonne might want to team up with someone who was certified and told Mr. Sonne that he hadn't started the process yet but intended to soon. This suggests that this was the first time Mr. Supinski talked to Mr. Sonne about starting up a rocket venture.</u> To this Mr. Sonne responded that he</p>

had only started small scale electrolysis which had worked OK but that the medium scale was not working as well, "not to mention all the safety procedures and storage design". Mr. Supinski warned Mr. Sonne to be careful and that he had heard several horror stories of exploding engines and labs. To this Mr. Sonne said that was why he was going "slooooow" and that he was working on designing/building automated blending and fuel pressing gear and was thankful that he already had a good anti-static setup from his electronics days. When Mr. Supinski said that this was why he wanted to avoid living in the Eglinton/Bathurst area, Mr. Sonne said that a lot of this would be done up north at the cottage and that the presses would have to be portable and that he would need good "deflagration proof magazines for storage". He asked for folks to keep an eye out for a good "stepper driven worm gears" that he could use to make a press and that half the fun was just making the tools to do this stuff. Mr. Supinski responded that he was not sure what the approval process was to manufacture rocket engines but that he believed both Industry Canada and Natural Resources Canada needed to be involved. Mr. Sonne commented that he did have safe hobbies namely reading and growing food in his garden. Mr. Supinski must have done some checking because he then stated that model rocket engines must be approved safe by Energy, Mines and Resources Canada. Later Mr. Supinski stated that his earlier post was a little off and was for model rockets and that high powered rockets need to use motors approved by Transport Canada.

At 13:14hrs: the Crown alleges that Mr. Sonne attended the Canadian Tire located at 825 Eglinton Ave. East in Toronto and purchased 20 kilograms of "Natures Own", Potassium Chloride water softener. The receipt, however, was not included in the Agreed Statement of Facts and so this has not been proven.

At 14:26hrs: Mr. Sonne created photographs of the following on his computer:

- a) a 20 kilogram bag labelled: "Natures Own", Potassium Chloride Crystals" *This suggests he had purchased a bag of salt.*
- b) what D.C. Ouellette believed to be another distillation process. *This appears to show the electrochemical cell that was found in the furnace room at the time of the search.*
- c) what Dr. Anderson testified looked like a classic setup for a homemade electrochemical cell with the same principle as the electrochemical cell found in the furnace room at the time the search warrant was executed. Although not tested, Dr. Anderson believed the black rod through the centre of the lid is a graphite rod which is the material that is recommended as the anode for electrochemical cells for the production of chlorates. At the time the search was executed what appears to be the same yellow lid was on its own in the storage room in the basement and there is no evidence that the bottom of the

	<p>pail was found, which suggests this cell had been abandoned by this time. <u>This appears to be the biggest electrochemical cell made by Mr. Sonne. Based on the posts by Mr. Sonne that follow, the rod is graphite but the process did not work properly.</u></p> <p>14:33hrs: Mr. Sonne posted a photograph on Flickr, with a link on the Hacklab chat of an electrolysis cell “with a honking big graphite EDM electrode”. This was presumably one of the pictures of the cell using the large yellow bucket lid, later found in the storage room. He stated that the cells convert cheap potassium or sodium chloride into their corresponding chlorate which is a cheap and powerful oxidizer similar to potassium nitrate, <u>that so far he had mostly just made cheap bleach since he goofed up on the relative electrode areas. He was warned again about blowing off one of his limbs by another person online and he responded that that was why it is taking him so long to come up with reliable and safe protocols for “making and storing this stuff” and that he was no way in a rush and that he would be happy if he was flying a rocket next year.</u></p> <p>14:42hrs: Mr. Sonne stated that if you have too big an electrode you end up reducing the chlorate back into chloride or hypochlorite.</p>
May 19, 2010	Two photographs of blue crystals were uploaded to Mr. Sonne's Flickr account.
May 20, 2010	Two photographs of what are believed to be bolts were uploaded to Mr. Sonne's Flickr account. It is an agreed fact that they are extruders from a three-dimensional plastic printer known as a Maker-Bot and that when they are used in that printer they are wrapped in <u>nichrome wire</u> and an insulating material.
May 27, 2010	A photograph of what appears to be two drywall screws is uploaded to Mr. Sonne's Flickr account. <i>Note: Although D.C. French believed these to be related to posts about design flaws in the G20 fences, without captions there is no basis to make this link, particularly given the tendency of Mr. Sonne to post photographs of various tools and other objects on Flickr.</i>
May 29, 2010	<p>At 13:27hrs: Mr. Sonne created a bookmark on his computer: “Richard Nakka’s Experimental Rocketry Site”.</p> <p>Hacklab chats:</p> <p>12:45hrs: Mr. Sonne asked for Mr. Supinski and the automated response is that Mr. Supinski had not been on the Hacklab chat for almost four days. Mr. Sonne stated that he wanted to ask him for that link about the “canadian rocketry thing, and all the regulations”.</p> <p>13:36hrs: Mr. Supinski came online and repeated the link to CAR. Mr. Sonne responded that he figured they should work on a <u>“project/presentation about rocketry and how to follow all the laws and shit, and do it right … like the different class licences, transport canada authorization for building engines,</u></p>

etc.”. He stated that he had all the kclo3 [potassium chlorate] needed now to make engines, but “before I do a damn thing I’m going to, again, research the safety and this time with an eye to canadian law.” Again Mr. Supinski stated that he recalled that fuel/engines need to be approved by the Ministry of Transportation for use in Canada. Mr. Sonne responded that he might spend some time designing a rig that would fill and press hollow inside “grains (tubes of rocket fuel) remotely”, that the trick was to do it without hydraulics and to find some worm gears that would exert a lot of force. Mr. Supinski asked if it was actually going to be cheaper to make it yourself and Mr. Sonne responded that for a small batch, no but that it would be cheaper in the long run and that “now that I have the rig, all I need is \$20 bags of kcl salt for 20 kg.” He then set out the process and the costs which totaled \$160.

13:45hrs: Mr. Sonne stated that after the current run he was stopping production “since I don’t like having this much of an oxidizer around the house”.

13:51hrs: Mr. Supinski told Mr. Sonne, in a private chat, that once he got the new job he would be up to sharing some costs on going through certifications with Mr. Sonne and split the rocket costs in half.

14:40hrs: Mr. Sonne was engaged in a Hacklab chat that included Mr. Supinski. The discussion included Mr. Sonne commenting that he was involved in advanced amateur rocketry, with the goal of putting a video camera in as a payload and getting some good footage, for the “Lulz”. (Mr. Supinski said he did not know what “lulz” meant.) When asked about what the “crazy talk of containers and oxy stuff” was all about Mr. Sonne responded that he didn’t know what to believe, that potassium chlorate wasn’t that sensitive by itself and that it wouldn’t burn without a blowtorch if sugar wasn’t involved and that as far as the containers were concerned he had made some oxidizer components for rocket fuel. He said he had smashed it with a hammer, ground it in a pestle, mixed it with sugar and done both just to try and set it off without any luck. He repeated that he was stopping after this run as “I will have a lot by that point, too much for comfort level ... I have a storage magazine mostly buried in the shady part of my backyard that’s sealed and hidden ... not storing this stuff inside.”

14:46hrs: Mr. Sonne responded to a comment about TATP and stated that it “is the stupidest thing to make”.

14:47hrs: Mr. Sonne stated that he had only done a “gram or two of the kclo3 and stuff for characterization tests”. Note: this suggests that by this point he had only actually produced a very small amount, even less than the April batch later found buried in the pail, which is at odds with his post at 13:36 that he had all the potassium chlorate “now” to make rocket engines.

	<p>At 14:48hrs: Mr. Sonne asked again about a good place to get some worm drive gears to make an electrically driven press. Someone suggested an electric car jack to retrofit.</p> <p>14:56hrs: There was a discussion involving a number of individuals about an explosion at plants in the late 1990s that Mr. Sonne described as an “epic explosion … the shockwaves are ‘crazy.’” He was also researching presses during this discussion and in response to a comment about the US chemical safety board he commented “let’em make all the TATP they want! … lol … I’ll mail them the hammer for testing it out, too”. <i>This was clearly intended as a joke referring back to the “idiot” who had hit TATP with a hammer.</i> As the discussion proceeded Mr. Sonne wondered out loud about how many plants like this are tucked away in Thornhill, Leaside, etc. that we don’t even know about “waiting for another Sunrise Propane to happen”, that it was “fucking scary”.</p> <p>18:53hrs: When asked by Mr. Supinski about his G20 plans Mr. Sonne said they included <u>“not saying anything incriminating on IRC but a lot of walking and biking around and videotaping and monitoring the cops and helping broadcast protest information to keep people safe and organized.”</u></p> <p>20:06hrs: During a discussion about weed killer, Mr. Sonne stated that he had weeded the lawns by hand that year and that the next week would be spent in a “massive bed weeding”. <u>Later he said that he liked working with his hands in the soil.</u> In response to someone suggesting <u>copper sulphate</u> for gardening Mr. Sonne responded that it is great for killing roots.</p> <p>20:17hrs: Mr. Sonne commented that he likes watching “uscsb” and Myth Busters and that they both have “great accidents”.</p> <p>21:20hrs: Mr. Sonne talked about the Danvers explosion that was stupid as it should not have been next to an industrial area. Someone mentioned dust explosions and in particular <u>aluminum dust and Mr. Sonne responded that he had some for mixing with epoxy and that it’s not to be treated with lightly.</u></p> <p>22:02hrs: Mr. Sonne commented about a video he was watching called “Explosion at BP Texas City Refinery” and that Al Qaeda doesn’t need planes but rather should get people new jobs at refineries and “chem plants and get them to fuck shit up”. <i>This was clearly not intended as a serious suggestion.</i></p>
June 2010	<u>A plastic jar labelled “KCLO3 Batch #2 June 2010 417g” containing a little over 415 grams of potassium chlorate was found inside a Home Depot pail buried in the backyard of 58 Elderwood Drive on April 4, 2012. This suggests that sometime in June, Mr. Sonne had completed his second batch of potassium chlorate.</u>
June 1, 2010	At 09:13hrs Mr. Sonne uploaded another photograph to his computer that appears to show the electrochemical cell that was found in his furnace room.

June 2, 2010	<p>Mass email from TCMN that included Mr. Sonne and announced a call for affinity groups for the G8/G20, i.e. small groups of people who are interested in similar tactics and have similar levels of comfort in terms of things they are willing or not willing to do, how to deal with arrest, plans and material preparations, etc. The email stated they had a month and a half to get ready and encouraged people to gather “in the secret, quiet places”, and discuss these matters within their affinity groups. Notice of a meeting scheduled for June 5, 2010 for “community action for social justice” given. Notice was also given of a clinic hosted by Greenpeace for June 4 through June 6, that included non-violent direct action theory and practice to stop climate change.</p> <p><i>There is no evidence that these meetings were put in Mr. Sonne's calendar or that he attended either meeting.</i></p> <p>Mr. Sonne added a bookmark on his computer called “Recrystallized Rocketry”.</p>
June 3, 2010	Mr. Supinski had a private online Hacklab chat with Mr. Sonne and advised Mr. Sonne that he should start having a consistent income soon and that it was “time to start my rockets”.
June 5, 2010	<p><u>Photograph created on Mr. Sonne's computer showing the Buckner funnel attached to the top of a clear container on top of his lab desk.</u></p> <p>At 14:40hrs: Mr. Sonne was engaged in a Hacklab chat conversation. Mr. Sonne <u>discussed hiding Internet traffic, hijacking Internet Wi-Fi signal and Port scanning government servers.</u></p> <p>Mr. Sonne was engaged in a Freenode chat with a person named Shaz. Their discussion was about setting up <u>“encrypted tunnels”</u> using a server in the US and Sweden that Mr. Sonne suggested was <u>for “movies and shit.”</u> Shaz said he wanted to hide who he was completely and Mr. Sonne responded that was hard but he could make it much more difficult. <u>Mr. Sonne told Shaz that he had “portscanned gov't servers ..” and that he never did it from home but did it from a coffee shop downtown and then through things like “hidemyass.com” just to make it a little harder.</u> He told Shaz he believed that if people want to find you they can find you. Mr. Sonne said he wasn't that familiar with hidemyass.com but had used anonymizing services in the past and that <u>when he had upped some files of “sketchy shit” he usually did it from his car parked in a quiet neighbourhood after jacking someone's Wi-Fi.</u></p>
June 6, 2010	Mr. Sonne created a photograph on his computer of a <u>manual press</u> that was in the lab workshop area of his home and uploaded it to his Flickr account.
June 7, 2010	Mr. Sonne uploaded a photograph of a device to his computer and to his Flickr account that the police originally thought was a detonator. In fact, there is no dispute that it is a thermocoupler. He also uploaded a photograph of a blue crystal being held in the palm of someone's hand.

At 12:23hrs: Mr. Sonne attended the Canadian Tire located at 825 Eglinton Ave. East and purchased a 6 volt electric car jack.

A photograph of a schematic drawing which shows part of the hydraulic jack lifting and pushing some material, according to D.C. Ouellette was uploaded a sketch to his Flickr account. Dr. Anderson agreed this could be a sketch of a modified car jack to press rocket engines.

Hacklab chats:

09:51hrs: Mr. Sonne said that he had to move his biggest CuSO₄ crystal to a beaker and that it was too big for the mason jar. A discussion followed about how to seal it and Mr. Sonne says for the next one he will try a clear resin from PlasticWorld. *Note this must be a reference to one of his blue crystals.*

18:14hrs: Mr. Sonne was engaged in a Hacklab chat which included Mr. Supinski. The discussion included Mr. Sonne referring to the website for CAR and asking Mr. Supinski if that was the site and that he had lost the bookmark for. Mr. Supinski said that it was and gave him the NAPAS site again. A minute later Mr. Sonne created bookmarks to these sites, see below. Mr. Sonne stated that he would join CAR and that he might as well start this “long, painful process now” and queried why he thought it was going to be “a real pain in the ass.” Mr. Supinski told him it was very simple and that he just needed to follow the process. Mr. Sonne commented a few minutes later that it was “time to get my nerd on” and that “dude we are gonna blow people away with this presentation!”

Emails with CAR:

At 14:02hrs: Mr. Sonne had email correspondence with Angelo Castellano, the president of CAR, with the subject line: “Some advice on how to proceed with safely manufacturing my own rockets”. In the email Mr. Sonne said he had been advised to join both CAR and NAPAS as he wished to begin building his own rockets from scratch including strong engines. He stated that he had his own apparatus, that he was quite versed in synthesizing the necessary chemicals, that he had access to trained and certified engineers and chemists but that before he even thought of starting to “press my own engines and grains I want to make sure that I stay well within the law and do everything right – dot every ‘i’ and cross every ‘t’, as it were.” He said that he understood that he would need Level 4 Certification and some sort of Transport Canada certification “for the really big stuff”, that he was committed to starting this process and sticking with it and that his eventual goal was to launch cameras and telemetry gear hundreds of meters into the air and return it safely.

19:52hrs: Mr. Castellano responded advising Mr. Sonne that currently the law did not allow the making of a rocket engine by oneself, that by law he needed a factory explosive licence to make motors and that in Canada rocket motors are considered explosives just like fireworks. He advised Mr. Sonne that

	<p>Level 4 would not allow for the making of motors, only the use of the rating of a motor and that he would still need to go through all of the steps of certification and that in terms of his goals, that could be done by attaching cameras to an existing kit and this is done all the time with existing motors. It was suggested that Mr. Sonne look at building/buying kits and using the motors on the market which would "be much easier and safer".</p> <p><u>Mr. Sonne added bookmarks on his computer: "CARWeb - Canadian Association of Rocketry", "NAPAS.NET..." at 18:15hrs and "Licences and Certificates for Manufacturing Explosives" at 20:02hrs.</u></p> <p>Hacklab chats:</p> <p>20:06hrs: Mr. Sonne was engaged in another Hacklab chat which included Mr. Supinski. The discussion included having spoken to Mr. Castellano from CAR and that he had been informed he would need a factory explosives licence to make his own engines. Mr. Sonne said that he was still going to join CAR and NAPAS and he queried that there may be someone with this "kind of shit" already taken care of and they could use their facilities. Mr. Sonne stated that he had emailed the "NRC" [National Resources Canada] telling them what he'd like to do and asking for clarification. <u>Mr. Supinski told him that he should do a background check on himself in a year to see "if you show up on any terrorist lists."</u> Mr. Sonne responded that if he wasn't now he'd never be.</p>
June 8, 2010	<p>Hacklab Chats:</p> <p>10:45hrs: Mr. Sonne was engaged in another chat with Mr. Supinski and others from Hacklab. He said he was going to the bank to draft some cheques for CAR and NAPAS. He commented to someone who joined who warned him to try not "to explode yourself" that they had not been "in channel" when he posted that <u>he needed a factory explosive license to press his own engines or for that matter, just to make a single small cherry bomb (which I presume was a reference to pyrotechnics as opposed to a rocket engine or a real bomb).</u> and that this was a "major cramp in plans."</p> <p>14:47hrs: Mr. Sonne stated that he made the money orders and sent in his CAR and NAPAS memberships applications and that he would become a member first and then start "on the certs."</p> <p>22:48hrs: A person online referred to a breaking news article about a man with 60 bags of ammonium nitrate.</p> <p>23:03hrs: <u>Mr. Sonne responded that he only had about 1 kg of it and that it was about 30 bags of insta-cool packs.</u> He referred to a building in Leaside that he believed stocked a good amount of KNO3 [potassium nitrate] for fertilizer and other aquaculture stuff.</p>

	<p>Mr. Sonne sent an email to ERD-Licences at nrcan.gc.ca. He stated that he had been informed by CAR that if he wished to make his own model rocket motors he would need a Factory Explosives License. He asked what was involved in the process and what the cost would be and stated that he is an individual looking to make “very small quantities.”</p>
June 9, 2010	<p>Mr. Sonne responded to Mr. Castellano’s email of June 7th that although it might be easier and likely safer, he was “an extreme ‘do-it-yourselfer’. I very much enjoy creating things in their entirety. It makes for very hard work but it also offers an incredibly satisfying challenge – I mean, anyone can just buy stuff off the shelf and slap it together. To know that I designed and fabricated every part of the launch vehicle from top to bottom is important to me.” He stated that he would reconsider the DIY engine part of his idea. He told Mr. Castellano that he had mailed his CAR and NAPAS memberships and hoped that he might meet people who had the requisite federal licensing that he could apprentice himself to.</p> <p>Mr. Sonne added bookmarks to his computer: “Chlorate-based rocket propellant”, “Pyrocreations.com” and “Wouter’s practical pyrotechnics page”.</p>
June 12, 2010	<p>Mr. Sonne uploaded a PDF map of the location of the G20 fence line in Toronto to The Pirate Bay.</p> <p>Mr. Sonne tweeted four times about the G20 fence to state that he had walked and videotaped it and was going to do more walking and videotaping as the fence line progressed and was posting of a PDF map of the G20 fence line. He started to use the #g20report hashtag.</p> <p>Mr. Sonne sent an email to TCMN on the subject of G20 fence line videos. He advised that he had started a YouTube channel where he had placed videos of the G20 fence line that he created showing where it ran so far as well as how it was constructed. He stated that he planned on keeping the channel updated as the fence progressed.</p> <p>Mr. Sonne was invited to join the “napas group”, which presumably he accepted as he received an email later in the day welcoming him to “napas on Yahoo”. Posts on this site are available only to other active NAPAS members.</p> <p>Mr. Sonne added a bookmark on his computer: “Movement Defence Committee”.</p>
June 13, 2010	<p>A plastic jar labelled “KClO3 Batch #3 13-June-10” containing a little over 1195 grams of potassium chlorate is found inside a Home Depot pail buried in the backyard of 58 Elderwood Drive on April 4, 2012. I presume this was the date this batch was made.</p> <p>Mr. Sonne tweeted that a security camera was pointed at a door where some activists planned to organize and that they should “remember to practice good security culture”. On the same day there were three other tweets by Mr. Sonne about the location of G20 security cameras.</p>

June 14, 2010	<p>Mass email from TCMN that Mr. Sonne received setting out a "wish list for the G20 convergence". The email included a note that you do not have to speak to CSIS or identify yourself to police and there was a link to a document about this. The email warned people to be careful of videotaping certain types of "disobedience as you may lose your camera and get someone you like in trouble."</p> <p>19:56hrs: Mr. Sonne sent a spreadsheet setting out a list of first aid products to Norman Chu (no evidence as to who this is) asking for his comments. The subject is "FAK order". The spreadsheet included quantities only for Norman and another for Mr. Sonne and so presumably this was someone who Mr. Sonne was ordering product for.</p>
June 15, 2010	<p><u>Mr. Sonne was captured on video surveillance taking photographs of the security fence that was being erected in advance of the G20 Summit.</u></p> <p>Mr. Sonne commented on his June 12th The Pirate Bay torrent concerning the G20 fence that he had made a second video of the G20 fence, was stopped and questioned by the police. <u>"Apparently I made a lot of people around the downtown nervous today. Good stuff, and most funny."</u></p> <p>Tweets by Mr. Sonne:</p> <p>14:56hrs: That he was stopped and questioned by police for filming the G20 fence line in the financial district. He added that they were polite but threatened him with an HTA violation for walking in the road to videotape and added "beware of this trick".</p> <p>14:56hrs: "new fence line video coming today."</p> <p>21:08hrs: Tweeted about new videos of G20 fence line that he had finished uploading onto his YouTube/Toronto Goat accounts stating that "these ones got me some police trouble".</p> <p><u>22:24:58hrs: Asked if someone who was a resident or worked in the G20 zone could post a picture of the pass that would get them behind "the line".</u></p> <p><u>22:25:09hrs: Added "obviously edit out your details so you won't get caught."</u></p> <p>Mr. Sonne added a bookmark to his computer: "Communique to activists: 2legal/Toronto Community Mobilization Network".</p>
June 16, 2010	<p>Mr. Sonne uploaded 95 photographs to his Flickr account - <u>71 photographs of what appear to be cameras installed for the G20, 13 of Queen's Park, 6 of the American Embassy, one of the G20 fence detail and one of Union Station.</u> With respect to one of the photographs of the front door of the American Embassy Mr. Sonne stated: <u>"It sure pissed off the guard, he didn't like pictures at all. Fuck him."</u> Two photographs of a sign that gives notice of CCTV camera are also uploaded with the caption "Gestapo".</p>

	<p>Tweets by Mr. Sonne with g20 report hashtag:</p> <p>12:01hrs: "listening to my scanner, cops are using a lot more unmarked cars around the downtown core than normal."</p> <p>12:24hrs: "Have noticed no decrease in regular police radio traffic due to use of new encrypted radio system."</p> <p>12:25hrs: "Assuming encrypted system is being used in parallel, or by certain segments of the security forces only".</p> <p>12:35hrs: "[with link to The Pirate Bay – RF CounterSurveillance] DIY PDF Presentation I created some time ago".</p> <p>20:55hrs: "uploaded a shit ton of pics of surveillance cameras in the downtown core today [with link to Flickr]."</p> <p><u>20:56hrs: "almost every police-y looking camera I could find between Queen and Front from Spadina to Yonge + American Embassy front + back" [with Flickr link].</u></p> <p>21:01hrs: <u>"now we have a record of most of the surveillance cameras just in case the Gestapo forgot to take them down."</u></p> <p>21:03hrs: <u>"some cameras may be easy to interfere with, check it" with link to Flickr of picture of cable joint in sidewalk with caption: "Now that's secure cable management".</u></p>
June 17, 2010	<p>On Mr. Sonne's desk at the time of the search there was a letter dated June 17, 2010 from CAR thanking him for his recent membership.</p> <p>Mr. Sonne added a bookmark on his computer: "G8/G20 Summit" and he visited the Wouter's pyrotechnics page and a number of websites about pyrotechnics.</p>
June 18, 2010	<p>Mr. Sonne used his Visa credit card to purchase 1 kg of <u>zinc oxide</u> and 1 kg of <u>iron oxide red</u> from Tuckers Pottery Supply in Richmond Hill, Ontario and five 38 oz plastic jars from PlasticWorld in Scarborough, Ontario.</p> <p>Mr. Sonne uploaded a file titled "Practical Pyrotechnics by Wouter Visser" onto The Pirate Bay. <u>He commented: "This online book is a de facto standard for beginning pyrotechnicians".</u> Mr. Sonne also visited the torrent he had posted on Electrical Timers which would be consistent with him checking for information or simply monitoring if people had downloaded this torrent.</p> <p>Tweets by Mr. Sonne with g20 report hashtag:</p> <p>22:35:42hrs: <u>"these would be handy for scaling G20 fences; the ones I have would fit the smaller grid fence".</u> On the same date Mr. Sonne posted a photo to his Flickr account likely related to this tweet captioned: <u>"Tree steps for going up/pulling down fences. Tree steps for climbing G20 fences, or for</u></p>

	<p><u>helping get a grip to pull them down”.</u></p> <p>22:37:28hrs: “<u>Could probably be fabricated cheap and quickly out of bolts from Home Depot or Rona or something too”.</u></p> <p>22:37:44hrs: “<u>not to mention they’d help people get a good grip on the fence for bringing it down”.</u></p>
June 19, 2010	<p>Tweets by Mr. Sonne with the g20 report hashtag:</p> <p>12:21hrs: “Remember, 151 Front Street is the most important telecommunications hub in Canada.”</p> <p>12:28:24hrs: “<u>don’t forget design flaw in most G20 fence: holes are small enough to thread big bolts in for extra leverage and grip”.</u></p> <p>12:44:05hrs: “<u>see what I mean? tiny holes</u>” [with link to Flickr and a photo showing a close-up of the fence.] On the same date a photo captioned “G20 Fence grid” showing a close-up of the fence was uploaded to Mr. Sonne’s Flickr account which is likely the photo referred to in the tweet.</p> <p>Email from Kate Milberry to Mr. Sonne forwarding an email on the subject of “G20 Surveillance Flickr Group and Surveillance Club Flickr Account.” The original message is from Andrew Clement stating that as discussed at recent Surveillance Club meetings he had set up a Flickr group to host photographs documenting the G20 surveillance paraphernalia and activities, that it was open to anyone, that he had seeded the group with a photo and <i>Toronto Star</i> map of the Toronto Police’s 77 new G20 camera locations and that he had also created a surveillance club account on Flickr that could be used for uploading photographs.</p>
June 20, 2010	<p>Tweets by Mr. Sonne with the g20 report hashtag:</p> <p>13:18hrs: “<u>stopped and questioned by the cops again for taking pictures, but this time ... the officers, had to let me go”.</u></p> <p>13:48hrs: “On your bike or on foot, always obey the highway traffic act or they’ll use it to stop you and get ID. Sucks.”</p> <p>13:52hrs: “You’ve less rights in/on a vehicle than on foot on a public sidewalk. Remember, you’re a hobbyist taking lawful pics, that’s all.”</p> <p>14:26hrs: “Another security camera pointed at 1266 Queen convergence space ...<u>Practice good security culture”.</u></p> <p>14:36hrs: “<u>When I say ‘security culture’ I mean read this pamphlet</u> and he posted a link to the Security Culture Handbook. See Schedule “B” for a summary of this handbook.</p> <p>15:13hrs: Mr. Sonne posted a map of G20 camera locations courtesy of the <i>Toronto Star</i>.</p>

	Mr. Sonne uploaded photographs to his Flickr account – 6 of what appear to be security cameras, 4 of fence detail, 3 of Union Station, 3 of the American Embassy and 4 of police officers of which 2 had derogatory headings: “stationary bacon” and “bacon on wheels”. One of the photographs was of a very small camera on the Hilton where a large number of internationally protected persons including members of State were going to stay.
June 21, 2010	<p>Tweets by Mr. Sonne with the g20 report hashtag:</p> <p>10:26hrs: <u>Posted a link to the “movementdefence.org/resources” and advised everyone to read every PDF on this page and “know your rights”.</u> The materials all relate to what was described as G20 specific resources materials, including a pocket-size “Know Your Rights Flyer”, a “Legal Guide for Activists” and a brochure entitled “What to do if the police come knockin’.” <u>This material in general advises what a person should do if arrested by police.</u></p> <p>18:27hrs: Asked that people post photographs of police presence outside the convergence centre.</p> <p>19:20hrs: Queried why people were accepting being questioned by police “If you’re not detained or arrested, walk away. It’s your right.”</p> <p>19:23hrs: “Seriously, people, walk away. Every time you accept it, it lets them get away with it all that much easier for someone else.”</p>
June 22, 2010	<p>Mr. Sonne ordered some first aid supplies and sent an email to Norman Chu confirming the order. He stated that he did not know when the shipment would arrive. <i>This makes it unlikely that this purchase had anything to do with the G8/G20.</i></p> <p><u>Mr. Sonne was arrested.</u> He was in possession of a camera, a police scanner and a piece of paper which contained a paragraph from an Internet article posted by the G8/G20 Community Solidarity Network on the Toronto Mobilize website which purported to quote from Jennifer Wisinski, with the Law and Government Division of the Parliamentary Information and Research Service referring to section 83.3 of the <i>Criminal Code</i> “which governs preventative arrests and <u>permits a police officer to arrest a person without warrant and detain that person in custody if the person with the officer suspects on reasonable grounds that detention is necessary in order to prevent a terrorist activity.</u>” In addition an arrest line phone number was handwritten on the paper.</p>
June 25-27, 2010	The G20 Summit is held in Toronto.

SCHEDULE "B"

Note: The following is a summary of certain documents that were referred to in evidence and portions found to be particularly relevant have been underlined and on some occasions findings of fact have been included which are italicized.

Documents and books uploaded by Mr. Sonne to The Pirate Bay

1. Copies of some documents and books were entered as exhibits and the Crown was able to establish that Mr. Sonne uploaded files by the same titles and authors to The Pirate Bay. It is an agreed fact that these documents and books are known to exist, but because they were uploaded as torrents to The Pirate Bay, it was not possible for the police to obtain the actual copy that Mr. Sonne had access to and uploaded. *Although it is not possible to conclude with any certainty that the documents and books entered into evidence are exactly the same as the ones that Mr. Sonne uploaded, given the use of Mr. Sonne's computer and the name of the account it is reasonable to infer that they are at least similar in nature.* These documents include the following which were downloaded on January 1, 2010 and are relied upon by the Crown:

Ragnar's Guide to Home and Recreational Use of High Explosives

2. Dr. Anderson reviewed this book and described the author, Dr. Benson, as an American who had had a lot of experience with “playing with explosives for want of a better term”. Dr. Anderson testified that people are allowed to use explosives in their backyards in the United States; no licence is required. They are only arrested if they do not store the explosives properly.
3. Dr. Anderson summarized this book as follows. The author describes how he has fun with explosives, the dos and don’ts. The first four or five chapters focus on the use of black powder type devices namely dynamite devices but he does get into the use of ammonium nitrate, the use of improvised explosives, how to build detonators and specifically how to make HMTD, detonators and the use of nichrome wire as the heating filament for the detonator. The author also talks about the use of sugar chlorate which is basically potassium chlorate and sugar and he lists several mixtures that you can use including mixing the chlorate with Vaseline to bind it and hold it together and to add a little bit of aluminum powder to increase the blast output. He also teaches how to make improvised explosives and in particular RDX, and in connection with that he teaches the use of potassium nitrate and sulphuric acid to make the nitric acid that is necessary. According to Dr. Anderson from Chapters 5 or 6 onwards there are some significant correlations with what is in the book and what he sees from the evidence in terms of the materials available in Mr. Sonne’s home.
4. To this I would add the following. In a chapter on improvised detonating caps there is a discussion about how to make blasting caps out of hexamine tablets using citric acid. The chapter on improvised explosives starts off by talking about the huge intrinsic risk they carry. The author states, however, that “high explosives are so much fun and so interesting that I’ve always felt the risk was well worth the ultimate payoff.” Again reference is made to potassium chlorate which the author claims he uses as a wash for flowerpots, cement cleaner,

super soluble fertilizer for a hydroponics garden or a sea treatment, and that readers “undoubtedly can come up with equally creative reasons for owning KClO₃ that their corner druggist will accept.” I note, however, that this book presumes potassium chlorate can be purchased and does not explain the process of making it from potassium chloride. The author states that potassium chlorate needs to be ground to the consistency of talcum powder in order to work. In the chapter on “recreational use of explosives”, the author starts off by commenting that explosives are recreational and that this is a perfectly logical progression going from firecrackers when one is very young to heavy explosives when one is older and more mature. He then gives various examples from his youth as to how he used explosives for recreational purposes.

5. I could not find any section of this book that advocates the use of explosives for improper purposes although one could query the wisdom of a book that advocates them for recreational use.

Setting Fires with Electrical Timers by the Earth Liberation Front Guide

6. According to D.C. Ouellette, the Earth Liberation Front is touted as an anarchist group in the United States but I cannot give this evidence any weight as that is, at most, the group’s reputation. Dr. Anderson reviewed this document and testified that it gives information about a variety of detonation devices to start a fire. It has “recipes” for electrical timers that can be used by someone who does not have prior experience with electronics, only practice with using a soldering iron. The timers are guaranteed to ignite multiple incendiary devices at the same time which is considered important if firefighters are expected to arrive quickly so they do not have an opportunity to put the first fire out. This document is clearly aimed at how to destroy a building through arson. According to Dr. Anderson, the methods of starting fires in this document could easily be transferred to the construction of an improvised detonator if you were using some sort of heat source to set off the material that is the detonator. The article doesn’t tell you how to make the cap but it tells you how to come up with some sort of methodology whereby you can control the time prior to actually igniting the accelerant or the material in the detonator.

Assassination Politics - Jim Bell

7. D.C. Ouellette was familiar with this document and testified that the author was a graduate of MIT. This is an article where the author speculates on the question of whether an organization could be set up to legally announce that it would be awarding a cash prize to somebody who correctly “predicted” the death of someone on a list of violators of rights. It could ask for anonymous contributions from the public and individuals would be able to send those contributions using digital cash anonymously and no one would know who was awarded the money.

Security Culture: A Handbook for Activists

8. This document is stated to be a handbook for a Canadian activist “who is interested in creating and maintaining security awareness and culture in the radical movements.” It contains “essential information for anyone associated with groups advocating or using economic disruption or sabotage, theft, arson, self defence from police or more militant tactics.” It goes on to state that the advice also applies “to anyone associated with groups practicing civil disobedience ... Even if you’ve never expressed your politics by doing property damage, ... or getting arrested for civil disobedience ... these guidelines are presented here to enhance your personal safety as well as the overall effectiveness of our movements.”
9. Security culture is described as the culture where the people know their rights and assert them. Secure practices include advice about things not to say such as your involvement with an underground group or participation in any action that was illegal. If one is planning action with other members of a small group those discussions should never take place over the Internet (email) or phone line or through the mail as those forms of communication are frequently monitored. A section of the booklet deals with the Canadian-States security apparatus and the use of police monitoring, infiltration and agent provocateurs to collect information about groups and specific individuals in them or to subvert their activities. The handbook goes on to describe the Canadian Security and Intelligence Service, the National Security Investigation Service and their powers. Reference is also made to “the golden rule of silence” and the fact that no one is under any legal obligation to provide to the police any more information than one’s own name, address and birth date and this is only if one is under arrest.” There is also a section about informers and infiltrators and provocateurs and how to spot them. At the end of the booklet is a summary of “your rights”.

Other hard copy books

10. A book entitled *Encyclopedia of Serial Killers* was also seized from the home office. I place no significance on this. From the photographs taken at the time of the search it is clear that Mr. Sonne’s home was filled with books in many rooms and on many different topics. In the office, which appears to have been Mr. Sonne’s office, there were books on computer programming, various scientific books, books on bird watching, mountain biking, building bike trails, survival guides, learning Latin, historical literature, cheese, various religious and philosophical books and books that were comical. No hard copy books were found relating to the making of explosives or rocketry. Among Mr. Sonne’s paper files, no folders were found with details on experiments relating to the production of explosives or rockets.

List of files in the Documents folder of Mr. Sonne’s computer

11. The blsonne user account folder contained a folder named Documents and a directory of the folders and documents in this folder was entered as an exhibit. Given the name of the user account and the fact it was found on Mr. Sonne’s computer, it is reasonable to assume he downloaded these documents. Documents from this folder were introduced into evidence with the file creation date and the last accessed date. It became clear from the evidence that

the last accessed date was likely a date when the computer was backed up and so those dates did not necessarily suggest that Mr. Sonne had accessed the documents then. The particular documents relied upon by the Crown are as follows:

- a) A folder named "Military Field & Technical Manuals, Battle Histories". In turn, that folder contained subfolders named "Canadian" and "American". The Canadian folder contains a large number of documents, many dating back to the late 1990s. They cover a wide variety of military subjects. Although some relate to rockets and high explosives, that is only a very small segment of the list. The list of US military documents is considerably longer. Again, it includes documents relating to explosives, but they are only a very small portion of all of the topics covered.
 - b) The Crown relies on additional documents found in the Documents folder which D.C. Ouellette had read and some were reviewed for the court. There were a number of documents with respect to wave guides which were created on the computer in February 2009, which would be consistent with Mr. Sonne's interest in the magnetron experiment. There were also documents related to police scanners and frequency codes created in 2009, about 35 documents generally related to different weapons including firearms, guns, rifles, ammunition, and several documents on how to convert an air pistol to a fully automatic pistol, created in January 2010.
12. Almost 300 files were first created on Mr. Sonne's computer on January 5, 2009. To the extent they were referred to by D.C. Ouellette, he testified that for all the last access date is shown as one of two dates in March 2010. It is believed that this is an automatic backup date. This means that it cannot be ascertained when, if at all, Mr. Sonne accessed these documents from the time they were downloaded initially. The only fact that is known is that he did not access them after March 2010. D.C. Ouellette testified these documents were all similar in nature and were based on military practices and training, including the Canadian military. He reviewed the following in particular:
- a) Rocket, High Explosives which, according to D.C. Ouellette, is a military operations manual for rocket launchers and is not hobby related. This is basically a training manual for Canadian Forces and outlines the Canadian Forces' policy governing the use and misuse of a rocket launcher which is a weaponized rocket that contains a warhead which explodes on impact or when triggered.
 - b) Military Explosives, a US publication that discusses the use of explosives. A chapter entitled Historical Development of Energetic Material discusses the use of ammonium nitrate and ANFO bombs.
 - c) Unconventional Warfare Devices and Techniques – Incendiaries, a US military manual. It discusses the use of aluminum powder and potassium permanganate as igniters and then various incendiary materials.

- d) Improvised Munitions Handbook from Volume 2 of "Poor Man's James Bond." It is a military manual and includes schematics on how to make an improvised explosive device. This includes a plastic explosive filler that uses potassium chlorate and petroleum jelly or Vaseline.
- e) Unconventional Warfare Devices and Techniques – Incendiaries from the Department of the Army Technical Manual from Volume 3 of the Poor Man's James Bond. Based on the table of contents of this document it deals with initiators including potassium permanganate, potassium chlorate, aluminum powder plus other things like Ragnar's sugar chlorate, fire fudge, and instructions for a chemical fire bottle. Two of the required ingredients are potassium chlorate and sulphuric acid and gasoline.
- f) Improvised Munitions Handbook from the US War Office. The table of contents includes explosives and propellants, motors and rockets, incendiary devices and detonators and delay mechanisms. D.C. Ouellette testified that the reference to rockets here was of the weapon type not hobby but he said that the hobby rocket would be the "same basic concept".
- g) Soldiers' Improvised Explosive Device (IED) Awareness Guide for Iraq and Afghanistan Theatres of Operation by the US army for distribution only to US government agencies. It is a training manual and deals with IEDs in Iraq and Afghanistan and reaction to a possible IED. It includes information on placement of IEDs in a vehicle attack.
- h) Viet Kong Booby-traps, Mines and Mine Warfare Techniques from the Department of Army Training Circular, the US War Office. It is a document from May 1967 and has a chapter on explosive and non-explosive booby-traps.
- i) Multiple Launch Rocket System Operations – it speaks to the training surrounding a multiple launch rocket system that could propel several rockets at once.
- j) Explosives and Demolitions from the Department of the Army Field Manual US War Office. Chapter 3 talks about the calculation and placement of charges. In Chapter 4 there is a section on damaging communication systems. Chapter 5 includes information on storage magazines for explosives substances.
- k) Communications Jamming Handbook. From the index there is a section dealing with electronic countermeasures and how to disable communications in the theatre of war.
- l) Principles of Explosive Behaviour from the Engineering Design Handbook published by the US Army. It is a military document that explains the behaviour of a bomb and the types of explosions.
- m) Explosive Series, Explosive Trends from the Engineering Design Handbook from the US Army. It covers development of the complete explosive training from elements suitable for initiation of the explosive reaction to the promotion of effective functioning of the final output element.

- n) Engineering Design Handbook called Explosives Series Property of Explosives of Military Interest. It appears to be a continuation of the two prior documents. It provides more information on the chemical breakdown of materials and it's very specific in that regard. The chemicals include ammonium nitrate.

Bookmarks on Mr. Sonne's computer

13. A document that reflected the user-created bookmarks for a web browser in relation to the blsonne user account on Mr. Sonne's computer was entered into evidence which reflected the bookmarks as they existed at the time of Mr. Sonne's arrest and how they were organized. Only a few of the actual contents of the folders were introduced into evidence. For the most part, all there is is only the name of the bookmark as set out on the computer which may have been a name that was embedded in the webpage or may have been edited by the user. Another exhibit included the date added for the various bookmarks and to the extent that is important, they have been added to the Chronology.
14. The bookmark menu included folders related to employment, security and computers, as well as folders as follows:
- (i) "Firearms, Hunting, Survival, Military" included bookmarks to documents on a variety of topics including building your own bow plans for archers, tracking, hunting including sites for air guns and ammunition, edible wild plants, plants and seeds, surgical dressing, wild animal control and firearms licensing.
 - (ii) "Tools and repair, wood, boats" included bookmarks to documents on cross-cut saws for timber and log buildings, cool tools, chainsaws, home repair and do-it-yourself subjects and a website called "trial furnace" which referred to, among other things, "amateur rocketry, and general geek stuff".
 - (iii) "Politics and Religion" included bookmarks to a file called Assassination Politics, *which I presume is the same one referred to below* as well as documents on prisoner abuse, "secuirty.resist.ca" which provided detailed information on keeping your Internet transactions and computer data secure and private, Secrets of Scientology, Police Investigation Manual on Gangs, Hate Crimes or Cults, and an Ontario anarchist organization Common Cause.
 - (iv) "chemistry, distilling, rocketry, energetics" included bookmarks to the Guidance Document for the Precursor Control Regulations; Licences and Certificates for Manufacturing Explosives; bucket cell adapter; home distiller; chlorates and perchlorates; potassium nitrate synthesis from ammonium nitrate chlorate based rocket propellant; pyrocreations.com which is about making smoke bombs and other fireworks; recrystallized rocketry; Richard Nakka's Experimental Rocketry Site as well as Wouter's Practical Pyrotechnics page. In addition, there are links to Toronto Hydroponics, and lab glassware and equipment at Efston Science.

- (v) "Electronics" with subfolders called "various RF antenna and gear Identification" and "wave guides, microwaves, magnetrons" includes links to a number of documents that deal with wave guides.
- (vi) "Presentation and presentation software", with links to the Movement Defence Committee; the Toronto Community Mobilization Network; the G8/G20 Summit.

15. A summary of the contents of bookmarked files entered into evidence, with the date added, is as follows:

- a) January 7, 2010 - Home Distiller Bookmark: appears to relate to distilling alcohol, such as beer and wine.
- b) January 7, 2010 - Guidance document for the application for a Class A precursor licence created January 7, 2010, well before Mr. Sonne appears to have begun making potassium chlorate, but is in the timeframe when he attempted to obtain, and ultimately did obtain, potassium permanganate. Ms. Nadeau took the position that the search to obtain this information would have been for explosives and this document related to the licence to manufacture rocket engines Mr. Sonne allegedly only became aware of in June 2010. However, having reviewed the document I find that this is not a document relevant to potassium permanganate as an explosive. It provides guidance to individuals applying for a licence under the precursor control regulations to produce, package, provide, sell, import and/or export any Class A precursor, as set out in Schedule VI of the *Controlled Drugs and Substances Act*. This schedule includes potassium permanganate but all of the other items on the list appear to be related to narcotic drugs and, in fact, the background section of the document describes precursors as chemicals that are frequently diverted from legitimate activities to the illegal manufacture of drugs.
- c) January 10, 2010 - The chlorates and perchlorates: about using electrolysis to manufacture chlorates and perchlorates. It states anodes that make chlorate only are graphite, mixed metal oxide (MMO) and others, in general terms.
- d) January 20, 2010 – part of the AlphaChem website: section dealing with hydrochloric acid and hydrogen peroxide and iron powder, and other chemicals.
- e) March 13, 2010 – Benson Chemical: appears to be simply a link to their homepage. They deal in chemicals including hydrochloric acid at 29% and 32% as well as nitric acid.
- f) March 13, 2010 – Bouston Toronto Hydroponics: related to gardening.
- g) March 15, 2010 – [kno3] Potassium Nitrate Synthesis from Ammonium Nitrate: The author shares a method for synthesizing ammonium nitrate using ammonium nitrate as the precursor. As the reaction releases great quantities of ammonia gas it must be done outside ideally on a windy day in the middle of nowhere. The chemicals required are ammonium nitrate and potassium hydroxide.

- h) May 2, 2010 - The Bucket Cell Adaptor: article describes a bucket cell adaptor as a standard HDPE bucket with a flat bucket lid with holes drilled in and a rectangular opening which allows for two basic electrodes to be mounted and supports for venting, sampling etc. The article discusses the use of graphite anodes but there is a picture that shows a cathode made of mesh referred to as "MMO" which is similar to the Ziploc bag found in Mr. Sonne's ... labelled "TI-MMO". *This suggests this article was used by Mr. Sonne for experimenting with his homemade electrolysis cell.* The bucket cell is described for the (per)chlorate process and discusses how to harvest potassium chlorate.
- i) May 29, 2010 – Richard Nappas' experimental rocketry website: describes PVC rocket motors, ignition, mounting and conclusion. These are rocket motors using PVC tubing for the casing and requiring no special tools for construction. Chemicals to be used are potassium perchlorate as the oxidizer, charcoal as the fuel and aluminum powder as the thermic fuel. The conclusion is that it is possible to make "reliable, high powered rocket motors using PVC pipe and other low cost, readily available materials".
- j) June 2, 2010 - recrystallized rocketry: site is about making rockets not about "bombs, weapons, ...". It states the site is not about fireworks although the author loves them too. It shows a picture with a caption "cheap digital camcorder catches flight movies – how to build this camera mount". The article sets out links that appear to focus on "sugar rocketry" including candy rockets. Iron oxide is listed as a catalyst that increases burn rate, facilitates ignition and creates a pretty colour.
- k) June 7, 2010 - Natural Resources Canada, Explosive Regulations and the Industry - Licences and Certificates for Manufacturing: deals with licences for the manufacturing of explosives which can be blasting explosives, ammunition or fireworks etc.
- l) June 9, 2010 - pyrocreations.com: seems to be a post from a customer titled "chlorate based rocket propellant" and describes the use of potassium chlorate and powdered sugar packed into a three quarter inside diameter (ID) tube the length of three inches for a small rocket. It discusses the addition of sodium bicarbonate in rockets exceeding one inch inside diameter.
- m) June 9, 2010 – Practical Pyrotechnics: is a link only to a page that speaks to what you need to know to get started, a description of several chemicals used in pyrotechnics with special attention to the preparation of chlorates and perchlorates, tools of the trade including a press and instructions on making some actual fireworks.

Unallocated Spaces

16. Within the area of Byron Sonne's computer called "Unallocated Spaces" that contains data that had been deleted from the computer either by a user or automatic process, there was a portion of an article from "Walters 1998, Fundamentals of Shaped Charges, page 318".

CITATION: R. v. Sonne, 2012 ONSC 2126
COURT FILE NO.: 10000167-11
DATE: 20120515

ONTARIO
SUPERIOR COURT OF JUSTICE

HER MAJESTY THE QUEEN

- and -

BYRON SONNE

Defendant

REASONS FOR JUDGMENT

SPIES J.

Released: May 15, 2012

