Bruce Probert
Searsport Town Council - Planning Board
July 12, 2012

Dear Mr. Probert:

My name is Dr. David Goldschmitt. I have been a practicing Emergency Physician for over 25 years. I was also the director of the Emergency Department at Ground Zero during and after September 11, 2001, and have, therefore, many years of experience in disaster management and potentials. I am nationally certified in Homeland Security, being a diplomate of the Board of Certification in Homeland Security of ACFEI and credentialed at their highest level. I have also written a textbook on Disaster Management, published by CRC press for international circulation. I say these things not to tout my own credentials, but to inform you of my qualification to provide cogent input on the apparent shortcomings, omissions, errors and inconsistencies of the proposal.

I am also a property owner in Searsport. My land, located less than a mile from the proposed Propane Tank Project, where I have already begun preparations for building my permanent residence in the town, will be highly and negatively affected by this project as it is not only in proximity, but the rail line proposed for transport runs directly through my property, 100 feet from the proposed building site. I am sorry for this late response to the issues, but I presently live out of State, and despite the potential significant factors affecting my property, neither I, nor my neighbor, Dr. Bailey from Hamden, were notified of the project and its scope, and I only learned of it when I came up to Maine in June and saw the protest signs on the streets of Searsport.

I have several serious concerns for the safety and efficacy of this proposed project, and do not see the promised benefits, other than the tax incentive to the town. I feel that other avenues for additional revenue could be investigated rather than subjecting the region to potentially dangerous situations, simply to stabilize the budget. In addition, the money gained from this project will most surely be eaten up by the potential need for reparations to the infrastructure of the town, and the potential loss of tourism from the increased noxious traffic situation.

Having gone over the entire proposal, from an Engineering standpoint, there is little argument about the construction and routine operation of the Tank. But the environmental and traffic issues as well as the security factors and prevention of disaster are woefully lacking. I have included my thoughts below. I hope they are helpful. I am more than happy to provide more detail, clarification and issues, but I was trying to keep the initial letter as short as possible. I'm sure you have already considered most or all of them, but I put them down in the event that the massive scope of the glaring issues may have masked some issues you hadn't considered, and which are definitely not included in the actual proposal from DCP and the response from Maine DOT and DEP.

I have grouped the other issues that have come out of examining the proposal by DCP to Searsport into several categories outlined below. I would very much appreciate your response to these queries, and respectfully submit that this proposal is flawed and untenable. If you have specific questions or wish additional information or clarification, please feel free to contact me. Thank you for your kind consideration in this matter.

Sincerely,

David Goldschmitt MD FACEP DABCHS CHS-V

POTENTIAL ISSUES OF THE PROPOSED PROPANE TANK PROJECT GLEANED FROM DCP PROPOSAL TO SEARSPORT, MAINE.

TANK FAILURE:

1. Employment: DCP has proposed eight full time employees for the plant. As one full time equivalent (FTE) equals 36 hours per week (forty hours minus vacation, personal and sick time). The plant will operate 24 hours a day, seven days a week which equals 168 hours per week. Therefore, dividing 168 by 36 equals approximately five FTE to just provide one employee at the plant for the entire time. The remaining three FTE would provide a second worker for 16 hours a day. One of those two, at least, would be tasked with pumping the propane into the trucks at all times. Therefore, for 16 hours there would be, at best, one employee to monitor the plant and provide security and maintenance, while the other eight hours, there would be none. If any emergency arose, there would be no one to recognize it, much less correct it. Therefore, the entire reliance would be on the automated system not to fail.

2. Further, it would not take a failure of the propane tank to cause a disaster. Failure of any of the Gasoline tanks on Mack point with a resulting fire or explosion would be enough to take out the plant, especially since the piping both to and from the plant runs between the row of tanks of the tank farm and much of it is above ground. Bear in mind also, that it is not a failure of the tank itself that must be feared. The lethal failure is more likely to come from the coolant system. This system is automated with a single back up generator (which DCP has also alluded may not be necessary if the electrical plant of the town is upgraded). If this system fails, the tank will overheat, causing the liquid propane to expand into a gaseous state, increasing pressure within the tank. That is the purpose of the vent stack and flare; to decrease the pressure of a temporary overheat. However, if there is a prolonged loss of coolant from a cataclysmic failure, then no amount of venting will keep up as the entire tank must be virtually completely emptied. And the overflow, backup tank is calculated on cooled liquid volume and would be of little use in the exponentially expanded volume of gaseous propane.

3. The failure of a Propane Tank is a rarity, but that does not mean that the area is safe. The Propane tank will be nestled right next to a tank farm of several large petroleum storage tanks. Unlike Propane tank issues, Petroleum tank failures and explosion are far more common and well documented. An explosion of an adjacent Petroleum tank would threaten the integrity of the Propane Tank and almost surely trigger a catastrophic failure and a resulting explosion or expulsion of gas.

4. Tank Failure: Typically, a three mile clear zone is maintained around a propane tank of this size, free of population or endangered natural resources. The reason is that, in the unlikely event of a tank failure, the resulting explosion would first freeze, then gas, then blast and incinerate that entire range, potentially more when traveling across water. This would effect the towns of Searsport, Castine, Stockton Springs, Islesboro, Belfast, and Northport. Further, the resulting wild fires, with the local fire departments incapacitated, would burn out of control for many miles, endangering all the neighboring towns to the South, West and North of Mack Point for 10-20 miles at least. While such failures are extremely unlikely, they are not impossible. Just reference the Daichi Nuclear Plant in Japan after the earthquake and Tsunami, a scenario which was not considered in the original construction and operation of the plant. Bear in mind that there are very few tanks in existence (only 12 in the U.S.) and without a long track record, so saying that an unexpected event could not happen is short sighted and

dangerous. While the scenario in Japan was a natural disaster, the same or worse potential exists for terrorism.

5. The placement of the Propane Tank Plant is also ill conceived in that, not only is it not only feet from Petroleum Storage tanks that could explode, it is only yards away from GAC which produces industrial Chlorine. If an explosion at Mack Point occurs, that plant, too, is likely to fail. The resulting explosion would trigger a cloud of toxic chlorine gas that would necessitate evacuation of a large portion of the coast, probably even beyond the scope of the original explosion.

6. I am including here, a link to a website showing a liquid propolene tank car explosion in Texarcana, Arkansas. Bear in mind that this explosion and fire, encompassing one quarter of a mile radius from the incident, came from a single 9,000 gallon train tank car, and not a 22 Million gallon storage tank. The video illustrates two points of view: how much damage would there be from a tank over 2000 times larger than the one involved in this incident; and the amount of damage from just one tank car, bearing in mind that there will be anywhere from 56 to 224 of those smaller tanks in the area each day. The website is: *www.youtube.com/watch?v=pw_bnS-qcds*

7. See Natural Disaster and Terrorism Section

NATURAL DISASTER AND TERRORISM:

1. Natural Disaster: The backup generator at the plant could easily be knocked out by any number of disasters, including earthquakes, tsunamis, or even a good Noreaster being that close to the shore. Any of these could also cause the tank itself to fail. The tank does not need to explode, only to overheat. The backup tank would not be cooled either in the event of a loss of power, so would be useless for the purpose of venting the gas (only valuable for mechanical rupture of the tank). Depending upon how high the generator is positioned, simple coastal flooding could cripple the backup system. In that event, the entire automated system would fail and the temperature of the tank would begin to rise, making the only remaining protection for the tank, and the surrounding population, the single lone employee.

2. An earthquake fault line that passes directly under Sears Island and affects Mack Point prevented the construction of a Nuclear Power Plant in the 1970s and 1980s, yet this same earthquake issue is being ignored in the construction of a potentially explosive tank. I would be interested to know why the Maine DEP is unconcerned with this potential now, but was very concerned with that potential thirty years ago. The tank would also be threatened by a myriad of other natural disasters including Tsunami, Hurricane, Tornado, Forest Fire, etc.

3. Terrorism: Searsport Maine is already higher on the list of potential terrorist targets than most other towns due to several factors. First because of the variety and amount of toxic chemicals within a short range of Mack Point; second for the large population of residents and tourists within range, providing not only a large kill zone, but an emotional trigger for the rest of the Country; third for the fact that it is directly in the flight path for Bangor international airport, so a fireball and smoke would necessitate diversion of the planes over an extremely large radius; fourth, the bay already has a precedent for terrorist incursions twice in its history, once by German submarine, and once by Russian submarine. It is an inviting target as there is minimal police or coast guard presence and private security to protect the plant and monitor the entire region and bay. There is a highly traveled route only blocks from the tank that would mask the

presence of a terrorist infiltration until the last moments of the plot. And there is virtually no homeland security or military presence.

TRANSPORTATION:

1. Traffic Impact: The DOT letter states that present traffic at Mack Point is 30-40,000 per year. That means 100 departures per day (and consequently 100 arrivals). If the port is operating 20 hours per day, that would be 200 trucks presently entering or exiting the port which works out to one truck every six minutes. If you then consider the 50-144 departures per day (let's average it at 100). Again, that means that there would also be 100 arrivals, adding another 200 trucks entering or leaving the port, making it one truck every three minutes. (with the potential to be up to 250 departures and 250 arrivals every day which would make 500, or one truck every two minutes). DOT should be questioned about their misleading, at best, statement of only 60-144 departures as the basis for their calculation of the number of trucks per minute, when they did not include the arrivals, which cuts the time between trucks in half.

2. There are several areas of increased concern for the increased traffic pattern. The first, of course is the intersection of the road from Mack Point and Route 1. The second is the intersection of the Mt. Ephraim road cutoff (I believe it is Burnett Street, but am not sure) and Route 1 at the center of the town of Searsport that already bogs with traffic at peak times from the left hand turns. The third is the intersection of Routes 1 and 1A in Stockton Springs, and the fourth is the intersection of Routes 1 and 3 in Belfast. These four areas should have had individual impact studies done by the DOT and they should be questioned as to the results of their investigations.

3. These trucks will not be traveling down city streets at 25 miles per hour as in other communities, like Boston, that proposed a ban on such trucks going through their north end, but be traveling on highways at up to 55 miles per hour through populated areas during conditions of frequent dense coastal fog, and icy winter road conditions making the possibility of a devastating high speed collision with the increased traffic flow far more likely. These are also not multi-laned highways with controlled distant single entrances and exits, but single lane roads, passing directly adjacent to occupied spaces, with multiple entrances from businesses and residential dwellings that increase the probability of accidents.

4. The other main consideration is the proximity of dwellings (as little as 6 feet in Searsport) to the major highway, Route 1. With the recent fatal crash of a Tractor Trailer into a house, killing a child; the potential for a driver or mechanical error causing a crash is real and significant. This proximity issue means that there is little, if any, margin of error. There is already significant risk from the present truck traffic along that route, and doubling that volume could be catastrophic. The DOT should be pressed to reevaluate their assurance that there will be no impact on traffic with this plant.

5. Tourist travel heaviest in the summer months, DCP says that it would be doing most of the traffic during the winter months because of the increased demand. However, if the propane is also being used for the Fracking operations in Canada, that is a year round endeavor. It would be important to know just what percentage of the use would be for that purpose to more accurately judge the traffic flow issue.

6. The DOT also needs to be questioned on the impact of a 24 hour per day, multiple round trip rail schedule of toxic, potentially explosive transports literally in the backyards of the residents, commercial businesses and towns up and down the line, involving several communities, none of which has had a say in the proposal process. DCP keeps changing

its projections on the number of required trucks to unload the tank, but have not provided any data to support these projections. It is quite easy to simply state that there will be less traffic than originally projected, just to satisfy concerns, but it is quite another thing to back up these assertions with reasonable and concrete estimates of usage data to justify their claims. Without the proposed rail travel, all of these figures will be increased.

7. Rail Travel: The rail transport portion of the proposal has been noted as not yet in the planning stage. However, they are already using the rail transport within their calculations of the required truck transport. If the rail system is not included, the number of trucks required will significantly increase. These two items have not been addressed by the DOT. Further, the DOT must approve the transport of dangerous chemicals by rail within yards of residential and commercial dwellings for the entire length of the trip. Therefore, the towns of Stockton Springs, Prospect, Frankfort, Winterport, Hamden and Bangor should be given the opportunity to voice their objections.

8. In addition, the dramatic increase in rail traffic in both number (presently one round trip a day and eight round trips per day proposed) and in hours (presently only daylight hours, proposed overnight as well) would demand an environmental impact study by both the DOT and the EPA (noise pollution, emissions, vibration, danger to river, etc.). Again, these studies must include all of the above towns (or more if the rail transit goes beyond Bangor). All of these factors are particularly topical in light of the recent derailment and toxic spill on the Penobscot River above Winterport. Those along the route, including myself and my neighbor, Dr. Bailey, were not informed of this drastic change in the transport pattern.

9. Marine: DCP proposes that there would be only four times per year that the Super Tanker would be loading in the bay. As the tanker is required to maintain a clear zone of other marine traffic, effectively, Mack Port would be closed to all other shipping during the several days the ship was in port and unloading. As there is no requirement for the present staff of Mack Point to participate in this unloading process, and there would be no other traffic, the port would be effectively shut down for those days, if I understand correctly, eliminating work for all of the employees. (causing a net loss in worker revenue for the town, overcoming the eight new jobs generated by the Propane Tank) (incidentally, all pleasure boating on that end of the bay would also be restricted for those days, cutting off Stockton Springs and, possibly Castine, as well as possibly all Penobscot River traffic). To calculate the number of deliveries required per year, unless I am grossly mistaken, you would take the number of extractions from the tank daily and divide that into the 22 million gallon capacity of the tank, then subtract the two weeks of reserve that the company wishes to maintain in the event that the supertanker delivery schedule is delayed. Each tank car or tanker truck transports approximately 9,000 gallons per trip. The original proposal called for 144 maximum transports per day by truck, and 80 transports per day by rail (eight round trips of a ten car train). Thus, the maximum total is 224 tanks per day, at 9,000 gallons per tank equals slightly over 2 million gallons per day. Therefore, the tank would empty in 11 days which is less than even the two weeks reserve they wanted to maintain, so the supertanker would have to be in port constantly. If we drop down to the absolute minimum projected of 56 truck transports and no rail cars, then the daily total is just over 500,000 gallons per day. The tank would then empty in 44 days, minus the 14 days for reserve, would mean that the tank would need to be refilled once a month, or twelve times per year, effectively closing the Mack Point port once a month for several days. In order to reach their quarterly estimate, there could only be 20 trucks per day leaving the plant. If my calculations, assumptions or information is grossly incorrect, please let me know. Otherwise DCP and

the DOT should be answering to the issue of misrepresentation and the issue of boating restrictions for that end of the bay.

ENVIRONMENTAL IMPACT, COMMERCIAL IMPACT, FINANCES AND AESTHETICS:

1. Revenue to the Community: The impact on the job market and the "contribution to the community" stated in the DCP proposal from these eight full time employees will be negligible. As far as I am aware, the supertanker crew must remain on board during unloading, and the truckers will be from distant locales, as would probably be the specialized construction workers for assembling the plant; not contributing significantly to the financial welfare of the community. I would further assert that the increased truck traffic and noise will negatively affect the business community, particularly those that rely on the tourist influx.

2. Noise Pollution: The figure of the DEP for 59.6 Dcb, which is only 0.4 Dcb below the maximum standard only appears to take into account the mechanical operation of the plant, and not the idling of all trucks in the queue waiting to load. Adding that tractor trailer noise contribution, would bump the combined level well over the 60 Dcb limit.

3. Bird Sanctuary: The Maine DOT operates a bird sanctuary on Sears Island only about 500 feet from the proposed tank. One would think that the Maine DEP and the Fish and Wildlife Authority would have something to say about placing potentially harmful and explosive materials that close to a refuge and should be asked to explain why they don't see it as a problem.

4. Dredging: In addition to all of the other issues, the bay will require dredging to allow the Super Tanker access. The department of Fisheries does not seem to have signed off on this plan, despite the possible impacts and ramifications on the estuaries and on the ongoing fishing practices of the bay (unless I missed that in my perusal of the proposal). And neither has the DEP addressed that issue specifically, and should be called upon to answer that question as well.

5. Toxic discharge: The notation of the DEP was that there would be no odor coming from the plant that would bother the citizens of the neighboring area. The toxic problem with propane is exactly that, it is odorless (chemicals have to be added to make it smell). Therefore, the population could be poisoned without ever knowing it.

6. Aesthetics: while many complaints have already been received about the visual implications of the tank, and not belittling the relevance or importance of those concerns to the residents and neighboring towns around the bay. I am far more concerned by the presence of the increased truck traffic, spoiling the tranquility and appeal of the area as a tourist destination and a pleasant place to live.

7. Infrastructure Damage: The center of the town of Searsport is comprised largely of 150 year old brick structures, six feet from the highway. The amount of vibration from the proposed or projected truck volume will certainly have significant destabilizing effect on those relatively fragile and historic buildings. In addition, the wear on the roadway will be significant. If I am correct, the town is at least partially responsible for the repair of these roads within the town boundaries. These repairs would significantly dip into the increased tax revenue that the town is to receive from the Propane Tank. On a different note, the air quality of the increased diesel traffic will have a deleterious effect on the health of the population, and while that may not be of concern to the fiscal bottom line of the town, the cleanup of this pollution on public buildings and other areas may be of a small concern.

8. Property Values: With the rush of so many residents placing their homes on the market as soon as the Tank Proposal was finalized and imminent, the housing values in Searsport fell by over 20% as reported by several local realtors. With the average market value of the probably 2,000 homes and businesses in the town could be estimated at $100.000 (the figure may be higher or lower), the cost to the individual homeowner is approximately $30,000. Estimating the annual property taxes at $1,000, the gain over five years of the 20% reduction promised with the installation of the Propane Tank would be 100% of one year, or $1000, making a net loss to each homeowner of $29,000. Further, with such a glut on the market, it will take many years for the home prices to rebound. If the town performs a revaluation of the properties for tax purposes, the tax revenue to the town will drop, as does the bond potential from the value of the town to the State and Federal Governments. Should the proposal for the Tank fail, I would feel that the town is justified in suing DCP for the loss of value to the individuals of the town, totaling $60 million.

9. Green Industry Proposals: A town of the size of Searsport should not be seeking out projects that would heavily impact on infrastructure as they present unseen expenses and consequences in later years with which the town must deal. The better approach is to go with light industry or retail ventures that require less operating cost in the long run and can provide a better continuing revenue source. One such project would be to consider an outlet center similar to that of Freeport, Maine. Buildings could be constructed at the center of town near Mt. Ephraim road and a parking structure just beyond to provide space for the increased tourist population. There is no competition for such a venture in Midcoast or Northern Maine, and the project in Freeport seems to be a success. I am not suggesting this project be considered by the town, I am only using it as an example of more scaled and reasonable projects without the severe environmental impacts and potential consequences, that could be considered.