

1
2
3
4 **BEFORE THE STATE OF WASHINGTON**
5 **ENERGY FACILITY SITE EVALUATION COUNCIL**

6 In the Matter of:
7 Application No. 2013-01

8 TESORO SAVAGE, LLC

9 VANCOUVER ENERGY DISTRIBUTION
10 TERMINAL

CASE NO. 15-001

**PREFILED TESTIMONY OF SCOTT
JOHNSON, FILED BY THE CITY OF
VANCOUVER AND CLARK COUNTY**

11 Q: Please state your name, place of employment and title, and address.

12 A: Scott Johnson, Emergency Management Division Manager
13 Clark Regional Emergency Services Agency (“CRESA”)
14 710 West 13th Street
15 Vancouver, Washington 98660

16 Q: What does CRESA do?

17 A: CRESA is a regional public safety agency that provides 9-1-1 dispatch, emergency
18 management and associated technology services. CRESA’s service area includes each of
19 the seven cities within Clark County – Battle Ground, Camas, La Center, Ridgefield,
20 Vancouver, Washougal, and Yacolt – as well as the unincorporated areas of the county.
21 CRESA also serves as the host agency for Region IV Homeland Security Office, which
22 coordinates Homeland Security efforts within four SW Washington counties – Clark,
23 Cowlitz, Skamania and Wahkiakum.

Q: What are your responsibilities within CRESA?

TESTIMONY OF SCOTT JOHNSON- 1

CITY ATTORNEY’S OFFICE
PO BOX 1995
VANCOUVER, WA 98668
Tel: (360) 487-8500 Fax: (360) 487-8501

1 A: I am the manager of the Emergency Management Division of CRESA. The CRESA
2 Emergency Management Program is the consolidated emergency management division
3 for Clark County. We oversee the All-Hazards Comprehensive Emergency Management
4 Program that deals with all aspects of disasters within the community. Our Emergency
5 Management staff work on projects related to:

- 6 • Preparedness – writing and exercising emergency plans, teaching citizens
7 about personal preparedness
- 8 • Mitigation – finding ways to reduce the damage from disasters by taking
9 smart prevention steps in advance
- 10 • Response – activating the Emergency Operations Center (EOC) to support
11 emergency responders in the areas of resources, information and
12 situational awareness. When agencies exceed their capacity to respond
13 we help coordinate getting additional assets through shared use
14 agreements, mutual aid or, in a declared emergency, through the State
15 EOC. We help to inform the public about the incident and what they
16 should or should not do, based on direction for public officials and
17 incident command, and we help to put the incident in context, called
18 situational awareness or common operating picture, in order to facilitate
19 decision making by elected and appointed officials. We do these in
20 accordance with the National Incident Management system, where my role
21 as the Emergency Manager is defined as a coordination rather than
22 leadership of command function.

- Recovery – helping the community get back on its feet after a disaster

1
2 Q: Can you review your education and professional experience as it relates to emergency
3 preparedness and management?

4 A: Prior to my retirement from military service in 2008, I served as an on ground responder
5 during four presidentially declared disasters. I attended both basic and advanced
6 noncommissioned officers courses with a ground operational focus, and I served as the
7 lead NCO in a battalion level tactical operations center. In addition to a Bachelor of
8 Science degree in business management, I have completed the FEMA professional
9 development series and I am a FEMA certified Master Exercise Practitioner.

10 Q: What organizations are you a member of related to emergency preparedness and
11 management?

12 A: I am a member of the Washington State Emergency Management Association

13 Q: As the manager of CRESA's emergency management division what are your main
14 concerns regarding the proposed oil terminal facility?

15 A: In 2011, as the agency responsible for coordinating the comprehensive Emergency
16 Management plan, CRESA conducted a Hazard Identification and Vulnerability Analysis
17 (HIVA) around the Natural and Technical hazards most likely to impact Clark County
18 and the 7 cities within the county. This HIVA identified 3 natural and 1 technical hazard
19 as those with the highest probability and greatest vulnerability. Hazard Material Spill
20 was the technical hazard, defined as a failure of manmade infrastructure that results in an
21 emergency, and it had a high probability and medium vulnerability. Medium
22 vulnerability means that:
23

- 1 • “The total population, property, commerce, infrastructure and services of the
- 2 county are exposed to the effects of a hazard of moderate influence; or
- 3 • The total population, property, commerce, infrastructure and services of the
- 4 county are exposed to the effects of a hazard, but not all to the same degree; or
- 5 • An important segment of population, property, commerce, infrastructure or
- 6 service is exposed to the effects of a hazard. In a worst case scenario there could be
- 7 a disaster of moderate to major, though not catastrophic proportions.

8 As a result of this HIVA we have focused many of our planning, preparation, and
9 mitigation efforts and resources on those natural hazards that have both a high probability
10 and a high vulnerability. The proposed oil terminal would change our HIVA and would
11 likely result in an increased vulnerability to this hazard, meaning that our current efforts
12 at hazard planning, preparation, mitigation and response may be inadequate. A review of
13 our current Comprehensive Emergency Management Plan (CEMP) shows that these
14 inadequacies would most likely be in three areas: public alert and warning, mass
15 evacuation, and mass care and sheltering.

16 Q: What are your concerns as they relate to notification?

17 A: We are required by FEMA to perform public information and warning during
18 Emergencies. This is defined as the ability to deliver coordinated, prompt, reliable, and
19 actionable information to the whole community through the use of clear, consistent,
20 accessible, and culturally and linguistically appropriate methods to effectively relay
21 information regarding any threat or hazard, as well as the actions being taken and the
22 assistance being made available, as appropriate. This is also an expectation of our
23

1 community that we provide them the information they need to make the best decision for
2 themselves and their family in an emergency. We do this currently through 5 primary
3 means: Emergency Community Notification Systems, Wireless Emergency Alerts,
4 FlashAlert, Emergency Alerts Systems, and Social Media.

- 5 • Emergency Community Notification System is a telephone-based system designed to
6 alert and provide emergency instructions to the general public, by placing phone calls
7 from the government to private party phone numbers. Once a public safety official
8 determines that there is a need to alert at-risk citizens, he or she can request activation
9 of an ECNS plan.
- 10 • Wireless Emergency Alerts can be sent by state and licensed Emergency
11 Management agencies, for three alert categories – imminent threat, amber alerts, and
12 presidential disasters. They look like text messages, but are designed to get your
13 attention with a unique sound and vibration, that is repeated twice. WEAs are limited
14 in size to 90 characters, and should include the type of the alert, what you should do
15 and who is telling you what to do. They are not affected by network congestion and
16 don't disrupt texts, or calls that are in progress
- 17 • FlashAlert distributes emergency messages, such as breaking news or weather closure
18 information, and news releases from participating organizations to the media for
19 broadcast and web display.
- 20 • The Emergency Alert System (EAS) is a national public warning system that requires
21 broadcasters, cable television systems, wireless cable systems, satellite digital audio
22 radio service (SDARS) providers, and direct broadcast satellite (DBS) providers to
23

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

provide the communications capability to the President to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information, such as AMBER alerts and weather information targeted to specific areas.

- Social media has become the go to information site for much of our community and as such, we use sites such as Facebook and Twitter to provide information to people in the format they are most likely to use

At this time, each of these sites is accessed separately by CRESA staff in an emergency. This means for each of these systems we must separately map the area to be notified and create a message to be distributed. We must manually ensure uniform mapping and messaging across all platforms. Because two of our top four hazards, flooding and severe weather, are capable of being forecasted and allow for some pre-event notification and planning, these systems have been adequate. However, hazardous material events seldom allow for pre-event notification, expand rapidly and they have the capability of impacting communities both close to and removed from the immediate incident. Another limitation of our current notification systems is that we do not have the ability to send site specific messages to facilities within a mapped area. This means that when we map an area and send a message using the Emergency Community Notification System, there is one and only one message that is sent. This adds to the complexity of the notification requirements as special needs facilities may have shelter in place or evacuation protocols that are different from those of the general public. In addition to the standard special needs facilities in a community such as hospitals and assisted living facilities Vancouver

1 is the location for the state school the deaf and the state school for the blind. In the event
2 of a large spill or fire, CRESA does not have the ability to provide rapid, specialized
3 emergency notification to facilities such as these. In this type of incident my concern is
4 that our current systems, including the human element, will not be able to meet the
5 FEMA requirement or citizen expectation of prompt and reliable messaging because each
6 notification system must be activated separately. I am concerned that in a hazardous
7 materials incident our lack of integrated mapping, which is the ability to overlay
8 population density maps with a disaster impact map and with a map of the notification
9 area, will hamper our ability to provide incident command an accurate picture of who has
10 been informed of the event. This will negatively impact our ability to accurately inform
11 communities of what actions are most applicable to them regarding the emergency.

12 In hazardous materials incidents, it would be advantageous to have a more
13 comprehensive notification system. This would be a system that integrates all 5 of the
14 platforms I mentioned, as well as providing for GIS mapping, key facilities identification
15 (schools, hospitals, etc.), and role-based access to data and messaging. It would also
16 provide the ability to create group specific messaging and would be of more value to both
17 our responders and our communities. CRESA is exploring an upgrade to this type of
18 system, and although we do not have funding at this time, we believe that we may be able
19 to secure the funding to support them in the future. If the proposed terminal was to begin
20 operations prior to that time, and an incident occurs, I do not believe our current systems
21 will be able to cope with the demands of our responders or the needs of the community.
22
23

1 Q: What are your concerns as they relate to evacuation?

2 A: In Emergency Management we define evacuation as the orderly movement of people
3 from an area of danger to an area of safety. In the context of natural disasters we are
4 often able to pre-identify routes and population estimates based on GIS data for high risk
5 areas that allow us to make this movement more effective. It's important to remember
6 that not only are people leaving the impacted area, but that responders are entering the
7 area to deal with the emergency. To support both of these demands, the EOC may be
8 asked to work with other agencies, such as highway departments or public works, to
9 create one-way ingress and egress routes; or the EOC may be asked to help coordinate
10 additional resources such as buses or traffic control personnel. My evacuation concerns
11 center around these two areas. The first is the EOC's ability to provide accurate route
12 data to responders and the public in the event of a fire or explosion at the fixed facility or
13 along the rail line. The second is our ability to provide, if asked, adequate resources to
14 facilitate evacuation areas or buildings impacted by a fire or explosion at the fixed facility
15 or along the rail line. The second is especially challenging as we know that we will be
16 asked for resources to provide assistance to special needs communities. Special needs
17 communities are those communities whose members have disabilities, access, or
18 functional needs that prevent or hinder their ability to receive emergency instruction and
19 act on that instruction in an independent or unassisted manner. Examples of these
20 communities in Vancouver and Clark County that have the potential to be impacted
21 include assisted various living facilities, the Clark County Jail and Jail work center,
22 Washington State School for the Blind and Washington State School for the Deaf.

23

1 As I mentioned, whenever possible we plan for evacuation based on a known
2 threat, reasonable estimate of impacted population within a known impact area. For
3 planning purposes we have used the 2012 US Department of Transportation Emergency
4 Response Guidebooks recommended evacuation radius of ½ mile in all directions for a
5 containment vessel of approximately 34,000 gallons, larger vessels or multiple vessels
6 would likely require a larger evacuation zone. This planning has not addressed air quality
7 concern which would further expand the potential evacuation zone. For planning we
8 have used Clark County population density data to estimate an evacuation population of
9 7,000 to 13,000 based on various locations along the rail line and around the fixed site
10 using the 1 mile (1/2 mile in all directions from the incident) evacuation zone. These are
11 population density estimates based on residents, and do not include people who are
12 working in, visiting in or traveling through a potential incident evacuation zone.

13 In the case of the proposed fixed site oil terminal and the rail lines feeding it, our
14 standard evacuation model does not allow for detailed evacuation planning, but it does
15 help us to see the following areas of concern as they relate to both information and
16 resources.

- 17 • Bottleneck concerns on SR 501 and Old Lower River Road as responders
18 and evacuees move in opposite directions on a single, 2 lane road. The
19 Jail Work Center (JWC) and CPU River Road Generation Plant are points
20 of concern as they would have more concentrated populations. In the case
21 of the JWC there would be an added challenge of getting busses and
22 additional corrections officers into the site prior to the evacuation.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

- Bottleneck concerns on Fruit Valley road and the Mill Plain/Fourth Plain interchange are points of concern in the event of a Fruit Valley Neighborhood evacuation. Fruit Valley Elementary would require busses to come in to help with evacuation or residents would be required to shelter-in-place.
- Bottleneck or isolation concerns along the Columbia River as there are only five streets (Columbia Shores, Shorewood, Lieser, Ellsworth and 164th Avenue) that allow vehicles or people to evacuate the area between the river and Highway 14 while simultaneously allowing emergency responders to enter the area. The BNSF mainline as it transects Vancouver is located along the north shore of the Columbia River. State Highway 14 also parallels the north shore of the river to the north of the railroad tracks. This area is 4.78 square miles in size and has a population of 3,261 people. It is steeply sloped and there are only five streets that allow vehicles or people to evacuate the area between the river and Highway 14. A map of this area is attached as Exhibit A. These streets are not designed or built to serve as evacuation routes. In the event of a derailment, an evacuation of this area would be extremely difficult. Additionally, a derailed train that is 1.2 miles long would block several at-grade crossings and the only means of egress for residents living south of the railroad tracks. The difficulties of evacuation are magnified by the inability of the notification system to give differing evacuation instructions to different recipients.

- 1 • Staffing Concerns for traffic management personnel. Because many Clark
2 County Sheriff's Office (CCSO) personnel would be needed at the JWC it
3 is unlikely they would be available to assist the Vancouver Police
4 Department (VPD) in directing people to the proper evacuation routes,
5 once they are identified. Exact modeling data is not readily available.
6 However, using the University of California post-event crowd movement
7 data, we can anticipate VPD needing 7 sergeants and 38 officers for a
8 crowd size of 13,000 and 4 sergeants and 26 officers for a crowd size of
9 7,000.
- 10 • Staffing concerns for special needs facilities. The State School for the
11 Deaf and the State School for the Blind are in the potential expanded
12 evacuation zone for rail. At the School for the Deaf, the standard student
13 to teacher ratio is 2 staff for 7 students for residential students during non-
14 class room hours, and it is similar for the School for the Blind. Experience
15 shows that the number of staff needed to manage the people they are
16 responsible for doubles during an emergency. The staff's effective span of
17 control, which is defined as the number of individuals they can manage in
18 an emergency, shrinks due to the stress and lack of familiarity with the
19 emergency situation and need to evacuate. Finding qualified staff to assist
20 visual and hearing impaired students to safely evacuate this population
21 during a quickly expanding incident may not be feasible for the
22 Emergency Operations Center. Both schools have stated that, because of
23

1 the need to provide some form of individual instruction or assistance to
2 each student, they could not evacuate in less than 60 minutes if an incident
3 occurred during non-class room hours.

4 Q: What are your concerns as they relate to sheltering?

5 A: "Emergency management sheltering" refers to the establishment and maintenance of
6 facilities provided by a governmental agency to provide temporary housing to those
7 displaced by an incident. Sheltering may be supported by non-governmental
8 agencies(NGO's), but since providing for the public safety is an inherent obligation of
9 government, NGO's are not considered primary sheltering agencies. For planning
10 purposes, sheltering is divided into 2 board phases. The first phase is from the time of
11 the incident to 72 hours and the second phase is 72 hours and beyond. The sheltering
12 requirements may change during the first three days if the incident stabilizes and areas
13 that were initially evacuated as a precaution can be reoccupied. Our role at CRESA is
14 providing support and coordination in both phases, but our focus is on coordinating rapid
15 sheltering during phase 1.

16 We can predict, based on data provided by FEMA and supported by the American
17 Red Cross that during a disaster between 5 to 20% of an evacuated population will need
18 sheltering in an incident lasting more than 12 hours. This number is consistent across
19 notification and non-notification disasters, with the exception of earthquakes where the
20 level of area destruction could raise the percentage to 100% in some communities. The
21 two biggest determinates of sheltering numbers are notification time and economic
22 stability. With sufficient notification time, people have more ability to make alternate
23

1 living arrangements or to prepare to shelter in place. Without notification time people
2 default to public shelters as their primary resort. "Economic stability" refers to
3 individuals' ability to avoid public sheltering by staying with friends, relatives or funding
4 their own sheltering in hotels and motels outside the impacted area. Using the
5 evacuation numbers as a template we plan for a sheltering population of between 1,400
6 and 2,600 people for 72 hours. My concerns with this are largely in the resources areas.

- 7 • There are 1,100 hotel rooms in Clark County and they have an average
8 occupancy rate of 30%. That means there would be slightly over 700
9 rooms available at any given time and they are likely to be used by the
10 80% of the evacuees who can afford them, meaning they are not available
11 to use for community sheltering.
- 12 • Portable tents with basic climate control cost approximately \$9,200 per
13 unit and house eight people per unit. There are no such tents inventoried in
14 Clark County. In the event tents were available, the largest location to
15 provide tent shelters is the Clark County Fairgrounds, which is only large
16 enough to accommodate approximately 50% of the demand.
- 17 • We have a special needs community in close proximity to the proposed oil
18 terminal, the approximately 200 inmates of the Jail Work Center, whose
19 sheltering needs include a medium security site, integrated food service
20 and hygiene, court ordered segregation from the general public, and
21 separate accommodation by gender. These are unique to this population.

- According to the Washington Department of Health and Human Services an average of 45% of residents in assisted living facilities have some form of dementia and 13% are receiving the equivalent of inpatient care. There sheltering needs include increased space for health care workers and additional space and power/water to facilitate continued care
- All shelters must meet federal Americans with Disability Act requirements. This is not only a mobility requirement but an overall safety and wellbeing requirement for those with sight or hearing challenges.

Q: What do you believe will be the greatest challenge CRESA will face in supporting responders and the community in the event of an incident involving the derailment and explosion of a high hazard flammable train (HHFT) in its urban environment?

A: Coordinating resource support in those areas indicated as well as the traditional requests for firefighting apparatus and supplies. Keeping the general public informed so as not to overwhelm the 911 system, road ways and shelters with those who are not in immediate danger, but are scared none the less.

I declare under penalty of perjury of the laws of the State of Washington that the foregoing is true and correct to the best of my knowledge.

DATED this 10th day of May, 2016 at Vancouver, Washington.



Scott Johnson
Manger, Emergency Management Division
Clark Regional Emergency Services Agency