

Questions, Concerns, and Comments From the July 2, 2012 Public Meeting in Crockett

Sour Water Tank 294 Incident on June 15, 2012 From the Phillips 66 Rodeo Refinery

Background:

In the morning of June 15, 2012, the Phillips 66 Rodeo Refinery had an incident that involved the over-pressure of their “sour water” (dissolved ammonia and sulfur compounds) system that resulted in the release of natural gas, hydrocarbons, hydrogen sulfide, and mercaptans into the air. The incident resulted in an approximately 20-foot split of the roof-shell seam of Tank 294 that took approximately 36 hours to patch. During this time strong odors were detected in nearby communities, including Crockett, Rodeo, Benicia, and Bay Point.

Questions/Concerns:

Note, the following summarizes the questions and comments raised in the July 2, 2012 meeting along with responses from the various parties. Some of the responses listed below have been provided after the meeting took place to better answer the questions raised. Phillips 66 only provided further comment on questions 8, 9, 12, 15, 16, 19, and 23 after the meeting. Except where noted, Phillips 66 responses have been paraphrased from the video tape of the meeting.

#	Question/Response
1	<p>Question: Will the Phillips 66 slide show presented at the meeting be made available to the public?</p> <p>Phillips 66 Response: Yes, the slide show will be posted on the refinery’s website: http://www.sfrefinery.com</p> <p>Contra Costa Hazardous Materials Programs Response: The slide show, among other items related to the incident, have also been posted on the county’s website: http://cchealth.org/groups/hazmat/</p>
2	<p>Question: The Phillips 66 presentation described that the incident occurred at 7:10 am, but odors were in Crockett around 6:00 am and then overwhelming odors by 8:00 am. Is it possible there were releases earlier?</p> <p>Phillips 66 Response: There was a pressure spike on Tank 269, which is also in sour water service, at 6:45 am. This may have resulted in a puff of odorous material. The refinery is not aware of any earlier releases.</p>
3	<p>Question: If Phillips 66 is not aware of any releases prior to 6:45 am, and the same odors were in the Crockett community at 6:00 am, then are we to assume they came from normal operations?</p> <p>Phillips 66 Response: We are not aware of any odor calls that came in to the refinery at 6:00 am.</p>

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4	<p>Question: When did County Hazmat start air monitoring activities in the field?</p> <p>Contra Costa Hazardous Materials Programs Response: Incident Response team members were in the field at 8:09 am on Friday taking measurements using Jerome meters which provide instantaneous results of hydrogen sulfide (H₂S) in the parts per billion (ppb) range. They also had suma canisters which are little vacuum tanks which they used to collect grab samples and send to the Bay Area Air Quality Management District (BAAQMD) for analysis.</p>
5	<p>Question: Were the suma canisters tested the same day? I understand that sulfides degrade after 3 days. When did the suma canisters from County Hazmat get delivered to the BAAQMD and when were they analyzed?</p> <p>Contra Costa Hazardous Materials Programs Response: The suma samples were collected on Friday between the hours of 8:20 am and 9:08 am, and delivered to the BAAQMD on Friday June 15, 2012 at approximately 1:30 pm.</p> <p>BAAQMD Response: The canisters supplied to CCHMP by the District are glass lined. There is essentially no deposition of sulfides onto the inside surface of these type of glass lined canisters so there is no degradation.</p>
6	<p>Question: Contra Costa County operates a Community Warning System (CWS) that can sound sirens and make telephone calls to inform the public of significant incidents. How come the sirens and phone calls were not used for this incident? Sirens have been used in the past and everyone knows to go inside and shut their doors and windows. Why were sensitive receptors not notified?</p> <p>Contra Costa Hazardous Materials Programs Response: The CWS classifies incidents into levels, with Level 3 being the worst where sirens are sounded to advise the community to “Shelter-in-Place” and the Telephone Emergency Notification System (TENS) calls are made. A Level 3 event includes situations where offsite impact may cause eye, skin, nose and/or respiratory irritation to the general population. The Sour Water incident was classified as a Level 2. A Level 2 event includes offsite impact where eye, skin, nose and/or respiratory irritation may be possible for individuals with respiratory sensitivities. It is not in the CWS protocol to sound sirens or use TENS for Level 2 incidents. As a result of this incident, we now believe it would have been beneficial to use TENS for this event and are looking into changing our protocol. Our belief now is that even when a Shelter-in-Place has not been called, there might be certain types of Level 2 incidents where TENS may be beneficial to get messages out to the public.</p> <p>Contra Costa County Public Health Officer Response: During this incident we closely evaluated whether it should be called a Level 2 or Level 3. Since the concentrations of hydrogen sulfide (H₂S) in the communities were not high enough to result in eye, skin, nose and/or respiratory irritation to the general population, a Level 2 classification was appropriate. Sounding sirens are reserved for situations where the public needs to seek shelter immediately to minimize these types of impacts to the general population. Sounding sirens for the Sour Water incident might lead some people to think we are crying wolf since the expected health impacts were below the levels that would affect the general population. As stated previously, we are re-thinking the use of TENS for selective Level 2 incidents. We are working on developing a new message for TENS to broadcast when an event does not warrant sheltering-in-place but believe the public needs to know about.</p>

#	Question/Response
7	<p>Question: Is the telephone system associated with the CWS just for land line phones?</p> <p>Contra Costa Hazardous Materials Programs Response: TENS uses land line telephone numbers and mobile phone numbers that are voluntarily added to the system. Anyone can add their mobile phone number to the system. You can add you cell phone by calling 925-313-9622, or by registering on the following website: http://www.cococws.us</p>
8	<p>Question: Phillips 66 has a list of sensitive receptors that people in the community can sign up to receive a telephone call when an incident happens. I know people who are on this list; me included, and wonder why not everyone received a call? I received a call at 10:00 am from Phillips 66. Why did it take so long to call me?</p> <p>Phillips 66 Response: For those of you that don't know, Phillips 66 has a sensitive receptor list that has 137 names on it. At 9:00 am on 6/15/12 the system called one third of those on the list before the system failed and no further calls were made. If anyone wishes to be added to this list, please call 510-245-4400.</p> <p><u>[Subsequent to the meeting the following response was provided]</u></p> <p>The refinery has voluntarily established a list of residents and agencies who would like to receive a phone notification at the time of a CWS Level 2 incident. Currently, the phone notification list consists of 134 people. Anyone who would like to receive a phone notification from the refinery during a CWS Level 2 incident is invited to add their contact information to our "CWS Level 2 Community Notification Phone List". Please contact Aimee Lohr at (510) 245-5130 if you would like to be added to the list.</p>
9	<p>Question: It is my understanding that the fenceline monitoring system was originally set up to warn people that something was coming their way. There is supposed to be an alarm in the refinery at Unit 100 if the fenceline monitor goes off and then the county should be notified. How does the fenceline information get to the community?</p> <p>Department of Conservation and Development Response: The fenceline monitoring system's primary monitors are two Open-path Fourier Transform Infrared Spectroscopy Air Monitoring Systems (FTIRs), two Open-path Ultraviolet Air Monitoring Systems (UVs), and two Tunable Diode Laser Air Monitoring Systems (TDLs). The FTIRs, UVs, and TDLs are co-located along the refinery's north and south fencelines. There are also Organic Gas Detectors at six locations within the refinery. Each type of monitor detects a specific compound or group of compounds.</p> <p>The FTIRs and UVs operate by projecting a beam of light to a receiver located several hundred meters away. The TDLs are similar in that they project a beam toward a reflector that reflects the beam back to the projecting unit. Different compounds absorb different wavelengths of light. Thus, as compounds pass through the beam paths, various wavelengths of light in the beams are absorbed. By analyzing which wavelengths have been absorbed and to what extent, the system can determine which compounds are present along the fenceline and their quantities.</p> <p>The fenceline system is not designed to directly alert the community when a large release occurs. The Phillips 66 is required to operate the system such that it provides immediate automated notification to refinery personnel when chemical levels at or above CWS Level 2 and 3 are detected. The refinery is then supposed to take appropriate actions, including providing</p>

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	<p>notifications.</p> <p>The fenceline system reports to a public website (http://www.fenceline.org/xfence.php). Users can subscribe to the website and automatically receive emails or texts when the fenceline system detects compounds at CWS Level 2 and 3. However, the information displayed on the website is real-time and has not gone through quality control/assurance procedures. For this reason it is possible for the website to indicate a Level 2 or 3 release when one is not actually occurring.</p> <p>Phillips 66 Response: [As was said during the meeting] The over-pressured happened at 7:10 am; by the time the operator got out and noticed it we got the alarm at 7:16 am on the fenceline; by the time the operator got out there and saw what it was and called it in it was 7:20 am; and then that is when we started to respond. As was said earlier [during the meeting] it took us too long to activate the CWS and we need to be better than that. [Subsequent to the meeting the following response was provided]</p> <p>The Rodeo Refinery has a fenceline monitoring system that includes one Open Path Fourier Transform InfraRed Spectrometer (FTIR), one Open Path Ultra violet (UV) Spectrometer and one Open Path Hydrogen Sulfide Tunable Diode Laser (H2S TDL), are located on the Rodeo north fenceline (930 meter open path length) and south fenceline(820 meter open path length). The FTIR uses an infrared beam to identify compounds and calculate their concentration. The FTIR is set up to detect the following compounds: Ammonia, 1,3 Butadiene, Carbon Monoxide, Carbonyl Sulfide, Ethanol, Ethylene, Total Hydrocarbons, Mercaptan, Methane, and MTBE and Nitrous Oxide. Detection limits vary with the compound, and range from 4.5 to 15.75 parts per billion by volume (ppbv). The UV instruments use UV light beam to detect and measure Benzene, Toluene, Xylene, Ozone, Sulfur Dioxide, and Carbon Disulfide. The detection limits for all compounds are 5 ppbv. The H2S TDL transmits light emitted from the transceiver unit through the atmosphere to the retroreflector, which returns the beam back to the TDL unit where it is focused onto a photodiode detector. The amount of gas detected in the air is found by measuring the amount of light absorption from the beam and comparing this to a reference concentration. The detection limit for H2S is 25 ppbv. In addition to the three open path technologies on the north and south fencelines, there are six Organic Gas Detectors (catalytic bead and infrared open path) located along the eastern and western areas of the refinery. These detectors are set to alarm at 10 percent of the lower explosive limit for methane (or equal to 5,000 parts per million (ppm) as methane).</p>
10	<p>Question: It is my understanding that the fenceline monitoring system takes the results and averages the concentration over the entire distance of the 1 km fenceline. An H2S concentration of 12 ppm was seen on the Tunable Diode Laser sensor. Any idea what the peak concentration really was?</p> <p>Department of Conservation and Development Response: The individual chemical concentrations reported by the fenceline monitoring system are an average for each compound detected over the entire length of the beam path during five-minute intervals. For this reason, the actual concentration of a given compound at any location along the beam path could be many times higher or lower than the concentration that the system is reporting. Because the system is unable to detect exactly where a release is occurring along the beam path, the actual peak concentration of the June 15 H2S release cannot be determined, but could have been higher than 12 ppm.</p>

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	<p>Contra Costa Hazardous Materials Programs Response: As with any real time monitor, the measurement of the chemical by the monitor can only occur if the gas cloud with the chemical of concern comes in contact with the monitor’s means of measurement. A point source monitor will measure the amount of chemical that comes into contact with that monitor. It is not practical to line a fenceline with a number of point source monitors. For an open path monitor, a cloud must cross one of the beams from the monitor, but it has a greater opportunity to find a chemical of concern because of its much larger path.</p>
11	<p>Question: I have been coming to meetings forever and we always talk about the fenceline monitoring system. Do you think this monitoring system is adequate?</p> <p>Phillips 66 Response: The refinery uses thousands of instruments to notify us on what is going on or if something unusual is happening. In this particular incident the pressure readings and alarms we got from the tanks were the first things that notified us before there was a release. We certainly knew something was going on and were responding to it before there was a failure.</p> <p>Contra Costa Hazardous Materials Programs Response: One of the limitations to the fenceline monitoring systems is that something has to cross a beam internal to each system before any chemical would be detected. Since each fenceline monitoring system runs horizontally along Phillips 66’s north and south eastern fencelines, it is possible for the wind to take the gas above the beams or in a different direction, resulting in no chemicals being detected. This time the north fenceline monitoring system detected some values. This is the best available technology for determining the concentrations of specified chemicals in the air along a fenceline.</p> <p>Contra Costa County Public Health Officer Response: The fenceline monitoring system is only a tool that assists in identifying something is happening. It is not the only piece of equipment used to determine whether an incident happened.</p> <p>Department of Conservation and Development Response: The fenceline monitoring system was installed following the 16-day Catacarb release in 1994. As the system is capable of detecting numerous compounds coming over the refinery’s fencelines and reports to a publicly-accessible website, it allows the public to monitor refinery emissions and prevents an extended release from going unnoticed. In that role the system is adequate. However, the system has shortcomings. As explained previously, compounds are detectable only when they pass through the beam paths and the system cannot determine the actual concentration of a given compound at a particular location along the fenceline. Also, the detection limit for hydrogen sulfide is far above the level where one would begin to smell the gas, though still far below the level where the gas becomes a threat to public health. For these and other reasons, the system’s value as an early-warning device is limited.</p>
12	<p>Question: It took 30 minutes for Phillips 66 to contact the County after the Tank 294 split open, and then it was only a Level 1 notification. A Level 2 notification did not happen until almost an hour after the incident started. The County is supposed to be notified immediately. Why did it take so long and did the refinery notify the County quickly enough? Did the County respond quickly enough?</p> <p>Phillips 66 Response: When we first got the report what it was we decided to activate the</p>

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	<p>warning system as a Level 1, and probably 1-2 minutes later we decided this should have been a Level 2. By that time our incident responder was gathering our response team and he did not get to the terminal to upgrade it to a Level 2 quick enough. We agree that it took too long to start the CWS but we were doing a lot and responding in many ways. It also took us too long to update the CWS to a Level 2. At the time we had one person responsible for initiating and updating the CWS and that person had too many other assignments that delayed everything. We need to do better.</p> <p><u>[Subsequent to the meeting the following response was provided]</u></p> <p>The over-pressure event in Tank 294 caused a separation in the tank roof to shell seam at 7:10 a.m. At 07:15 hrs the Operator became aware of overpressure on Tank 294 while working at Tank 269. He blocked in the transfer pipeline to Tank 269 and closed the Odor Abatement bypass before responding to Tank 294. At Tank 294 both the Operator and his Shift Supervisor observed the separation in the roof to shell seam. An emergency was then called in at 07:22 hrs by the Bulk Shift Supervisor. The emergency announcement initiated the CWS Notifications process by the Shift Superintendent. The response efforts included emergency response team members responding directly to Tank 294 and activation of the Refinery Incident Management Team (IMT) and Emergency Operations Center (EOC). The Community Warning System activation for a Level 1 incident was completed at 07:40 hrs; approximately 18 minutes after the emergency was declared. The incident was up-graded to a Level 2 incident at 08:00 hrs. Phillips 66 strives to perform rapid and accurate CWS notifications whenever incidents occur. We will evaluate our methods and work with the County to improve this process.</p> <p>Contra Costa Hazardous Materials Programs Response: Contra Costa Hazardous Materials Programs (CCHMP) was notified by Phillips of the CWS Level 1 incident at 7:41 am. There was a substantial delay in Phillips’ initial notification to the County and we have asked Phillip’s to review and revise their notification procedures. CCHMP staff immediately responded to the initial notification by opening the Division Operations Center, mobilizing staff to the refinery’s emergency operation center, and to the scene with the appropriate equipment to monitor the chemicals that were in the air. Response staff arrived in the Cummings Skyway area and began air monitoring at 8:09 am.</p>
13	<p>Question: Like many people here, I was sensitive to the odor and have been coughing for the last two weeks. I tried calling the refinery first, instead of the Air District like requested, but nobody picked up the phone and the outgoing recording identifying an incident was going on did not change until after 9am. I left a message, but did not receive a call-back until late afternoon. During these types of situations, can Phillips 66 have more staff available to answer the telephone and make call-backs?</p> <p>Phillips 66 Response: It is true that we did not have a live person answering the telephones until 8:45am and that one person was likely overwhelmed. We probably need to have more than a single person to answer the phones.</p>
14	<p>Question: How do I add my name to the Phillips 66 Rodeo Refinery’s sensitive receptor list?</p> <p>Phillips 66 Response: You can contact a member of our Community Advisory Panel (CAP) or call the following number: 510-245-4400.</p> <p>Contra Costa Hazardous Materials Programs Response: As mentioned earlier, the Hazardous Materials Programs works closely with the media on getting information on the incident and</p>

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	<p>the protective actions to take during the incident. The Hazardous Materials Programs posts information on the incident the Health Services website (www.cchealth.org) and uses Facebook and Twitter on getting information out. The County is working with the 2-1-1 system to assist in being a resource for information to members of the public to share information on ongoing significant incidents and health concerns. The Sheriff's Office through the CWS uses Twitter and Facebook. The CWS group plans on getting messages to 2-1-1 to keep them in the loop. In the near future, when dialing '2-1-1' on your telephone you should be able to get updates on significant incidents.</p>
15	<p>Question/Comment: I find it interesting that this is the first I have heard about the refinery having a sensitive receptor list and I have attended many other refinery-related meetings in the past. It seems to me that today's meeting could have been advertised better (e.g., half-page ads in the Crockett Signal paper, banners on Community Center and Cummings Skyway that you can read from your car). Phillips 66 should provide better community outreach to the communities of Rodeo and Crockett. I hope you take the point on the need to sound sirens for releases. Phillips 66, please don't fight our school taxes anymore.</p> <p>Phillips 66 Response: <u>[Subsequent to the meeting the following response was provided]</u> Phillips 66 continually seeks to improve its operations, environmental stewardship, and community relations, among other things, and will use learnings from this incident to improve in those areas and its community outreach efforts overall.</p> <p>Contra Costa Hazardous Materials Programs Response: Articles appeared in the Contra Costa Times on the meeting that included the date, time, and location of the meeting. Flyers were posted throughout the communities announcing the meeting. The meeting was advertised in the media, with notices posted at commercial locations in Crockett and Rodeo and through e-mail distribution to various organizations in Crockett and Rodeo. There were over 100 people that did attend the meeting. Taking out paid ads in the local paper and posting a road banner are good suggestions for additional ways to promote community meetings, and will be taken into consideration for potential future meetings.</p> <p>Sirens will be sounded when it is expected that people will have a health impact from the release and there is a need for people to shelter-in-place. The Hazardous Materials Programs and the Community Warning System are in the process of revising the existing policy on using the Telephone Emergency Notification System (TENS) such that TENS calls will be made for select Level 2 incidents.</p>
16	<p>Question: One of the major issues with this incident was there was little information shared with the community on what to do. Should we shut our windows or not? Even stating that you don't know when the problem will be fixed gives a lot of information. Where do we get information on the incident, Phillips 66 or County Hazmat? If County Hazmat is used, can a link be placed on the Phillips 66 website to County Hazmat? The sirens should have gone off for us to take action.</p> <p>Contra Costa Hazardous Materials Programs Response: Although this was not a shelter-in-place event, shutting your windows is a good option if you then look for more information either by calling, tuning into the radio or TV, or through the internet. The Hazardous Materials staff works closely with KCBS 740 AM to get information out during an incident. As stated previously, the CWS group does not believe that sounding sirens for Level 2 events is the right</p>

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	<p>thing to do; instead TENS calls will be made for select Level 2 incidents. County Hazmat updated their website at 8am identifying there was an incident at Phillips 66. This website can be reached at: http://www.cchealth.org</p> <p>Phillips 66 Response: [Subsequent to the meeting the following response was provided] Yes, Phillips 66 will add a link to http://www.cchealth.org on our http://www.sfrefinery.com webpage.</p>
17	<p>Question: Why are emails or tweets not sent out to warn the public of these types of incidents?</p> <p>Contra Costa Hazardous Materials Programs Response: Contra Costa Health Services used Twitter at 8:17 a.m. and Facebook at 8:18 a.m. to alert the public that our Hazardous Materials Team was responding to the incident. Both updates instructed people to check cchealth.org, where we displayed updates throughout the incident. At 10:02 a.m., Contra Costa Health Services responded to questions about the incident from a member of the public who reached out via Facebook. Contra Costa Health Services continued to update Twitter throughout the day, including notices that the event could last all day and that people with respiratory problems should avoid area.</p> <p>If a member of the public chooses not to sign up for Facebook and/or Twitter, yet wishes to get information via those channels he or she would need to visit www.facebook.com/ContraCostaHealthServices and www.twitter.com/CoCoHealth to receive updates. If a member of the public wishes to "follow" us they can visit either of those websites and click Like or Follow, respectively.</p> <p>Using emails requires the public to provide their emails to us along with their location. It is difficult to keep up with changing email addresses. County Health is using Facebook and Twitter – these systems, not email, are more reliable and quicker to get the information out.</p>
18	<p>Question: Why wasn't external foam applied to Tank 294 early on to attempt to reduce off gassing and minimize odors?</p> <p>Phillips 66 Response: That was something we thought about very early on. When we originally set up the apparatus and we shot the water, there was such a long distance and such a small opening that we were not going to effectively get enough foam into the tank. So the strategy was to get the tank level down to the 13 foot level or get the system stabilized such that the fire fighters felt more comfortable moving the apparatus closer and then shoot the foam into the tank. We wanted to get foam on the tank much earlier but it was not possible due to the safety concerns.</p>
19	<p>Question: I have experience with various odors having attended various sniffing meetings. Early Saturday morning the winds changed and sent the odors to Rodeo and in doing so I believe I was smelling foam spray. Where did the foam go following application to the tank? Also I found out about the incident from Channel 2 news. Sensitive receptors should be informed; we should not have to dig for information.</p> <p>Phillips 66 Response: [Subsequent to the meeting the following response was provided] The foam that was put in Tank 294 was transferred along with the water to Tank 204 in the water recovery system. Tank 204 is currently isolated with only the material from Tank 294. The foam material will either be inserted into the refinery processing streams or otherwise</p>

#	Question/Response
	<p>managed in accordance with applicable law.</p> <p>Contra Costa Hazardous Materials Programs Response: As previously described for informing sensitive receptors of ongoing incidents, the CWS group has decided that making TENS calls would be beneficial for select Level 2 incidents like this one. This will notify everyone that has a land line in the area that is being notified and for people that have registered their cell phone to receive notifications.</p>
20	<p>Question: Will you post the results of the suma canister testing on the web?</p> <p>Contra Costa Hazardous Materials Programs Response: Yes. The results of the suma canisters collected by County Hazmat have been posted on our website: http://www.cchealth.org/groups/hazmat/</p>
21	<p>Question: The Chevron Refinery uses high resolution cameras to monitor their equipment and is able to detect subtle bulging of vessels before they rupture and see small breaks. Why doesn't Phillips 66 use that type of equipment to monitor their sour water tanks? How did Phillips 66 detect the release?</p> <p>Phillips 66 Response: Phillips 66 has a tank inspection program that inspects those tanks. The tank did do what it was designed to do for the seam split to relieve the pressure before the tank failed catastrophically. We do have all of the techniques that Chevron and the other oil companies have to inspect the integrity of our equipment and tanks. The refinery does have flare cameras that are used for gas detection. Unfortunately in this case, the pressure build-up in the tank went up so quickly the tank seam ripped open. Unless someone was out doing a search of the different tanks in the refinery at 7:10 in the morning, which would probably not happen, they are unlikely to have been there at that tank at that moment when the tank opened up. We do have those types of gas detection cameras, and we use them all the time, but we cannot look at all the equipment all of the time.</p>
22	<p>Question: Can people go over to Rodeo and give them information or add them to the sensitive receptor list? We want to be as informed as the residents of Crockett.</p> <p>Phillips 66 Response: You can be added to our sensitive receptor list by calling 510-245-4400. Our website has been updated and there is a Phillips 66 CAP meeting planned for the 4th Monday in July that will be open to the public. This meeting was held in Rodeo on July 23, 2012.</p>
23	<p>Question: I called the refinery at 6:43 am, 7:23 am, and 7:57 am on Friday due to the odor and the recording said there was no incident going on. At 8:43 am my CO detector went off and I called again. Would the release that occurred at Phillips 66 cause a household carbon monoxide monitor to alarm? I am really frustrated that I received no call backs and the odor was so bad and people were not asked to shelter-in-place.</p> <p>Phillips 66 Response: <u>[Subsequent to the meeting the following response was provided]</u> Numerous types of household Carbon Monoxide (CO) detectors are available for purchase. Several manufacturers offer multiple types of detectors that each utilizes different technologies of sensors. It is not possible to provide a definitive answer due to the large amount of variables that could affect sensor cross sensitivity.</p> <p>Contra Costa Hazardous Materials Programs Response: According to one manufacturer, the</p>

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	<p>sensor in carbon monoxide detectors are susceptible to a number of substances including vapors, aerosols, or smoke that contain sulfur compounds.</p>
24	<p>Question: A series of detailed questions were asked regarding sour water equipment level controller, LIC-239, and relief valves on T-269 and T-294. After this series of questions and responses, the following general statements were made. I suggest you place an indicator on the pressure relief valves on the sour water tanks so that you know when they open. Also suggest that you replace the sour water tanks with ones that can handle more pressure. I also request copies of the maintenance schedule logs for the indicator and for the relief valves on T-269 and T-294.</p> <p>Phillips 66 Response: (See the meeting video for responses to individual questions. CCHMP is not aware of any refinery responses to the general comments made above during or after the meeting.)</p>
25	<p>Question: I don't feel you need to be on a special list to receive a phone call that something is going on; everyone should be called. You mentioned you have 100+ tanks. What steps are you doing now to make sure other tanks do not release material into the community?</p> <p>Phillips 66 Response: We are committed to doing a thorough design review of our sour water system and use best practices to make sure we have the latest technology and the best equipment.</p> <p>Contra Costa Hazardous Materials Programs Response: As previously described, the Hazardous Materials Programs and the CWS group has decided that making TENS calls would be beneficial for select Level 2 incidents like this one. The Telephone Emergency Notification System (TENS) is one of the tools of the CWS and is used to call landline phones in the area that is designated and cell phones that individuals have listed on the CWS cell phone call out list. You may add your cell phone number to the list, which you can do by calling 925-313-9622, or by registering on the following website: http://www.cococws.us</p>
26	<p>Question/Comment: Several years ago the refinery decided not to renew the Good Neighbor Agreement for the communities of Crockett and Rodeo identifying one of the reasons was they thought they were being a good neighbor because of an increase in safety culture. I think you have failed to demonstrate this safety culture to the community and I request that you open up discussion on a new the Good Neighbor Agreement with the community.</p> <p>Phillips 66 Response: (CCHMP is not aware of any refinery responses to the comments made above during or after the meeting.)</p>
27	<p>Question: I live in Rodeo and was impacted by the strong odors early Saturday morning and woke up with yellow dots around my car. What chemical could be on my car? Could that be from the Phillips 66 incident?</p> <p>Phillips 66 Response: This is the first report of any powdery yellow material that I have heard. I don't know what that might have been, but I will get your information and put you in contact with a refinery specialist to follow-up on this.</p>
28	<p>Question/Comment: I believe it is inappropriate to have this meeting in conflict with another regularly scheduled government meeting in Crockett.</p>

#	Question/Response
	<p>Contra Costa Hazardous Materials Programs: This date and time worked for all the different parties that presented information this evening, which included the refinery, Hazardous Materials Programs, Supervisor Glovers' Office, the Public Health Director, and the location was available.</p>
29	<p>Question/Comment: I smelled the odor at 6:00 am on Friday. I called the BAAQMD and left a message and got a personal report from an inspector at 7:30 am in Benicia who said he smelled the odor there at 7:30 am. I believe the only reason that we are here at this meeting is because the refinery got caught. I believe Phillips 66 knew the system broke down earlier. Phillip 66 needs to be more responsible and proactive and we need to be on a telephone system.</p> <p>(No responses provided)</p>
30	<p>Question: I have a small child and small dog with hair falling out and itching all over the place. My daughter has had headaches and is itching and has a stomach ache. Could this be the result of the strong odors? Could this be after effects of the incident?</p> <p>Contra Costa County Public Health Officer Response: People could get headaches and nausea from smelling H2S at the time of exposure, but it is unlikely to last this long. I do not know what is causing these symptoms that have lasted this long. I suggest you take your daughter to a doctor for an examination.</p>
31	<p>Question/Comment: I am new to the area and have no idea who to call or where to go for information. My house still smells. You keep saying there is nothing to worry about, but how are you going to help us? What are you going to do if this happens again?</p> <p>Phillips 66 Response: I think it is clear that the overriding theme is should have communicated better and responded quicker to the incident. I think we all agree that we have some good lessons learned here. We are committed to not let this happen again.</p> <p>Contra Costa Hazardous Materials Programs Response: The Hazardous Materials Programs is in contact with the news media during any event. There was very wide coverage of this event during the incident. Community members are asked to tune into their radios or televisions to get information. The Hazardous Materials Programs works very closely with KCBS 740 AM to get quick and accurate information to the public. As stated previously, the Hazardous Materials Programs believes that making TENS calls to the surrounding community for Level 2 incidents like these will occur in the future. County Hazmat also updates their website and places information on Facebook and Twitter for significant events. Our website can be reached at: http://www.cchealth.org/groups/hazmat/ In the near future 2-1-1 will be another location to get information.</p>
32	<p>Question: Can you please post the Root Cause Analysis (RCA) report on-line when it is completed?</p> <p>Phillips 66 Response: We are currently investigating this incident. Once our investigation is complete, we will provide a copy to County Hazmat and the public.</p> <p>Contra Costa Hazardous Materials Programs Response: Once the RCA report is received it will be posted at: http://www.cchealth.org/groups/hazmat/</p>
33	<p>Question: Can you please provide contact information for Michael Kent?</p>

#	Question/Response
	<p>Contra Costa Hazardous Materials Programs Response: Michael Kent can be reached at: Michael Kent Contra Costa Health Services Hazardous Materials Ombudsman 597 Center Ave., Suite 100 Martinez, CA 94553 (925) 313-6587 (925) 313-6334 (fax) Michael.Kent@hsd.cccounty.us</p>

**Phillips 66 Rodeo Refinery
Community Advisory Panel (CAP) Meeting
July 23, 2012
Rodeo Senior Center, 199 Parker Ave., Rodeo, CA
6:00 – 8:00 pm**

The following are notes (not transcript) from the CAP Meeting on Monday, July 23 at the Rodeo Senior Center.

Questions/Comments during Randy Sawyer’s, Contra Costa Hazardous Materials Programs (CCHMP), presentation:

Difference between CWS Levels and Incident Severity Levels

1. **Question:** Who makes the determination of the Severity Levels (e.g., I, II or III)?

CCHMP response: We do (i.e., Health Department).

Question: Based on what?

CCHMP response: Based on what is defined by each level in terms of its impacts on the surrounding community. Please see definitions of the different Severity Levels for a Major Chemical Accident or Release below:

- Severity Level III – A fatality, serious injuries, or major onsite and/or offsite damage occurred
- Severity Level II – An impact to the community occurred, or if the situation was slightly different the accident may have been considered major, or there is a recurring type of incident at that facility
- Severity Level I – A release where there was no or minor injuries, the release had no or slight impact to the community, or there was no or minor onsite damage

2. **Question:** It is usually difficult in the midst of an incident, but what about the determination made by the Refinery about what Level an incident should be and when to escalate? Does this determination dovetail with the Health Department’s assessment?

CCHMP response: No, it does not dovetail. Severity levels of an incident are determined by Contra Costa Hazardous Materials Programs staff after an incident. This is different than the Community Warning System (CWS) levels of activation. The original determination of the appropriate CWS level of activation is made by the refinery. The Hazardous Materials Programs staff can change the CWS level at any time.

Haz Mat Response to P66 Incident

3. **Question:** The “Catacarb” incident at Unocal 18 years ago prefaced this question. The Health Department said then that there would be no long-term effects from the public exposure of that release. However, the individual knows people who are still suffering from the effects of this previous release. In the July 2 public meeting in Crockett, Dr. Brunner told the audience that there are no long-term effects from H₂S exposure. Had the Health Department collected public health exposure information from the Unocal incident and studied those claims? Is there

someone in the Health Department that will collect information from this latest incident and conduct a study?

CCHMP response: There may have been a study on the Catacarb incident, but not that CCHMP is aware of. As for the latest incident, there is no study being undertaken. It is expected that with the recent incident the exposure to H₂S at the levels detected during the incident will have temporary and transient health effects. [H₂S levels during the incident, low odor threshold cited.]

4. **Question:** What program does the tank fall under?

CCHMP response: It falls under the Hazardous Materials Business Plan Program and may fall under the Aboveground Petroleum Storage Act (APSA) and the Hazardous Waste Generator Programs. It depends on how much petroleum product was in the “sour water” contained in the ruptured tank to determine if it is covered under APSA.

5. **Question:** Were water samples taken from the tank?

CCHMP response: No.

Questions/Comments during the Community Input and General Q&A portion of meeting:

6. **Question:** What happened to the waste (firefighting) foam spray from the incident? Where does it go? To the Bay?

CCHMP response: This question is best answered by the refinery although no refinery response was provided at or subsequent to the meeting.

7. **Question:** The “Good Neighbor Agreement” (GNA) was not renewed between the Refinery and the Community. P66 did not notify the County about the new hydrocracker project. At least the CCHMP should be notified and on board with the new project. Will P66 be fined for not making the notifications?

Department of Conservation and Development response (subsequent to the CAP meeting):
The land use permit for the new hydrocracker required Phillips 66 to complete certain upgrades to the refinery and submit documentation demonstrating completion of these upgrades prior to the hydrocracker coming on-line. Phillips 66 completed the upgrades as required, but did not submit all of the documentation until after the hydrocracker was operating. No fines were levied because Phillips 66 completed the required upgrades on the timeline required by the land use permit.

8. **Question:** The Community hears the sirens all the time. But then you are saying that if the County/P66 goes to Level 3 that it would do more harm than good. Is the Refinery penalized for going a Level higher?

CCHMP response: No.

9. **Comment:** I watched the televised Crockett Community Meeting. I think you should err on the side of caution and make a conservative determination. We should be given a choice to take care of ourselves. I called BAAQMD; I could not get through to them. I “tasted” the effect of the release not smelled. It was a metallic taste. My breathing was affected; I could not take immediate action to protect myself. When the button is pushed, does the public know to go to the media? What should we do? [Because of the confusion/not knowing where to go] I have concerns with the Community Warning System. (Side comment: Did County check for other

compounds beyond H₂S? The metallic taste is indicative of arsenic poisoning.) You have to think about the people/public.

CCHMP response: The public should turn into the media for situations such as the one that occurred starting on June 15 to get more information. CCHMP works closely with KCBS 740 AM to get information out to the public about a release. Contra Costa Health Services posted during the incident information about the release on their web site at <http://www.cchealth.org>. The Community Warning staff is working with 2-1-1 staff to supply information about an incident so the 2-1-1 staff can give updates to people calling 2-1-1 during an incident. CCHMP will revise the current notification policy for the public for Level 2 incidents. There is no Telephone Emergency Notification System provision in the current policy; CCHMP will revise this so that some CWS Level 2 incidents will use the Telephone Emergency Notification System (TENS) to let the community know of the release and that a Public Health Advisory has been issued and what actions that the public wish to take.

Sheriff/CWS response: CWS is mainly about the effective deployment of the sirens for public protective actions (shelter-in-place), TENS, Emergency Alerting System. If the sirens were deployed it would have caused more confusion.

10. Comment: Is there an immediate single information source that the public can go to? More public outreach/education about these information sources.

CCHMP response: KCBS, 740 AM, telephone calls, Contra Costa Health Services' web site (<http://www.cchealth.org>), and in the near future 2-1-1.

11. Question/Comment: You said the alarm was not activated because it was "too late." The time when the Level 1 went to Level 2 was a matter of minutes. Obviously there was a lot of confusion; the public would not want to go on the internet. When will the Refinery be willing to push the button (i.e., Level 3)?

CCHMP response: When the incident was assessed, it would have been too late to sound the sirens because the H₂S odors were already in homes. It was hot that day, and to have people shelter-in-place in their homes where the air quality may have been worse inside their homes than outside also may not have worked as intended.

12. Comment: We are all experts in refinery odors. Systems are great and work as they should (despite their limitations). My advice: If you think there is a problem, do what you were trained to do. Do not wait for the systems to tell you what's happening (especially when these systems can fail). Use your experience from living in this area; protect your personal safety. Use common sense.

13. Comment: I have been living here for 20 years. The refinery has not been a "good neighbor". Why is there a special subset of the Community that gets notified – Sensitive Receptors List? Members of the Community have been experiencing rashes and getting biopsies as a result of this incident. I woke up on June 16 and had asthma; I was gagging. I left for South City. I am not on the Sensitive Receptors List, but I was affected. I don't understand the "unequalness."

14. Question/Comment: There is an emergency radio at the Crockett public swimming pool for monitoring. When alerts/notifications are released, many people may be at the public pool and won't have access to their phones or television sets. Can the messages be sent to this emergency radio?

CCHMP/Sheriff response: CCHMP will work with the Community Warning System staff to determine if this can be done. If it can be done, then pre-crafted messages/sequences that can be immediately dispatched will need to be developed.

- 15. Question/Comment:** There has been a focus on what actually happened. Will there be a discussion or look into what could have happened but didn't? How close were we to a major disaster? Is the County conducting an independent root cause investigation of release?

CCHMP/P66 response: There is an incident investigation underway at the Refinery. At this time, the County is not conducting an independent investigation, but it is working with P66 and ensuring that the Refinery is finding the root causes of the release. The community is urged to subscribe to CWS alerting system (get your number on the notification list).

Community Comment to response: P66 is not in our corner; I do not think that the County is either sometimes.

- 16. Comment:** We just want the facts. Something happened, something big that was not detected. There was a "dark cloud" that passed over the Community. What was that big thing? A lot of data was missed and we are reacting to that [information/data gap]. We are trying to put the pieces together.

P66 response: [Alluded to earlier presentation by P66]. The "spike" was considered a false positive.