

A Report of The 2023 – 2024 Contra Costa County Civil Grand Jury

**Report 2404
June 10, 2024**

County Petroleum Refineries And Hazardous Material Releases

Improving The Hazmat Response



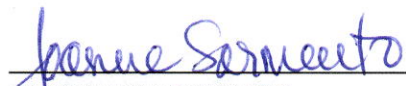
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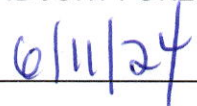
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Improving The HazMat Response

APPROVED BY THE GRAND JURY




JOANNE SARMENTO
GRAND JURY FOREPERSON

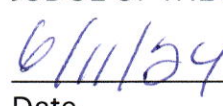


Date

APPROVED FOR FILING



Hon. TERRI MOCKLER
JUDGE OF THE SUPERIOR COURT



Date

SUMMARY

Contra Costa County is home to four petroleum refineries. Petroleum refineries store and utilize hazardous materials that pose a potential health risk to the surrounding community. To "promote prompt and accurate reporting of releases or threatened releases of hazardous materials that may result in injury or damage to the community and/or the environment" the Contra Costa Health Services Hazardous Materials Program (HazMat) administers the Hazardous Materials Incident Notification Policy (HMINP), approved by the Board of Supervisors in 1991.¹ As part of HMINP, HazMat can activate the Community Warning System (CWS) to alert surrounding communities to the release of hazardous materials. CWS is a web-based alert and notifications system that is designed to be activated by the petroleum refinery, preferably using a computer terminal at its facility connected to a similar computer terminal at HazMat.² HMINP includes specific guidelines to be used by the petroleum refinery to advise HazMat whether a particular release or threatened release poses a health hazard to the community, and to assess and report to Hazmat the severity of the risk created by that particular release.

As noted in HMINP Attachment A-1, the Community Warning System does not provide any direct notification to the public of any hazardous materials release that is not expected to have off-site health consequences, defined in HMINP as Level One releases. Our investigation confirms that CWS could be modified to provide direct notification to the public through phone calls, text messages and emails even for Level One releases, and we have concluded that this change to HMINP should be considered by the Board of Supervisors.

Currently, CWS is an "opt-in" system. Residents must register their cell phones to receive notifications on those phones of reported releases or threatened releases of hazardous materials. We recommend that the county continue to acquire all available cell phone contact data for county residents, and that the Board of Supervisors develop a plan to provide for a system in which all cell phone numbers of county residents are automatically added to CWS to include an option for the resident to "opt-out" of the system should they choose to do so.

As a separate matter, the current staffing structure used by HazMat to respond to hazardous material releases is, according to HazMat, not as effective as it should be, and to address this deficiency three new supervisory positions should be added to the staff. In addition, HazMat should place a toxicologist on retainer. This may reduce the current delay in the public's understanding of the health impacts of a hazardous release incident. These four positions can be added at no additional cost to the county and these staff changes should be considered by the Board of Supervisors.

¹ Relevant portions of the Hazardous Materials Incident Notification Policy can be found at: <https://www.cchealth.org/home/showpublisheddocument/719/638240012037070000>

² The refineries, Marathon Petroleum, Martinez Renewable Fuels, the Chevron Richmond Refinery, Martinez Refining (PBF Energy), the Phillips 66 Refinery in Rodeo, and four other industrial plants in the county that use hazardous chemicals (Chemtrade Logistics, Richmond, EcoServices, Inc. Martinez, Corteva Agrisciences, LLC, Pittsburg and K2Pure Solutions, Pittsburg) have and can use the computer terminal at their facility, which is the preferred method, or use an emergency response pager or telephone to notify HazMat.

BACKGROUND

Contra Costa County is home to at least nine industrial chemical processing facilities; four of Northern California's five petroleum refineries are located in the county. The petroleum refineries have released potentially dangerous compounds into the air and ground, endangering county residents' health. It is the responsibility of HazMat to monitor the compliance of the petroleum refineries and other responsible businesses³ with existing safety regulations regarding their use of hazardous materials, to respond to hazardous materials release incidents, and to report and provide warnings to the public regarding releases of hazardous materials.

The HMINP Notification System for CWS

HMINP authorizes notices to be provided by phone calls to landline telephones, and to cell phones with text messages and emails to individuals who have registered their cell phones with CWS, as well as for postings to social media such as Facebook and X (formerly known as Twitter), and information banners posted on the website maintained by HazMat. Landline phone numbers are automatically available to CWS using the reverse 911 directory.

HMINP defines releases or threatened releases as follows:

- A Level One release is not expected to have off-site health consequences.
- A Level Two release is expected to go off-site and may have adverse health consequences for sensitive individuals including those with lung or heart disease, the elderly, and the very young.
- A Level Three release is expected to go off-site and may have adverse health consequences for the general public.

For a reported Level Two or Level Three release, HMINP provides notifications for members of the public who have registered their cell phones to receive messages from the system.⁴

CWS is used by the county to provide notifications to residents for all potential life-safety hazards, not just hazardous materials releases, but also for fires, earthquakes, floods, and law enforcement activities. CWS is maintained and operated within the county's Office of the

³ Defined in HMINP, Section III, as "facilities and other entities that have custody of the hazardous material at the time it is accidentally released or the facility where the release occurs."

⁴ Until May 2023, HMINP did not require text messages and emails be sent to registered cellphones for a Level Two release. As with Level One, only postings on social media and on the HazMat website were provided to the public. That policy was amended to provide for direct notifications for a Level Two release, and HazMat is to be commended for adding this important modification to HMINP.

Sheriff's Emergency Services Division. Residents must affirmatively register their cell phones with CWS directly to receive notifications on those devices.⁵

Every responsible business in the county, including the petroleum refineries, is legally required to immediately notify HazMat of any release of hazardous materials. This requires that the business set the initial classification level of the release. The county relies on the responsible businesses to comply with this HMINP policy so HazMat can provide accurate notifications to the affected communities.

Releases reported to HazMat occur frequently. As shown in Appendix One, in the thirteen months following November 2022, the four petroleum refineries in the county notified HazMat of 247 releases. These included flares, fires, and spills. This report focuses specifically on the petroleum refineries, but the findings can apply to all regulated responsible businesses in the county.

Development of an Opt-Out Registration for CWS

About 30% of county residents have registered with CWS with the result that the 70% of residents who have not registered may not receive any alerts or notifications. With an opt-out system, additional residents' cell phones would automatically be added to CWS to be used for any emergency or informational notification, and more residents would likely receive notices concerning hazardous material releases. The resident would then have the option to remove the cell phone number from the system. CWS is permitted by state law to obtain the necessary information from cell phone providers to compile the necessary data.⁶

When an incident occurs HazMat must be notified by the refinery, preferably from the remote computer terminal maintained at the refinery facility, or by emergency response pager or telephone. HazMat then consults with the refinery and may send 5 or 6 staff technicians to investigate and assess the incident on site. A refinery may categorize a hazardous release as only a Level One when it should have a higher classification. HMINP allows HazMat to change a Level One notification to a Level Two or Level Three, and this authority was used for a sulfur release from Martinez Refining Company (MRC) on December 15, 2023, due to noxious odors emitted from the facility as reported by the public.⁷ However, if an incident is not reported by a petroleum refinery to HazMat, it can be too late to activate CWS. The recent example is the unreported Thanksgiving 2022 release from MRC of an estimated 20 tons of spent catalyst used in their refining process. The release began on November 24 and continued into the early hours of November 25. HazMat learned of the release only from media accounts two days after it had

⁵ Notices can in very specific circumstances be automatically sent to unregistered cell phones directly from cell towers to phones within range of a tower or towers under the federal Wireless Emergency Alert System.

⁶ Government Code Section 8593.4 provides in relevant part: "(a) A local government may enter into an agreement to access the contact information of resident account holders through the records of a public utility for the sole purpose of enrolling residents of that local government in a city-operated, county-operated, or city- and county-operated public emergency warning system."

⁷ <https://www.eastbaytimes.com/2023/12/15/health-advisory-goes-out-to-martinez-residents-after-suspected-flaring-at-refinery>

begun. Spent catalyst ash was found in the neighborhood surrounding MRC on cars and other outside surfaces. When HazMat learned of the release, the substance was no longer airborne and CWS was not activated. As analyzed by county and state investigators, including technicians from HazMat, and confirmed by lab reports, the release contained aluminum, barium, chromium, nickel, vanadium, and zinc. HazMat ultimately designated this release as a Level Two or higher. In January and March of 2023, HazMat advised residents on its website and through press releases not to eat produce from home gardens due to the release. A toxicology report was not commenced until May and not completed until June 8, 2023, approximately 6 months after the release. HazMat then issued an “all clear” notice for the home gardens. The release incident was classified under Section H. 3 of HMINP as a Major Chemical Accident or Release (MCAR), which accordingly authorized the establishment of an ad hoc Oversight Committee to provide an independent root cause analysis, incident investigation, and community exposure/risk assessment of this release by MRC.⁸

Notifications for Level One Incidents

There is recent evidence that members of the public who have registered their cell phones want more information from CWS regarding hazardous material releases than is currently provided. A survey was conducted by Contra Costa Health Services from December 15, 2023 to January 19, 2024 that received 560 responses from 61 zip codes, primarily in Martinez, Pittsburg, and Richmond. Approximately 87% of the survey respondents indicated they would like to receive direct information regarding CWS Level One incidents.⁹

On May 30, 2024, Contra Costa Health Services proposed to the ISO/CWS committee a modification to HMINP to provide for community awareness messaging for Level One incidents that include odor, audible impact, flaring lasting longer than 20 minutes or visible plumes off site. The proposal is currently under further review by HazMat as well as by the Office of the Sheriff’s Emergency Services Division. HazMat is also to be commended for this initiative.¹⁰

Improvement of Staffing at HazMat

Concerning staffing, we have confirmed from public records that the Contra Costa Health agency which operates HazMat is approved by the Board of Supervisors to assess annual permit fees to

⁸ On January 5, 2023, HazMat asked the Contra Costa County District Attorney to take legal action against MRC for this unreported incident. On or about November 16, 2023, the District Attorney announced the commencement of a Joint Civil Enforcement Action against MRC. The conduct of MRC from November 2022 to December 2023, as listed in Appendix One, is not further addressed in this report which focuses on the resources and response capabilities of HazMat, HMINP, and CWS.

⁹ A Summary of Survey Results is attached as Appendix Two.

¹⁰ The proposal includes a new Level Zero notification policy posted solely on the Contra Costa Health Services website for hazardous material releases with no off-site impact of any kind.

the responsible businesses pursuant to the Contra Costa County Certified Unified Program Agency (CUPA) to cover the costs of administering the HazMat program, including HMINP.¹¹

CUPA fees have not been modified since 2012 and Contra Costa Health Services has hired an outside contractor to perform a CUPA fee study which is in draft status and currently not available for inclusion in this report. We have learned that the purpose of the new CUPA fee study is to support the request from Contra Costa Health Services for a change in its organizational structure to establish the job classification of Supervising Hazardous Materials Specialist and add three such positions to report directly to the Assistant Director of HazMat.

On February 22, Contra Costa Health Services made a detailed report to the Industrial Safety Ordinance/Community Warning System (ISO/CWS) committee of the Board of Supervisors describing the proposed new organizational structure. Contra Costa Health Services has provided the ISO/CWS committee with its assessment of the improvements the proposed new organizational structure and new staff positions would provide.

METHODOLOGY

We have reviewed documents provided by Contra Costa Health Services, materials posted on the websites maintained by HazMat, the Martinez City Council, the Board of Supervisors, and comments from the public made at open meetings of government officials. We have reviewed HMINP and interviewed both personnel from various county departments and an outside industry expert.

DISCUSSION

Development of an Opt-Out Registration System for CWS

Currently CWS is an opt-in system in which residents must affirmatively register their cell phones to receive notifications on those devices of reported releases or threatened releases of hazardous materials, a system that presently includes only about 30% of county residents. We have concluded that an opt-out system in which all cell phone numbers of county residents are automatically added to CWS can be implemented by acquiring from public and private agencies, as permitted by state law, cell phone contact data for county residents, and that the Board of Supervisors should use this data to develop a plan to provide for a system in which all cell phone numbers of county residents are automatically added to CWS. The plan would include an option for residents to opt out of the system should they choose to do so.

Notification of Level One Releases

In addition, and whether or not an opt-out system is adopted, the survey evidence now available supports a finding that members of the public who have already registered their cell phones want to receive information from CWS on Level One releases. Residents should be given the option to receive this additional information.

¹¹ HazMat also administers under CUPA, the California Accidental Release Prevention Program, the Underground Storage Tank Program, and the Aboveground Petroleum Storage Act Program pursuant to Health and Safety Code Section 25404.

Improvement of Staffing for HazMat

As reported to the ad hoc ISO/CWS committee of the Board of Supervisors, Contra Costa Health Services proposes adding three new Supervising Hazardous Materials Specialists. Under the current structure just one Supervisor, the Assistant Director of HazMat, oversees twenty (20) staff-level Hazard Materialist Specialists, making oversight difficult and hampering field operations if more than once incident occurs at the same time.

The proposed Supervising Hazardous Materials Specialists would respond and supervise 5 staff-level Hazardous Materials Specialists from among the 20 who are assigned to respond to a specific hazardous materials incident. The Supervising Hazardous Materials Specialists would have the authority to make binding decisions on what action to take in the field in response to a particular incident. The proposed specialists would report to the Assistant Director of HazMat, providing that Assistant Director with increased capacity to complete administrative tasks such as reviewing contracts for engaging third party services, such as a retained toxicologist, in lieu of supervising responses to hazardous materials incidents in the field.

Putting a Toxicologist on Retainer

Had a toxicologist been on retainer to HazMat, the impact of the Thanksgiving MRC release on home garden produce could have been resolved sooner. The estimate from HazMat is that having a toxicologist on retainer would have saved as much as three weeks' time to complete a report assessment of the health consequences to home garden produce as compared to the current system which includes no retained toxicologist.

Funding

Funding to change the process for collecting residents' contact data, the cost to modify HMINP, the cost to implement an opt-out registration system, and the retention of a toxicologist could be included in the new CUPA fee structure and/or be funded from Measure X revenue. Measure X is the countywide, 20-year, ½ cent sales tax approved by voters on November 3, 2020. The ballot measure language stated that the intent of Measure X is “to keep Contra Costa’s regional hospital open and staffed; fund community health centers, **emergency response**; support crucial safety-net services; invest in early childhood services; protect vulnerable populations; and for other essential county services.” (Bold added.) Modification to the CWS registrations system, HMINP, and retaining a toxicologist, would accordingly be an appropriate use of Measure X funds.

FINDINGS

- F1. An opt-out rather than an opt-in system for all cell phone numbers of county residents should increase the percentage of residents receiving accurate and timely information regarding hazardous material releases.
- F2. A Level One incident that may include flaring, fire/smoke/plume, odors, or other conditions that can be observed or sensed by the public off site is not presently reported by CWS to landline telephones or registered cell phones, and the system can be modified to do so.
- F3. Contra Costa Health Services has hired an outside contractor to perform a CUPA fee study which is in draft status and currently not available for inclusion in this report.
- F4. One purpose of the new CUPA fee study is to support the request from Contra Costa Health Services for a change in its organizational structure to establish the job classification of Supervising Hazardous Materials Specialist.
- F5. Contra Costa Health Services is in the process of receiving approval from the Board of Supervisors to add three Supervising Hazardous Materials Specialists to its staff.
- F6. Placing a toxicologist on retainer would enable Contra Costa Health Services to obtain a toxicology report needed for some hazardous material release incidents without the delay of the current procedure.

RECOMMENDATIONS

- R1. By March 31, 2025, the Board of Supervisors should develop a plan to modify CWS so that it automatically registers all available contact data for all county residents and businesses into CWS and provides a mechanism for residents and businesses to opt out of the automatic registration process.
- R2. By December 31, 2025, the Board of Supervisors should complete the implementation of the plan to modify CWS so that it automatically registers all available contact data for all county residents and businesses into CWS and provides a mechanism for residents and businesses to opt out of the automatic registration process.
- R3. By December 31, 2024, the Board of Supervisors should approve a modification to HMINP giving residents the option to receive awareness messaging from CWS for Level One incidents that can be observed or sensed by the public off site.
- R4. By December 31, 2024, the Board of Supervisors should consider approval of the request from Contra Costa Health Services to establish the job classification of Supervising Hazardous Materials Specialist.
- R5. By December 31, 2024, the Board of Supervisors should consider approval of the request from Contra Costa Health Services to add three Supervising Hazardous Materials Specialists to the staff at HazMat.
- R6. By December 31, 2024, the Board of Supervisor should consider approval of the retention on retainer of a toxicologist by Contra Costa Health Services.

R7. By December 31, 2024, the Board of Supervisor should consider approval of the new CUPA permit fee schedule proposed by Contra Costa Health Services

REQUEST FOR RESPONSES

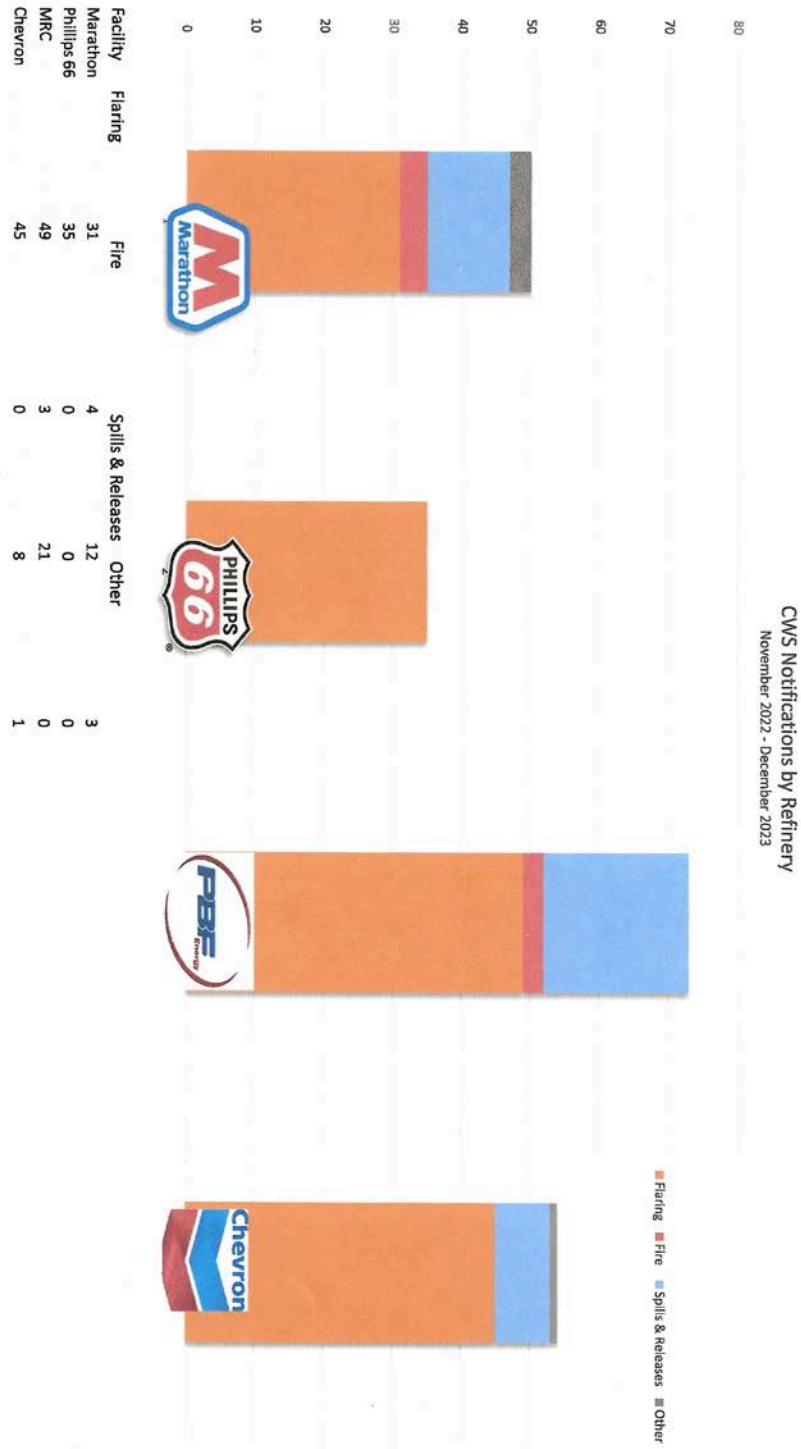
Pursuant to California Penal Code § 933(b) et seq. and California Penal Code § 933.05, the 2023-2024 Contra Costa County Civil Grand Jury requests responses from the following governing bodies:

Responding Agency	Findings	Recommendations
Board of Supervisors	F3, F4, F5, F6	R3, R4, R5, R6
Office of the Sheriff	F1, F2	R1, R2

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to ctadmin@contracosta.courts.ca.gov and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson
725 Court Street
P.O. Box 431
Martinez, CA 94553-0091

APPENDIX ONE



APPENDIX TWO



Summary of Survey Results

- 86.7% of respondents indicated they would like to receive information regarding CWS Level 1 incidents – Question 8.
- 72.5% of respondent would be interested in receiving text messages; 33.9% would be interested in receiving emails – Question 9.
- 79.5% of respondents indicated they would like the ability to select how they are notified for each type of incidents (e.g., fires, chemical spills, smoke, leaks, odors, and flaring) – Question 10.
- 75.1% of respondents indicated they would like the ability to select how they are notified for each level of incident – Question 11.
- Opportunities exist for increasing public awareness and education as it pertains to the CWS.