

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	8/8/2022 - 8/12/2022	
Media Program:	Air	
Regulatory Program(s)	Risk Management Program (RMP), 40 C.F.R. Part 68	
Company Name:	Occidental Chemical Corporation	
Facility Name:	Ingleside Plant	
Facility Physical Location:	1249 State Highway 361	
(city, state, zip code)	Ingleside, TX, 78632	
Mailing address:	P.O. Box CC	
(city, state, zip code)	Ingleside, Texas, 78362	
County/Parish:	Nueces County	
Facility Phone Number	Aron Baggett	
Facility Contact:	(361) 776-6000	Environmental Manager
	Aron_Baggett@oxy.com	
FRS Number:	110000599807	
Identification/Permit Number:	Air Operating Permit IDs: O1240 & O3806	
Media Identifier Number:	RMP: 100000157796	
NAICS:	325181 - Alkaline and Chlorine Manufacturing 325180 - Other Basic Inorganic Chemical Manufacturing	
SIC:	2869 - Industrial Organic Chemical, Not Elsewhere Listed	
Personnel participating in inspection/present at opening conference:		
Ray Gritte	Occidental Corporation	Tech Manager – Chloro-Alkali (C/A)
Scott Hill	Occidental Corporation	Maintenance Manager – Vinyl Chlorine Monomer (VCM)
Abraham Gonzales	Occidental Corporation	Technical Superintendent – Emergency Response Team
Robert Haney	Occidental Corporation	Maintenance Manager – C/A
Jennifer Lamden	Occidental Corporation	Safety Manage
Chris Keran	Occidental Corporation	Director – Process Safety
William Griffin	Occidental Corporation	C/A-Cogen Operations Manager
Aaron Baggett	Occidental Corporation	Environmental Manager
Lucas Hartman	Occidental Corporation	Ethylene Operations Manager
TJ McMinn	Occidental Corporation	Ethylene Maintenance Manager
Anna McMinn	Occidental Corporation	C/A Technical Manager
Adam J Brewer	Occidental Corporation	VCM Operations Manager
Rick Ritter	Occidental Corporation	Plant Manager
EPA Lead Inspector Signature/Date		
	Kayla Buchanan	Date
Supervisor Signature/Date		
	Samuel Tates	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

U.S. Environmental Protection Agency (EPA) Region 6 inspectors Kayla Buchanan and Howard Cole arrived at the Occidental Chemical Corporation Ingleside Plant (Occidental Ingleside) at 9:00 AM on August 8, 2022, for an announced inspection. EPA convened an opening conference and met with several representatives from the facility (*see Appendix 1*). Kayla Buchanan presented her credentials to the opening conference attendees and informed them that this was an EPA inspection to determine Occidental Ingleside's compliance with the Clean Air Act Section 112r (1) and (7), the General Duty Clause and 40 C.F.R. Part 68 requirements, respectively.

FACILITY DESCRIPTION

The Occidental Ingleside Plant occupies 1,504 acres along the Texas Coastal Bend. The facility is located on Highway 361 near Corpus Christi, Texas, where it produces important commodity chemicals such as chlorine, sodium hydroxide (caustic soda), ethylene dichloride (EDC), vinyl chloride monomer (VCM), and ethylene. The site has sixteen RMP-regulated substances that are products, intermediates, or raw materials: ammonia (anhydrous), butadiene, butane, chlorine, chloroform, ethane, ethyl chloride, ethylene, hydrogen, hydrogen chloride (anhydrous), methane, pentane, propane, propylene, vinyl chloride, and vinylidene chloride. Approximately 352 full time employees and 164 contractors are employed at the facility. There are 4 RMP Program Level 3 processes at the facility. There is no union present at the facility.

Section II – OBSERVATIONS

40 C.F.R. Part 68 – CHEMICAL ACCIDENT PREVENTION PROVISIONS

Subpart A – General

On August 8, 2022, EPA conducted a driving tour of the Occidental Ingleside covered processes and were accompanied by Aron Baggett, Environmental Manager, and William Griffin, Cogen Operations Manager. EPA observed the covered process, equipment, operations, control rooms, and emergency equipment. EPA interviewed operators and asked questions about their training, their involvement in the Management of Change (MOC) and Process Hazard Analysis (PHA) processes, and the facility's normal operating and emergency procedures.

40 C.F.R. § 68.10 Applicability – Occidental Ingleside is the owner/operator of a stationary source that has more than the threshold quantities for sixteen RMP-regulated substances in its processes; therefore, the RMP regulations are applicable. Occidental Ingleside has a Clean Air Act Title V Air Operating Permit and is categorized under the North American Industrial Classification System (NAICS) Codes 325181 and 325180. In addition, this facility is subject to the Occupational Safety and Health Administration's (OSHA) Process Safety Management (PSM) Standard (29 C.F.R. § 1910.119), which categorizes Occidental Ingleside as a Program Level 3 facility. Occidental Ingleside last submitted a Risk Management Plan

registration update to EPA on May 10, 2021, which describes the processes containing the regulated chemicals stored at more than threshold quantities.

40 C.F.R. § 68.12 General requirements – The owner or operator of a stationary source subject to this regulation must submit a Risk Management Plan, as prescribed in 40 C.F.R. § 68.150 to § 68.185. The RMP must include a registration that reflects the covered processes. EPA reviewed the May 2021 re-submission of Occidental Ingleside's RMP. It listed the toxic and flammable regulated chemicals and the associated Program Level 3 processes.

40 C.F.R. § 68.15 Management – Occidental Ingleside developed a management system to oversee the risk management program. It assigned an individual in a qualified position who has overall responsibility for the development, implementation, and integration of the RMP elements. Responsibility for implementing individual requirements of this part was assigned to individuals other than the primary person identified, so the names or positions of these people were documented, and the lines of authority were defined through an organization chart or similar document.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – Occidental Ingleside is a Program Level 3 stationary source subject to this subpart; therefore, it is required to prepare a worst-case release scenario analysis and complete the five-year accident history.

40 C.F.R. § 68.22 Off Site Consequence Analysis (OCA) Parameters – Occidental Ingleside employed the parameters specified by EPA in this rule by using the RMP*Comp™ software. EPA reviewed the off-site consequence analysis and supporting documentation to assure the data was accurate and correct.

40 C.F.R. § 68.25 Worse-case release scenario analysis – Occidental Ingleside identified and analyzed worst-case scenarios for each toxic and flammable substance in its Program Level 3 processes using the RMP*Comp™ software, thus meeting the requirements of the regulation. Occidental Ingleside identified and analyzed an additional worst-case scenario after determining that a release from another covered process at the stationary source could potentially affect public receptors different from those potentially affected by other scenarios identified.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – Occidental Ingleside identified and analyzed at least one alternative release scenario for each toxic and flammable substance in its Program Level 3 processes using the RMP*Comp™ software, thus meeting the requirements of the regulation.

40 C.F.R. § 68.30 Defining Off Site impacts - Population – Occidental Ingleside used the 2010 Census Bureau population data and the distances to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP. Occidental Ingleside used the *Circular Area Profiles* application to define the population surrounding the facility. In addition, Occidental Ingleside provided a map documenting the nearest public receptor. The off-site impact population determination will need to be updated with the 2020 Census Bureau information for the next registration renewal.

40 C.F.R. § 68.33 Defining Off Site impacts – Environment – Occidental Ingleside used US Geological Survey maps data to determine the environmental receptors and the distances to endpoints.

40 C.F.R. § 68.36 Review and Update – Review of available documentation confirmed that Occidental Ingleside reviews and updates its off-site consequence analysis every 5 years.

40 C.F.R. § 68.39 Documentation – Occidental Ingleside maintained records of the off-site consequence analyses in accordance with this subpart. These records included:

- a description of the vessel or pipeline and substance selected as worst case and alternate release scenarios, assumptions and parameters used, and the rationale for selection of specific substances;
- documentation of estimated quantity released, release rate, and duration of release;
- methodology used to determine distance to endpoint; and,
- data used to estimate population and environmental receptors.

40 C.F.R. § 68.42 Five-year accident history – The regulation requires Occidental Ingleside to include a five-year accident history in its RMP submission. The accident history must describe all accidental releases of RMP chemicals from covered processes that resulted in deaths, injuries, or significant property damage on site, or known off-site deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Occidental Ingleside stated it did not have any reportable accidental releases in the past five years that met these criteria. EPA examined incident investigations conducted at the facility, as well as Occidental Ingleside's OSHA Form 300 logs from 2017 to present, to ensure that additional releases from the facility which could possibly be included in the RMP five-year accident history, were not omitted.

40 C.F.R. § 68.65 Process Safety Information (PSI) – EPA reviewed Occidental Ingleside's PSI. The written process safety information enables the owner or operator and the employees involved in operating the processes to identify and understand the hazards posed by those processes involving regulated substances. Occidental Ingleside documented that its equipment complies with recognized and generally accepted good engineering practices (RAGAGEP). Occidental Ingleside's compilation of written PSI was lacking information pertaining to the equipment in the process, specifically for pressure relief valves. Occidental Ingleside failed to complete a compilation of written process safety information pertaining to the relief system's design and design basis for the equipment in the process **[AOC #1 - 40 C.F.R. § 68.65 (d)(1)(iv)]**. An audit of the pressure relief system was performed in approximately 2011-2012. The corresponding report is entitled "Applicability and Technical Basis for Relief Vent System Installed prior to January 31, 2011." The audit determined that the pressure relief design basis calculations were outdated and did not meet current industry requirements. The inspection identified deficiencies in approximately 189 pressure relief valves, which required complete re-design packages. At the time of this inspection, Occidental Ingleside had completed PSI redesign packages for less than 20 percent of the pressure relieve valves in the Vinyl Chloride Monomer Unit, Ethylene Dichloride (EDC) Unit, Chlorine Alkali Units, and Utilities area. The redesign requirements may result in changes to relief pressure set points or require the installation of new pressure relief valves.

40 C.F.R. § 68.67 Process Hazard Analysis (PHA) – EPA reviewed Occidental Ingleside's completed PHAs. Occidental Ingleside uses the Hazard and Operability Study (HAZOP) and Layer of Protection Analysis (LOPA) methodologies to determine and evaluate the hazards of the process being analyzed. The PHAs conducted should be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process; however, Occidental Ingleside's PHAs conducted from 2013-2022 were not appropriate to the complexity of the process and did not address the hazards involved in the process, based on the available process safety information. The facility conducted a pressure relief system study in 2011-2012, which determined that the pressure relief system design

basis and design calculations were outdated and did not meet current industry standards. The PHAs failed to address, evaluate or control the hazards posed by deficiencies in the pressure relief devices. Occidental Ingleside's PHAs also failed to evaluate and control the hazards related to pressure relief valves (PRV) to ensure that they discharge to a safe location. Many of Occidental Ingleside's pressure relief valves vent directly to atmosphere, and would discharge toxic chemicals (e.g., chlorine or vinyl chloride monomer) to the ambient environment in locations that could potentially affect workers. Toxic chemicals released from PRVs would pose a hazard to employees working on nearby ladders and platforms. There is no documentation in place that meets American Petroleum Institute (API) Standard 521 and Center for Chemical Process Safety (CCPS) Guidelines for Pressure Relief and Effluent Handling Systems to confirm that these PRVs vent to a safe location **[AOC #2- 40 C.F.R. § 68.67(a)]**.

Occidental Ingleside last completed a revised flammable chemical explosion assessment (i.e., blast study) in 2003. The 2003 blast study, for which all PHAs were based, is no longer current, and does not reflect changes in the process and equipment at the site. The 2003 blast study and subsequent PHA checklists for 2015 to 2022 address potential explosion outcomes and hazards resulting from a release of a flammable chemical; however, there is no consideration of the hazards posed by the release or combustion of a toxic chemical (e.g., chlorine, vinyl chloride monomer). As a result, Occidental Ingleside has not properly identified, evaluated, or recommended controls for the hazards involved in toxic release scenarios. Each PHA must also address stationary source siting. The facility siting portions of the PHAs do not evaluate releases from more than 50 atmospheric pressure relief valves. The PHA facility siting checklists are not consistent with API Standard 752 and are not appropriate for the complexity of the process. The facility siting PHA checklists also do not include a consequence analysis or risk management plan in accordance with Health, Environmental, and Safety Procedure (HESP) 604 and HESP 601.2. **[AOC #3 - 68.67(c)(5)]**

40 C.F.R. § 68.69 Operating Procedures – EPA reviewed Occidental Ingleside's operating procedures for the covered processes. The written operating procedures reviewed provided clear instructions for safely conducting activities involved in each covered process, consistent with the process safety information. The operating procedures reviewed addressed: the steps for each of the operating phases, the operating limits, including the consequences of deviation and mechanisms to correct and/or avoid deviation, safety and health considerations, and safety systems and their functions. Operating procedures are accessible by going to any Occidental Ingleside computer and downloading the procedures from the SharePoint computer network. There is also a binder containing paper copies of the operating procedures in the control room that can be used if the online system is down. Occidental Ingleside annually certified that its operating procedures are current and accurate. EPA reviewed Occidental Ingleside's safe work procedures, including lock out/tag out procedures and confined space safe entry procedures. The safe work procedures apply to both employees and contractors.

40 C.F.R. § 68.71 Training – Occidental Ingleside is required to train each employee involved in operating a covered process in an overview of the process and in the operating procedures. Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, must be trained. In addition to initial training, employees must undergo refresher training at least every three years. EPA randomly selected operators for a training records review. Each operator received the required initial and refresher training according to the schedules outlined in the facility's training program.

40 C.F.R. § 68.73 Mechanical Integrity (MI) – EPA reviewed the written procedures Occidental Ingleside established to maintain the ongoing integrity of process equipment. Review was conducted both on site

and in further detail after leaving the facility post-inspection. EPA examined the inspections and tests Occidental Ingleside performed on its equipment to ensure that the frequency of inspections and tests of process equipment are consistent with applicable manufacturers' recommendations and good engineering practices.

The following deficiencies in Occidental Ingleside's MI program are summarized as follows:

- Inspection and testing - Inspections and tests shall be performed on process equipment **[AOC #4 - 40 C.F.R. § 68.73 (d)(1)]**. Occidental Ingleside did not perform inspection and tests of the heating ventilation and air conditioning (HVAC) system and the emergency shut-down system equipment in the administrative building. The emergency shut-down system is designed to stop operation of the HVAC system in the event of a toxic chemical release (e.g., vinyl chloride, chlorine) at the facility.
- Inspection and testing - Inspection and testing procedures shall follow recognized and generally accepted good engineering practices **[AOC #5 - 40 C.F.R. § 68.73(d)(2)]**. Occidental Ingleside provided a list of equipment which was overdue for inspection. EPA reviewed the list of equipment to determine if the system for deferring equipment inspections was in accordance with API 510, which is a design code followed by Occidental Ingleside. API 510 Section 6.7, Deferral of Inspections, Tests, and Examinations, outlines the following requirements for deferring equipment inspections: *"Inspections, tests, or examinations for pressure vessels and associated pressure-relieving devices that cannot be completed by their due date may be deferred for a specified period, subject to the requirements in the following subsections. Pressure vessels or pressure-relieving devices that are operated beyond the due date without a valid deferral in accordance with these requirements are not permitted by this code. Deferrals should be the occasional exception, not a frequent occurrence. All deferrals shall be documented. Pressure vessels or pressure-relieving devices that were granted a deferral can be operated to the new due date without being considered overdue for the deferred inspections, tests, or examinations."*

Under Section 6.7.1, Simplified Deferral, a simplified short-term deferral may be approved by the owner-user if all the following conditions are met:

- The current due date for the inspection, test, or examination has not been previously deferred.
- The proposed new due date would not increase the current inspection/servicing interval or due date by more than 10 % or six months, whichever is less.
- A review of the current operating conditions, as well as the pressure vessel or pressure-relieving device history, has been completed, with results that support a short-term/one-time deferral.
- The deferral request has the consent of the inspector representing or employed by the owner-user and an appropriate operations management representative(s).
- Updates to the pressure vessel or pressure-relieving device records with deferral documentation are complete before it is operated beyond the original due date.

A simplified short-term deferral cannot be approved by the owner-user if all the conditions have not been met. Occidental Ingleside failed to ensure that the internal inspection deferral for certain equipment met all the conditions of API 510 Section 6.7.1 Simplified Deferral, because the following pressure vessels have had previous deferrals:

Pressure Vessel	Deferral Number	Previous Deferral
C-720A	Variance #20212664	Extension of Variance 20202681
C-802D	Variance #20211787	Extension of Variance 20201740

C-802E	Variance #20211789	Extension of Variance #20202684
C-802F	Variance #20211788	Extension of Variance #20202143
C-802C	Variance #20211790	Extension of Variance #20202680
E-2462A/B	Variance #20212351	Extension of Variance #20200972
C-741	Variance #20212657	Extension of Variance #20200958
C-802A	Variance #20212657	Extension of Variance #20200958
C-802B	Variance #20221169	Extension of Variance #20191931
E-812	Variance #20221192	Extension of Variance #20212659

For the following pressure vessels, the proposed new due date exceeds the current due date by more than 10 % or six months, which is not consistent with API 510 Section 6.7.1 (b):

Pressure Vessel ID:	Current Inspection Due Date	Proposed New Inspection Due Date
C-490	10/30/2020	12/31/2023
D-491A/B/C/D	10/31/2020	12/31/2023
C-712B	1/28/2020	12/31/2023
C-720A	7/18/2020	8/31/2022
C-565	12/30/2020	12/31/2023
C-802D	8/30/2016	12/31/2022
C-802E	4/30/2016	12/31/2022
C-802F	5/23/2017	12/31/2022
C-802C	12/29/2015	12/31/2022
C-802C	12/29/2015	12/31/2022
E-2462	4/30/2020	11/30/2024
C-741	12/31/2021	12/31/2023
E-464A	12/5/2021	5/5/2023
C-802A	3/31/2020	12/31/2023
C-802B	9/25/2019	12/31/2024
C-802B	9/25/2019	12/31/2024
E-812	12/30/2021	6/30/2023

For the following pressure vessels, updates to the pressure vessel or pressure-relieving device records with deferral documentation were not completed before the pressure vessels were operated beyond the original due dates, as required by API 510 Section 6.7.1 (e):

Pressure Vessel ID	Deferral Documentation Approved	Original Inspection Due date
C-712B	12/21/2020	1/28/2020
C-720A	12/29/2021	7/18/2020
C-565	1/13/2021	12/30/2020
C-802D	9/1/2021	8/30/2016
C-802E	9/8/2021	4/30/2016
C-802C	9/8/2021	12/29/2015
E-2462	11/16/2021	4/30/2020

- Occidental Ingleside's written procedure requires that pressure relief valves be inspected and specified intervals. The following pressure relief valves were not inspected and tested at the prescribed intervals.

PSV Number	Last Inspection Date	Next Due Date	Interval
PSV 8012A (VCM Railcar Storage C-8012A)	5/29/2015	5/20/2018	3-year testing
PSV 8012B (VCM Railcar Storage C-8012B)	7/20/2018	7/19/2021	3-year testing
PSV 8012C (VCM Railcar Storage C-8012C)	6/11/2015	5/20/2018	3-year testing
PSV4508B (C-4508B)	5/12/2018	5/11/2021	3-year testing
PSV2439A (C-2410)	4/25/2019	4/24/2022	3-year testing

Occidental Ingleside deferred these and extended inspections for three PSVs by more than 4.5 years, one PSV by two years and the last PSV by 10 months. The deferral periods are not in accordance with API 6.7.2.

PSV Number	Date of Variance	Existing Variance Due Date
PSV 8012A (VCM Railcar Storage C-8012A)	06/14/2018	12/31/2022
PSV 8012B (VCM Railcar Storage C-8012B)	06/14/2018	12/31/2022
PSV 8012C (VCM Railcar Storage C-8012C)	06/14/2018	12/31/2022
PSV4508B (C-4508B)	06/09/2021	06/30/2023
PSV2439A (C-2410)	08/04/2022	06/30/2023

- Frequency of Inspections and Tests - The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience **[AOC #6 - 40 C.F.R. § 68.73(d)(3)]**. Occidental Ingleside's written procedure for inspection and testing requirements requires routine maintenance in intervals not to exceed five (5) years and a function test in intervals not to exceed three (3) years. The Plant's written procedures also require compliance with the manufacturer's recommended inspection frequency. The manufacturer's recommended calibration frequency for these chlorine monitors is every six (6) months. The quarterly calibration is established by the Plant on greater frequency to ensure compliance with the manufacturer's recommendation per the Plant's written procedure. Occidental Ingleside performed the required quarterly testing of these monitors from 2019-2021. Although the quarterly calibration is implemented in the maintenance program to ensure compliance, the Plant does not have a written procedure that requires quarterly calibration. However, the company failed to implement the quarterly inspections it established by not performing quarterly testing of the following monitors during the first quarter of 2022.

Manufacturer	Equipment Type	Location	Monitor Serial #
Honeywell	Chlorine Monitor	Area 200	34211011

Honeywell	Chlorine Monitor	Area 200	26135614
Honeywell	Chlorine Monitor	Area 300	XNX Universal Monitor
Honeywell	Chlorine Monitor	Area 300	XNX Universal Monitor
Honeywell	Chlorine Monitor	Area 300	XNX Universal Monitor

- Equipment deficiencies - the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in §68.65) before further use or in a safe and timely manner when necessary, means are taken to assure safe operation **[AOC #7 - 40 C.F.R. § 68.73(e)]**. Occidental Ingleside failed to correct deficiencies in the pressure relief devices and pressure relief system in the Vinyl Chloride Monomer Unit, Chlor-Alkali Unit and Ethylene Dichloride (EDC) Unit, which were outside acceptable limits, as defined by the process safety information in § 68.65, before further use or in a safe and timely manner. A pressure relief system study was performed in 2011 and determined that the pressure relief design basis and design calculations were outdated and did not meet current industry standards. The initial study identified problems with many of the pressure relief valves and concluded that these devices are deficient as currently designed. The study addressed 248 pressure relief devices and identified the following deficiencies:
 - 3 pressure relief valves with capacity issues
 - 1) Cl2 PSV 3387 Cl 2 Accumulator Relief Valve Y-705
 - 2) Cl2 PSV 3389 Cl2 Accumulator Relief Valve Y-705
 - 3) VCM PSV 8283 K-810
 - 121 pressure relief valves with inlet design pressure issues
 - 12 pressure relief valves with outlet design pressure issues
 - 53 pressure relief valves with inlet and outlet design pressure issues

40 C.F.R. § 68.75 Management of Change (MOC) – Occidental Ingleside established written procedures to manage change, except for “replacements in kind”, for changes to process chemicals, technology, equipment, procedures, and changes to stationary sources that affect a covered process. The established documented procedures are intended to assure that the following considerations were addressed prior to implementing any change: technical basis for the change, impact of the change on safety and health, associated modifications to operating procedures, the necessary time period to complete the change, and authorization requirements for a proposed change. Occidental Ingleside employees involved in operating a process, and maintenance and contract employees whose job tasks will be affected by a change in a process, were informed of and trained in changes prior to start-up of the process or an affected part of the process.

40 C.F.R. § 68.77 Pre-startup safety review (PSSR) - EPA reviewed Occidental Ingleside’s written PSSR procedures, as well as various PSSRs completed by the facility within the past five years. The PSSRs reviewed confirmed that, prior to the introduction of a regulated substance into the process, the construction and equipment design were completed in accordance with design specifications, the required safety, operating, maintenance and emergency procedures were in place, and training of each employee involved in operating a process was completed.

40 C.F.R. § 68.79 Compliance audits – EPA reviewed Occidental Ingleside’s two most recent compliance audits, conducted June 26, 2018, and March 15-18, 2022, respectively. Both compliance audits were conducted by at least one person knowledgeable in the process. Occidental Ingleside certified compliance with the provisions of this subpart at least every three years to verify that procedures and

practices developed under this subpart are adequate and are being followed; however, the compliance audit conducted in June 2018 did not assess the facility's compliance with the mechanical integrity requirements of the RMP regulation. **[AOC #8 - 40 C.F.R. § 68.79(a)]**

40 C.F.R. § 68.81 Incident investigation – Occidental Ingleside is required to investigate each incident which resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance. EPA reviewed Occidental Ingleside's incident investigation procedure to determine that, when such an incident occurs, the facility initiates the investigation, prepares the report, and documents, corrects, and communicates the incident investigation findings according to the RMP regulations. EPA determined that, when required, Occidental Ingleside prepared reports at the conclusion of investigations which included at a minimum: (1) the date of the incident; (2) the date the investigation began; (3) a description of the incident; (4) the factors that contributed to the incident; and (5) any recommendations resulting from the investigation. Based on the records reviewed, Occidental Ingleside promptly addressed and resolved investigation findings and recommendations and documented the resolutions and corrective actions.

40 C.F.R. § 68.83- Employee Participation – EPA reviewed Occidental Ingleside's written plan of action regarding the implementation of the employee participation. This plan outlines how Occidental Ingleside consults with employees and their representatives on completion and development of process hazard analyses, and on the development of the other elements of process safety management. The plan appeared to meet rule requirements.

40 C.F.R. § 68.85 Hot work permit – EPA reviewed hot work permits issued by Occidental Ingleside. Each permit reviewed properly documented that fire prevention and protection requirements were implemented prior to beginning hot work operations. The permits reviewed also indicated the dates authorized for hot work and identified the object on which the hot work was performed.

40 C.F.R. § 68.87 Contractors – Occidental Ingleside uses the online system *Avetta* to obtain and evaluate information regarding an owner or operator's safety performance and programs when selecting a contractor. Occidental Ingleside developed a system to ensure contractors are informed of the known potential fire, explosion, or toxic release hazards related to the contractors' work and the process. All contractors receive training through the local safety council and receive site orientations before starting work. Occidental Ingleside is required to periodically evaluate the performance of the contract owner or operator in fulfilling their obligations. EPA reviewed the facility's contractor procedure which dictates the facility to utilize a specific form for periodically evaluating contractors, but the facility was not following this procedure **(Appendix 2) [AOC #9 - 40 C.F.R. § 68.87(b)(5)]**

Subpart E- Emergency Response

40 C.F.R. § 68.90 Applicability – Occidental Ingleside is a responding stationary source and must comply with the requirements of §§ 68.93, 68.95, and 68.96.

40 C.F.R. § 68.93 – Emergency response coordination activities – Occidental Ingleside coordinates response needs with local emergency planning and response organizations to determine how the stationary source is addressed in the community emergency response plan, to ensure that local response organizations are aware of the regulated substances at the stationary source and their quantities and the risks presented by covered processes, and, the resources and capabilities at the stationary source to respond to an accidental release of a regulated substance.

40 C.F.R. § 68.95 Emergency response program – EPA reviewed Occidental Ingleside’s emergency response plan. The plan includes procedures for informing the public and local emergency response agencies about accidental releases; documentation of proper first aid and emergency medical treatment necessary to treat accidental human exposures; and procedures and measures for emergency response after an accidental release of a regulated substance. The plan also includes procedures for the use of emergency response equipment, and for its inspection, testing, and maintenance, and training for employee responders in relevant emergency response procedures.

40 C.F.R. § 68.96 Emergency response exercises – As a part of coordination with local emergency response officials required by 40 C.F.R. § 68.93, Occidental Ingleside will be required to conduct an emergency response tabletop exercise before December 21, 2026, and at a minimum of at least once every three years thereafter.

Subpart G- Risk Management Plan

40 C.F.R. § 68.190 Updates – Occidental Ingleside resubmitted its RMP on January 2, 2019.

40 C.F.R. § 68.195 Required corrections – Occidental Ingleside’s next RMP re-submission is due by January 2, 2024, unless an update or correction is required by 40 C.F.R. § 68.190 and 40 C.F.R. § 68.195.

Section III – AREAS OF CONCERN (AOCs)

EPA Region 6 inspectors Kayla Buchanan and Howard Cole conducted a closing conference at Occidental Ingleside on August 12, 2021. During the closing conference, we reviewed the following Areas of Concern noted during the inspection. The mechanical integrity areas of concern (AOCs #5-#7) were identified post-inspection and were not discussed during the closing meeting.

AOC # 1: Process Safety Information - 40 C.F.R. § 68.65 (d)(1)(iv)] requires Occidental Ingleside to complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. This process safety information shall include information pertaining to the equipment in the process.

Occidental Ingleside failed to complete a compilation of written process safety information pertaining to the relief system’s design and design basis for the equipment in the process. An audit of the pressure relief system was performed in approximately 2011-2012. The corresponding report is entitled “Applicability and Technical Basis for Relief Vent System Installed prior to January 31, 2011.” The audit determined that the pressure relief design basis calculations were outdated and did not meet current industry requirements. The inspection identified deficiencies in approximately 189 pressure relief valves, which required complete re-design packages. At the time of this inspection, Occidental Ingleside had completed PSI redesign packages for less than 20 percent of the pressure relieve valves in the Vinyl Chloride Monomer Unit, Ethylene Dichloride (EDC) Unit, Chlorine Alkali Units, and Utilities area. The redesign requirements may result in changes to relief pressure set points or require the installation of new pressure relief valves.

AOCs #2 and #3 Process Hazard Analysis – 40 C.F.R. § 68.67(a) requires Occidental Ingleside to perform initial process hazard analysis (hazard evaluation) on processes covered by this part. The process hazard analysis must be appropriate to the complexity of the process and shall identify, evaluate, and control

the hazards involved in the process. **40 C.F.R. § 68.67(c)(5)** requires the PHA to address stationary source citing.

Occidental Ingleside's PHAs conducted from 2013-2022 were not appropriate to the complexity of the process and did not address the hazards involved in the process, based on the available process safety information. The facility conducted a pressure relief system study in 2011-2012, which determined that the pressure relief system design basis and design calculations were outdated and did not meet current industry standards. The PHAs failed to address, evaluate or control the hazards posed by deficiencies in the pressure relief devices. Occidental Ingleside's PHAs also failed to evaluate and control the hazards related to pressure relief valves (PRV) to ensure that they discharge to a safe location. Many of Occidental Ingleside's pressure relief valves vent directly to atmosphere, and would discharge toxic chemicals (e.g., chlorine or vinyl chloride monomer) to the ambient environment in locations that could potentially affect workers. Toxic chemicals released from PRVs would pose a hazard to employees working on nearby ladders and platforms. There is no documentation in place that meets American Petroleum Institute (API) Standard 521 and Centre for Chemical Process Safety (CCPS) Guidelines for Pressure Relief and Effluent Handling Systems to confirm that these PRVs vent to a safe location.

The facility siting portions of the PHAs do not evaluate releases from more than 50 atmospheric pressure relief valves. The PHA facility siting checklists are not consistent with API Standard 752 and are not appropriate for the complexity of the process. The facility siting PHA checklists also do not include a consequence analysis or risk management plan in accordance with Health, Environmental, and Safety Procedure (HESP) 604 and HESP 601.2.

AOC #4-#7: Mechanical Integrity – 40 C.F.R. §§ 68.73(d)(1),(d)(2)(3), and (e) require Occidental Ingleside to establish and implement written procedures to maintain the on-going integrity of process equipment, to perform inspections and test on process equipment, to ensure the inspections and testing procedures follow recognized and general accepted good practices, to ensure frequency of inspections and tests of process equipment are consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience, and to correct deficiencies in equipment that are outside acceptable limits before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

Occidental Ingleside failed to establish and implement written procedures to maintain the on-going integrity of process equipment, perform inspections and test on process equipment, ensure the inspections and testing procedures follow recognized and general accepted good practices and that deficiencies in equipment that are outside acceptable limits are corrected before further use or in a safe and timely manner when necessary means are taken to assure safe operation, as outlined in the mechanical integrity narrative on pages 6-9 in Section II Observations of this report.

AOC #8: Compliance Audits – 40 C.F.R. § 68.79(a) requires Occidental Ingleside to certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed.

Occidental Ingleside certified compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed; however, the compliance audit conducted in June 2018 did not assess the facility's compliance with the mechanical integrity requirements of the RMP regulation.

AOC #9: Contractors – 40 C.F.R. § 68.87(b)(5) requires Occidental Ingleside periodically evaluate the performance of the contract owner or operator in fulfilling their obligations.

EPA reviewed the facility's contractor procedure which dictates the facility utilize a specific form to use to evaluate its contractors but, the facility was not following this procedure.

Section IV – FOLLOW UP

On October 31, 2022, Occidental Ingleside provided EPA a response letter and additional information after the closing meeting held on August 12, 2022.

In this letter, Occidental Ingleside identified that EPA was using API 510 Section 6.7.1 to determine if deferrals were properly being employed. Occidental alleges the Plant utilized API 510, section 6.7.3, Deferral, for these vessels. API 510 6.7.3 may be utilized in circumstances where there has been a previous deferral. EPA will further investigate this.

Section V – LIST OF APPENDICES

All Appendices other than Appendix 1 are Confidential Business Information (CBI) or Sensitive Appendices and are not included in the online published inspection report. CBI Appendices include documents that are claimed CBI by the facility. Sensitive Appendices may include appendices that will not be posted but are not explicitly CBI. These could include Personally Identifiable Information (PII) or Homeland Security sensitive information.

Appendix 1 – Opening and closing conference sign-in sheets

Appendix 2 – Occidental Ingleside Contractor Procedure (not included in the report)