ATTACHMENT C
30-DAY FOLLOW-UP NOTIFICATION REPORT FORM
CONTRA COSTA HEALTH SERVICES

For CCHS Use Only:

Received By: _____
Date Received: _____
Incident Number: _____
Copied To: _____
Event Classification Level: _____

INSTRUCTIONS:This report is to be submitted for all Level 2 and 3 incidents or when requested by CCHS. See Attachment C-1 for suggestions regarding the type of information to be included in the report. Attach additional sheets as necessary. This form is to be used for update reports after the initial 30 day report has been submitted.
Forward the completed form to:

ATTENTION: Randall L. Sawyer
Hazardous Materials Programs Director
Contra Costa Health Services
4585 Pacheco Boulevard, Suite 100
Martinez, CA 94553

INCIDENT DATE: August 2, 2015
INCIDENT TIME: 15:05
FACILITY: Phillips 66 Rodeo Refinery

PERSON TO CONTACT FOR ADDITIONAL INFORMATION
Steve Harms Phone number 510-245-4425

PROVIDE ANY ADDITIONAL INFORMATION THAT WAS NOT INCLUDED IN THE 72-HOUR REPORT WHEN THE 72-HOUR REPORT WAS SUBMITTED, INCLUDING MATERIAL RELEASED AND ESTIMATED OR KNOWN QUANTITIES**,** COMMUNITY IMPACT, INJURIES, ETC.:

See the attached report; 080215-2 Coker Antifoam Fire.

I. **INCIDENT INVESTIGATION RESULTS**

Is the investigation of the incident complete at this time? ___X____Yes _____No
If the answer is no, when do you expect completion of the Investigation? _____
If the answer is yes, complete the following:

SUMMARIZE INVESTIGATION RESULTS BELOW OR ATTACH COPY OF REPORT:
See the attached report; 080215-2 Coker Antifoam Fire.

SUMMARIZE PREVENTATIVE MEASURES TO BE TAKEN TO PREVENT RECURRENCE INCLUDING MILESTONE AND COMPLETION DATES FOR IMPLEMENTATION:

RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Recommendation 1:

Provide refresher training of Policy and Procedures manual section 8.0-9, In-Plant Radio Communications, to all employees and reinforce the use of repeat-back protocol. Ensure review of this policy is included in new employee training.

[Target completion date – 12/31/2015]

Recommendation 2:

Evaluate all remote day tank filling tasks in the refinery for adequate overfill prevention safeguards such as ensuring the fill valve is closed except when in use.

[Target completion date – 12/31/2015]

Recommendation 3:

Eliminate the Silicone Day Tank by installing facilities to pump directly from the Bulk Storage tank to the coke drums.

[Target completion date – 12/31/2015]

Recommendation 4:

Evaluate the overflow systems on other atmospheric storage tanks in the refinery that are located within unit boundaries to ensure the overflow is routed away from potential ignition sources.

[Target completion date – 12/31/2015]

Recommendation 5:

Modify the Rodeo Refinery Alarm Guide Policy 07.0-12 to add a requirement for a higher level of review of all disabled alarms that have been on the monthly report for an extended time period. [Target completion date – 12/31/2015]

STATE AND DESCRIBE THE ROOT-CAUSE(S) OF THE INCIDENT:

The investigation identified four causal factors and eight root causes:

Causal Factor (CF) 1 – The Utility Operator starts the transfer pump G-256.

Root Cause (RC) 1 – Misunderstood verbal communication, Repeat back communications not used: The misunderstood radio communication would have been eliminated by using the formal radio communication protocol described by the In-Plant Radio Communications policy, 08.0-09, which includes the use of repeat backs to the sender to ensure the correct message is received prior to taking actions such as starting a pump.

RC 2 – Misunderstood verbal communication, Noisy environment: This contributed to the misunderstanding of the radio communication by the Utility Operator. The proper use of the new noise cancelling radios can mitigate this but using formal radio communications would have prevented the operator from starting the pump.

RC 3 –Standard, policy, or administrative control (SPAC) Not Used, enforcement needs improvement: The policy that directs operators on when to use formal radio communications protocols needs improved enforcement to ensure operators do not take actions due to communication error.

RC 4 – Procedure not followed, use not required but should be: The existing Refinery Normal Operating Procedure for filling day tanks (RNOP-902-OPS) covers the majority of day tanks in the refinery, but is thought to be intended for a tank being filled by a single operator. Many operators did not believe it was applicable to the Antifoam Day Tank filling task because two operators are needed. A well written unit specific procedure for filling the Silicone Day Tank, which requires two operators, would include a step to close the day tank fill valve after use since the general (single operator) procedure includes this. The task assessment process did not evaluate the risk of an overflow high enough to require a written procedure because there were no previous events with severe consequences to warrant a higher risk assessment.

CF 2 – Tank Overflow system was inadequate.

RC 5 - Equipment environment not considered. The tank overflowed through the pressure vacuum breather valve. The release was not directed to a safe location.

RC 6 – The independent design review needs improvement. The antifoam system evaluation did not get a more detailed review by the Process Hazard Analysis because the expected consequences of an overflow did not meet the criteria of severity. The previous incidents did not indicate that an overflow would result in as severe a consequence as this event.

CF 3 – The Antifoam Day Tank installed on the Top Deck.

RC 7 – Equipment environment not considered. The storage of a class 3 flammable material near the hot coke drum piping is an avoidable risk. The original unit design did not consider the tank on the cutting deck to be a high risk. The industry standards for acceptable levels of risk have become much lower since the unit was built.

CF 4 – The Day Tank high level alarm was put out of service.

RC 8 – Administrative controls not strict enough. The monthly tracking of disabled alarms did not require higher management approval for items on the list for extended periods. A functioning high level alarm may have prompted a quicker response by the operators and mitigated some of the damage.

Rodeo Refinery
Coker Antifoam Fire 080215-1
August 2, 2015

[redacted]

Incident Investigation Report

Executive Summary

Location: Rodeo Refinery
Date of Incident: August 2, 2015
Date Investigation Began: August 2, 2015
Time of Incident: 3:00 PM
Name of Incident: Coker Antifoam Fire 080215-1
Incident Risk Ranking: Category III

At approximately 3:00 PM on August 2, 2015 the F-223 Silicone Day Tank overflowed resulting in a spill of silicone antifoam (95% kerosene, 5% silicone) onto the coke drum top deck, and off the deck onto the coke drums and piping below. Shortly after the spill occurred, the silicone antifoam ignited off the 800+ ^{O}F bare coke drum overhead piping resulting in a fire on the coke drums top deck in the vicinity of F-223.

At 3:09 PM a refinery plant emergency was initiated. Because of the potential for the incident to escalate and impact sensitive receptors, a Community Warning System (CWS) Level 2 notification was made at 3:13 PM. The on-shift Emergency Response Team (ERT) members responded to the staging area at approximately 3:15 PM and shortly thereafter cooling and fixed fire-water streams were established. The Rodeo-Hercules fire department arrived on scene at about 3:30 PM and began applying additional cooling streams about 3:50 pm. Two teams of ERT members ascended the stairwell to the coke drums top deck and extinguished smoldering combustibles and closed isolation valves on the silicone antifoam system. The emergency was declared under control at 4:23 PM.

At the first report of the fire, the Unit 200 rates were reduced to maximize the drum cycle time. Due to damage to the decoking system controls, the A side (coke drums D201 and D202) had to be bypassed on Monday, August 3 at about 3:15 PM. After making the required temporary repairs, and performing the appropriate MOC for these repairs, the A side was brought back on line with D201 switched into on Tuesday, August 4 at 9:00 AM.

The majority of damage from the fire was to the instrument and electrical items in the area around F-223. There was no significant damage to F-223 itself or its associated piping. The G-230/A Silicone Injection Pumps and the F-223 breather valve PSV-858 were severely damaged and will need to be repaired or replaced. Three structural steel members in the area were noticeably distorted and after evaluation it was determined that they will need to be replaced. There was no damage to the coke drums or related process piping, other than insulation damage.

Key Findings and High Value Learnings

The physical cause of this incident was the overflow of the silicone antifoam liquid, a class 3 flammable liquid, from the 200 gallon F-223 Silicone Day Tank onto the coke drum top deck.

The team determined that the human cause of this incident is the starting of the G-256 Silicone Transfer pump by the Utility Operator after misunderstanding a radio communication.

The investigation team found several latent or root causes for this incident. Poor radio communication due to: the noisy environment, repeat back communication not used, and not following the IN-Plant Radio Communications policy, 08.0-09. Another root cause is not using the Day Tank Filling procedure, RNOP-902-OPS, for filling the F-223 Silicone Day Tank. This reference procedure includes a step to isolate all sources to the tank after each use. Other contributing root causes are: not considering the equipment environment when locating the F-223 Silicone Day Tank, which contained a class 3 flammable liquid, on the coke drum top deck near hot coke drum piping and not directing potential overflow from the tank breather valve to a safe location. There were insufficient administrative controls to raise the level of review for the Silicone Day Tank high level alarm, LAH-720. This alarm was out of service and bypassed for the twelve months prior to the incident. If the alarm had actuated, although the overflow likely would have still occurred, operators may have responded sooner to the overflow condition and limited the extent of the resulting fire.

INCIDENT INVESTIGATION REPORT

RODEO REFINERY- Coker Antifoam Fire

BACKGROUND

Unit 200 is a nominally 75,000 BPD total feed combined crude distillation and delayed coking unit that produces naphtha, diesel and gas oil range intermediate products for further processing in the refinery. The crude distillation section consists of three distillation towers: Primary Crude Tower (PCT), Secondary Crude Tower (SCT) and Vacuum Tower (VT). The VT resid, along with other resids from outside the unit, is fed to the delayed coking section which consists of the Bubble Tower (coker fractionator), coking heater and coke drums.

In order to prevent foaming and the carryover of coke from the coke drums into the Bubble Tower, silicone antifoam is injected into the top of the full coke drum coming off line approximately 15 minutes prior to switching the feed out of the drum. The silicone antifoam injection is stopped after the stripping steam is introduced into the off line coke drum. About 10 to 20 gallons of silicone antifoam are injected into the coke drum during each switch. The silicone antifoam is pumped from the F-223 Silicone Day Tank located on the top deck of the coke drum structure by one of the G-230/A Silicone Injection Pumps into the coke drum. F-223 is a small vertical tank 36" in diameter and 48" from the bottom tangent to the top of the tank and holds approximately 200 gallons (see attached drawings for details). The tank has a breather valve, PSV-858, mounted on a 2" nozzle on the top of the tank. F-223 is equipped with a sight glass with scale and a DCS high level alarm, LAH-720 that activates at 6" below the top of the tank.

F-223 is filled from the F-256 Silicone Storage Tank using the G-256 Silicone Transfer pump. Both F-256 and G-256 are located at grade on the opposite side of the unit from the coke drums. G-256 is an air-motor driven gear pump that transfers the silicone antifoam to the day tank at an estimated 20 gpm.

DESCRIPTION OF ACTIONS BEFORE THE FIRE

The F-223 Silicone Day Tank and related equipment were installed and commissioned in 1985 as part of Coker Revamp Project that installed the new Unit 200 coking section.

Around 2007, the current silicone antifoam (Baker Hughes BPR45160D) replaced the previously used silicone antifoam (Baker Hughes BPR45105). The BPR45160D is 5% 600,000 cS (centistoke) silicone mixed in kerosene (95%) and the BPR45105 is 20% 60,000 cS silicone mixed in kerosene (80%). The physical properties of these two materials are very similar. The only significant difference is the viscosity. BPR45160D is 30 to 35 cP (centipoise) and significantly lower than that of the BPR45105 at 100 to 300 cP.

In October 2009 the alarm rationalization was completed for Unit 200 as part of the Coker-Crude Controls Modernization Project. The F-223 Silicone Day Tank high level alarm, LAH-720, was not fully rationalized, likely because of the low risk and likelihood of F-223 experiencing a high level as an operator is normally standing by F-223 when it is being filled. However, because it was an existing hard-wired switch it was assigned a "low" priority per operations request.

In July 2012 the required revalidation HAZOP/LOPA was completed for Unit 200. A release from the F-223 Silicone Day Tank was covered under the Inherently Safer Systems Review node and was determined to be a low risk (Severity = 1 and Likelihood = 4).

The F-223 high level alarm field device, LSH-720, has a history of maintenance problems resulting in nuisance alarms. On July 1, 2014 LAH-720 was disabled per procedure RNOP-400-OPS, "Disabling / Enabling of DCS alarms." LAH-720 remained disabled and was still disabled at the time of the incident. LAH-720 was included on the U200 Plant Disabled Alarm List that was reviewed monthly by the Unit 200 engineer, Unit 200 area supervisor, and the PCA engineer October 2014 through July 2015. There were no monthly reviews July to September 2014 due to the unavailability of review team members. Because of the low risk and likelihood of F-223 experiencing a high level, as an operator is normally standing by F-223 when it is being filled, the review team assigned a low priority to repairing LSH-720. There are records of

two SAP notifications to work on LSH-720 in 2013. Operations also stated that the instrument techs have worked on it other times using hand written work orders after the alarm was disabled.

On July 16, 2015 new radios that included a noise cancelling feature were distributed to the Unit 200 operators. A one page "quick-start" guide for operation of the new radios was provided for reference. It was reported that the new radios made it less apparent as to who was speaking on the radio.

INCIDENT DESCRIPTION

On day shift Sunday, August 2 some time prior to the incident the operator decoking coke drum D203 observed the level in the F-223 to be about 30".

On Sunday, August 2 at 2:45 PM the silicone was started to coke drum D202. At 2:55 pm the feed was switched from coke drum D202 into D201.

At about that time it was determined that the extra operator that was working to decoke drum D203 could be released to go home. A radio transmission was made to the Utility Operator telling him that the extra operator was ready to go home and asking the Utility Operator to drive him down to the gate. The Utility Operator was working in the vicinity of the Odor Abatement compressors, a high noise area. It is believed that the Utility Operator misunderstood this request and thought he was being asked to start the G-256 Silicone Transfer pump. The Utility Operator acknowledged the request by saying OK, and at about 3:00 PM started G-256 by opening the valve on the air to the motor. Based on what we believe the starting level in the F-223 Silicone Day Tank was (~30") and the pumping rate of the G-256 Silicone Transfer Pump (~20 gpm), F-223 started to overflow 3 to 4 minutes after G-256 was started. It should be noted that there have been reports of foam coming out of the breather valve on F-223 when it was being filled and the level was still 6 to 9 inches below the top. During this incident, it is likely this occurred for 1 to 2 minutes prior to the liquid overflowing through the breather valve.

At about 3:04 PM the Drum Switcher was on the common header deck opening the stripping steam into coke drum D202 when he noticed a diesel like odor. He looked up and noticed a liquid running off the top deck of the coke drums. At that point he called the Utility Operator on the radio and asked him if the silicone pump was running. The Utility Operator responded that it was at which point the Drum Switcher told him to shut it down. The Utility Operator did so immediately. It is estimated that 30 to 40 gallons of the silicone antifoam overflowed out of F-223 before G-256 was shut down. Almost immediately after G-256 was shut down the silicone antifoam ignited resulting in a fire on the coke drums top deck in the vicinity of F-223. We believe the silicone antifoam ignited when it came in contact with the bare 800+^{O}F D202 overhead line that runs under the coke drum top deck in the vicinity of the F-223 Silicone Day Tank.

At 3:09 PM a refinery plant emergency was initiated. Because of the potential for the incident to escalate and impact sensitive receptors, a Community Warning System (CWS) Level 2 notification was made at 3:13 PM. The on-shift Emergency Response Team (ERT) members responded to the staging area at approximately 3:15 PM and shortly thereafter cooling and fixed fire-water streams were established. The Rodeo-Hercules fire department arrived on scene at about 3:30 PM and began applying additional cooling streams about 3:50 pm. Two teams of ERT members ascended the stairwell to the coke drums top deck and extinguished smoldering combustibles and closed the isolation valves on the silicone antifoam system between the day tank and the coke drums. Based on the witness statements, it is believed that the fire burned all the available combustible antifoam liquid that had been released from the 200 gallon tank by this time. The emergency was declared under control at 4:23 PM.

At the first report of the fire, the Unit 200 rates were reduced to maximize the drum cycle time. Due to damage to the decoking system controls, the A side (coke drums D201 and D202) had to be bypassed on Monday, August 3 at about 3:15 PM. After making the required temporary repairs, and performing the appropriate MOC for these repairs, the A side was brought back on line with D201 switched into on Tuesday, August 4 at 9:00 AM

The majority of damage from the fire was to the instrument and electrical items in the area around F-223. There was no significant damage to F-223 itself or its associated piping. The G-230/A Silicone Injection

Pumps and the F-223 breather valve PSV-858 were severely damaged and will need to be repaired or replaced. Three structural steel members in the area were noticeably distorted and are currently being evaluated to determine if they need to be replaced. There was no damage to the coke drums or related process piping, other than insulation damage.

The event was risk ranked at Category III using the Phillips 66 Risk Ranking Matrix. The investigation report was prepared according to the format required by policy 10-1, Incident Management Program and the Phillips 66 Health, Safety, and Environmental Management System standard.

During the initial assessment of the incident, a CWS Level 2 notification was made in an abundance of caution. However, the smoke generated from the fire quickly dissipated with no impacts to the surrounding community, nor having possible health impacts.

This investigation report meets the requirements of the Industrial Safety Ordinance. Contra Costa County Hazardous Materials Program participated in the investigation as an observer.

The property damage exceeded the $25,000 threshold for a Tier 1 Process Safety Event as defined by API RP-754, Process Safety Performance Indicators for the Refining and Petrochemical Industries.

INCIDENT CAUSES

The initial members of the investigation team met after the incident on August 2 to begin investigations, conduct preliminary interviews, visit the incident site, and take photos. The full team held an investigation team kickoff meeting on August 4 to discuss the incident, review the information gathered to date and assign action to the investigation team

Members of the team conducted interviews with employees, examined the scene, and reviewed the policies, procedures, work documents related to the work before the fire, and similar incidents.

The team conducted training on the use of the Human Factors checklist and the use of TapRooT® prior to conducting the root cause analysis phase of the investigation.

PHYSICAL CAUSES:

1. The overflow of the Antifoam liquid, a class 3 flammable liquid, from the Day Tank on the Top Deck was the physical cause of this event.

HUMAN CAUSES:

1. The human cause of the event was the starting of the G-256 Silicone Transfer pump by the Utility Operator after misunderstanding a radio communication.

LATENT CAUSES:

1. The latent (or root causes, RC) of the event are listed below by causal factor (CF).

CF 1 – The Utility Operator starts the transfer pump G-256.

RC 1 – Misunderstood verbal communication, Repeat back communications not used: The misunderstood radio communication would have been eliminated by using the formal radio communication protocol described by the In-Plant Radio Communications policy, 08.0-09, which includes the use of repeat backs to the sender to ensure the correct message is received prior to taking actions such as starting a pump.

RC 2 – Misunderstood verbal communication, Noisy environment: This contributed to the misunderstanding of the radio communication by the Utility Operator. The proper use of the new noise cancelling radios can mitigate this but using formal radio communications would have prevented the operator from starting the pump.

RC 3 –Standard, policy, or administrative control (SPAC) Not Used, enforcement needs improvement: The policy that directs operators on when to use formal radio communications protocols needs improved enforcement to ensure operators do not take actions due to communication error.

RC 4 – Procedure not followed, use not required but should be: The existing Refinery Normal Operating Procedure for filling day tanks (RNOP-902-OPS) covers the majority of day tanks in the

refinery, but is thought to be intended for a tank being filled by a single operator. Many operators did not believe it was applicable to the Antifoam Day Tank filling task because two operators are needed. A well written unit specific procedure for filling the Silicone Day Tank, which requires two operators, would include a step to close the day tank fill valve after use since the general (single operator) procedure includes this. The task assessment process did not evaluate the risk of an overflow high enough to require a written procedure because there were no previous events with severe consequences to warrant a higher risk assessment.

CF 2 – Tank Overflow system was inadequate.

RC 5 - Equipment environment not considered. The tank overflowed through the pressure vacuum breather valve. The release was not directed to a safe location.

RC 6 – The independent design review needs improvement. The antifoam system evaluation did not get a more detailed review by the Process Hazard Analysis because the expected consequences of an overflow did not meet the criteria of severity. The previous incidents did not indicate that an overflow would result in as severe a consequence as this event.

CF 3 – The Antifoam Day Tank installed on the Top Deck.

RC 7 – Equipment environment not considered. The storage of a class 3 flammable material near the hot coke drum piping is an avoidable risk. The original unit design did not consider the tank on the cutting deck to be a high risk. The industry standards for acceptable levels of risk have become much lower since the unit was built.

CF 4 – The Day Tank high level alarm was put out of service.

RC 8 – Administrative controls not strict enough. The monthly tracking of disabled alarms did not require higher management approval for items on the list for extended periods. A functioning high level alarm may have prompted a quicker response by the operators and mitigated some of the damage.

Health, Safety, and Environmental Management System (HSEMS):

The HSEMS elements involved in this incident are listed for use during the annual HSE Excellence Assessment process. The needed improvements for these elements should be discussed and developed during the assessment process.

- Policy and Leadership; management review of disabled alarms
- Risk Assessment; this incident will change future risk assessments of the antifoam system.
- Programs and Procedures; this incident will change the risk assessment used for task analysis.
- Communications; the monitoring and enforcement of the formal radio communications policy protocols need improvement.

OTHER OBSERVATIONS

In the course of the investigation the team reviewed the Utility Operator's work schedule to determine if that had any impact on the incident. Starting on Saturday, August 1 the Utility operator exceeded the maximum number of shifts (7) in a work set per Policy and Procedures Manual section 1.1-22, "Fatigue Management Standard Policy." This is because the Utility operator worked four night shifts (7/24 to 7/27), did not work 7/28, and then came in for 6 hours for ERT training on 7/29. He then worked day shifts on 7/30 and 7/31. Because he did not have the required 48 hours off after his four night shifts, his work set was not reset and 8/1 became the eighth day in his work set, requiring an exception to the Fatigue Management Standard. August 2, the day of the incident, was the ninth day in the Utility Operators work set.

The required R-682 Fatigue Management Standard Hours of Service Exception Process Approval Form was filled out by the Operations Shift Supervisor on Friday, July 31 prior to the start of the first exception shift on August 1. The form was signed by the Utility Operator, the Shift Supervisor and the Health & Safety Shift Supervisor. It was then e-mailed to the Operations Manager, Operations Superintendent and the Labor Relations HRBP. Per the policy section H.3, when the exception is for

exceeding the number of days in a work set, it must be approved by the Refinery Manager or his designee. The exception form for the Utility Operator was never signed by the Refinery Manager or his designee (these exception forms have been delegated to and typically been signed by the Operations Manager).

While the team does not believe fatigue was a contributing factor in this incident, we do believe the approval process for exceptions to the fatigue policy needs to be reviewed and improved. Consideration should also be given to implementing a process to ensure the fatigue exception form and its requirements are reviewed every day the exception is in effect.

RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Recommendation 1:

Provide refresher training of Policy and Procedures manual section 8.0-9, In-Plant Radio Communications, to all employees and reinforce the use of repeat-back protocol. Ensure review of this policy is included in new employee training. [RC1, 2, 3]

Recommendation 2:

Evaluate all remote day tank filling tasks in the refinery for adequate overfill prevention safeguards such as ensuring the fill valve is closed except when in use. [RC4]

Recommendation 3:

Eliminate the Silicone Day Tank by installing facilities to pump directly from the Bulk Storage tank to the coke drums. [RC5, 6, 7]

Recommendation 4:

Evaluate the overflow systems on other atmospheric storage tanks in the refinery that are located within unit boundaries to ensure the overflow is routed away from potential ignition sources. [RC7]

Recommendation 5:

Modify the Rodeo Refinery Alarm Guide Policy 07.0-12 to add a requirement for a higher level of review of all disabled alarms that have been on the monthly report for an extended time period. [RC8]

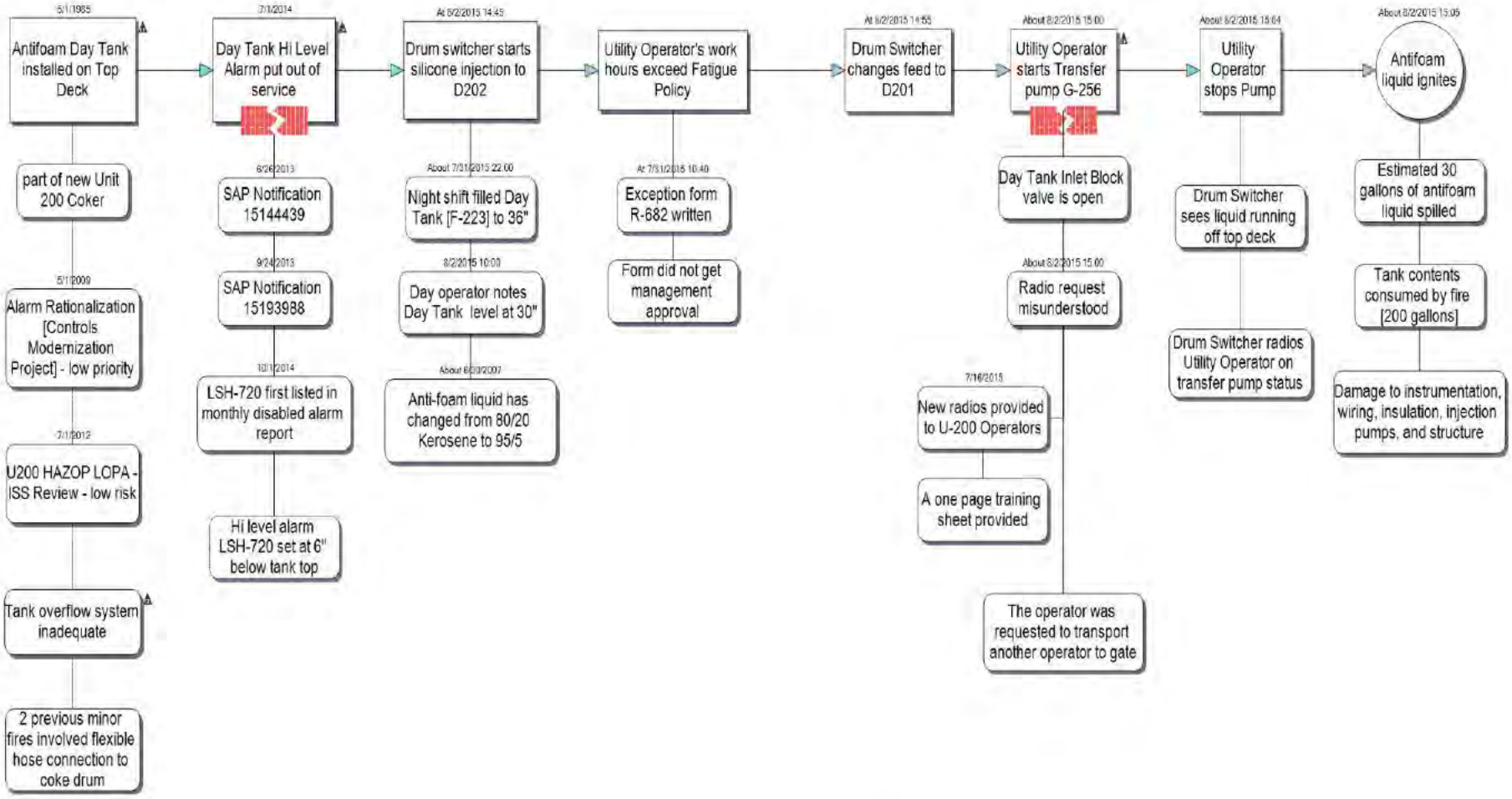
INVESTIGATION TEAM

The team consisted of:
Senior Advising Project Engineer (Team Leader)
Health & Safety Team Leader
PSM Representative (JHSC Member)
Operations Engineer
USW Operator
Metallurgical Inspector
Senior Health and Safety Consultant (TapRoot Facilitator)
Contra Costa County Hazardous Materials Programs (Observer)

ATTACHMENTS

1. TapRoot® Root Cause Analysis Results Summary
2. Silicone system P&ID 0200-YD-010-004
3. Antifoam Day Tank F-223 and associated level bridle drawings
4. Photograph

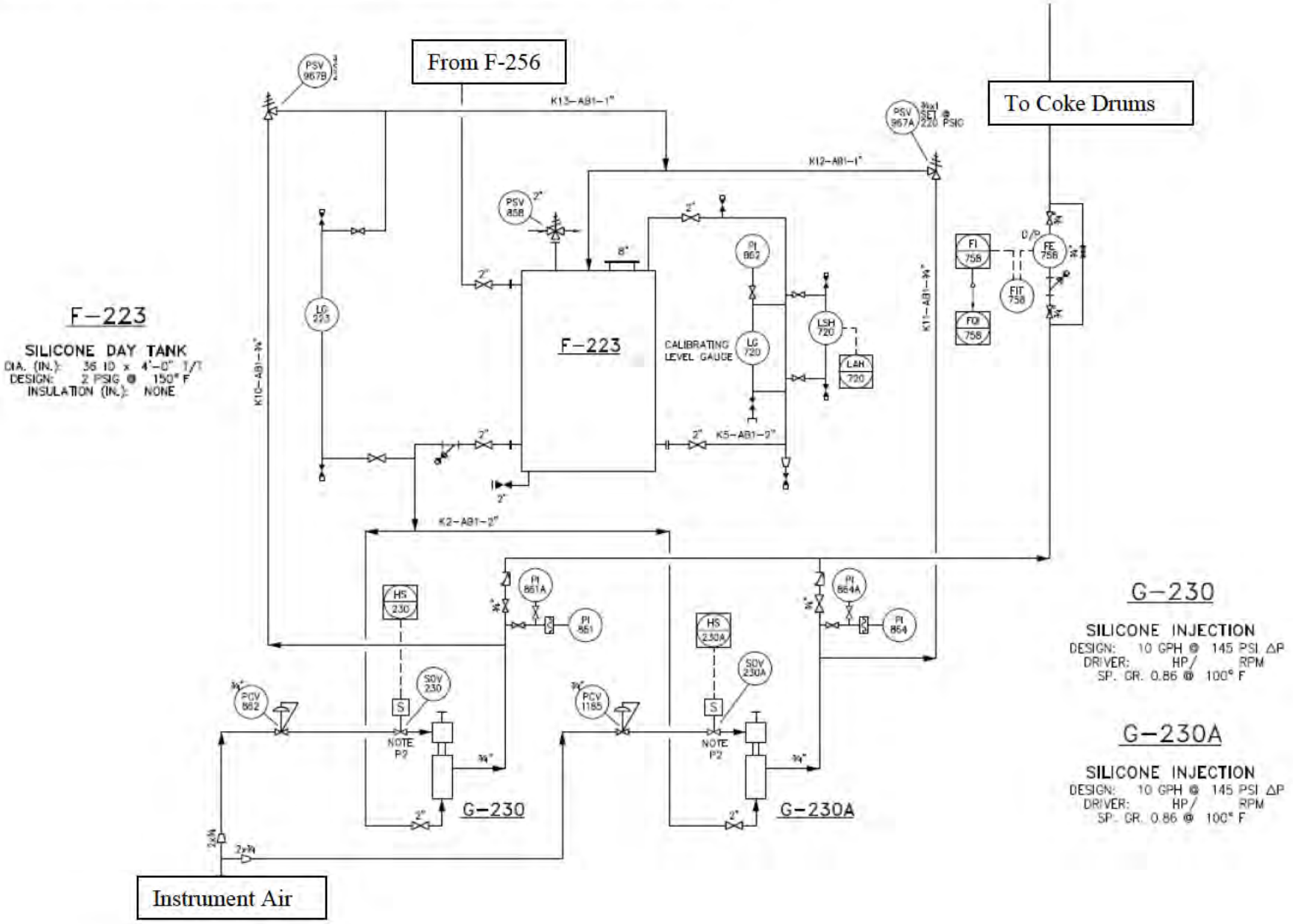
ATTACHMENT 1: TapRooT® Root Cause Analysis Summary

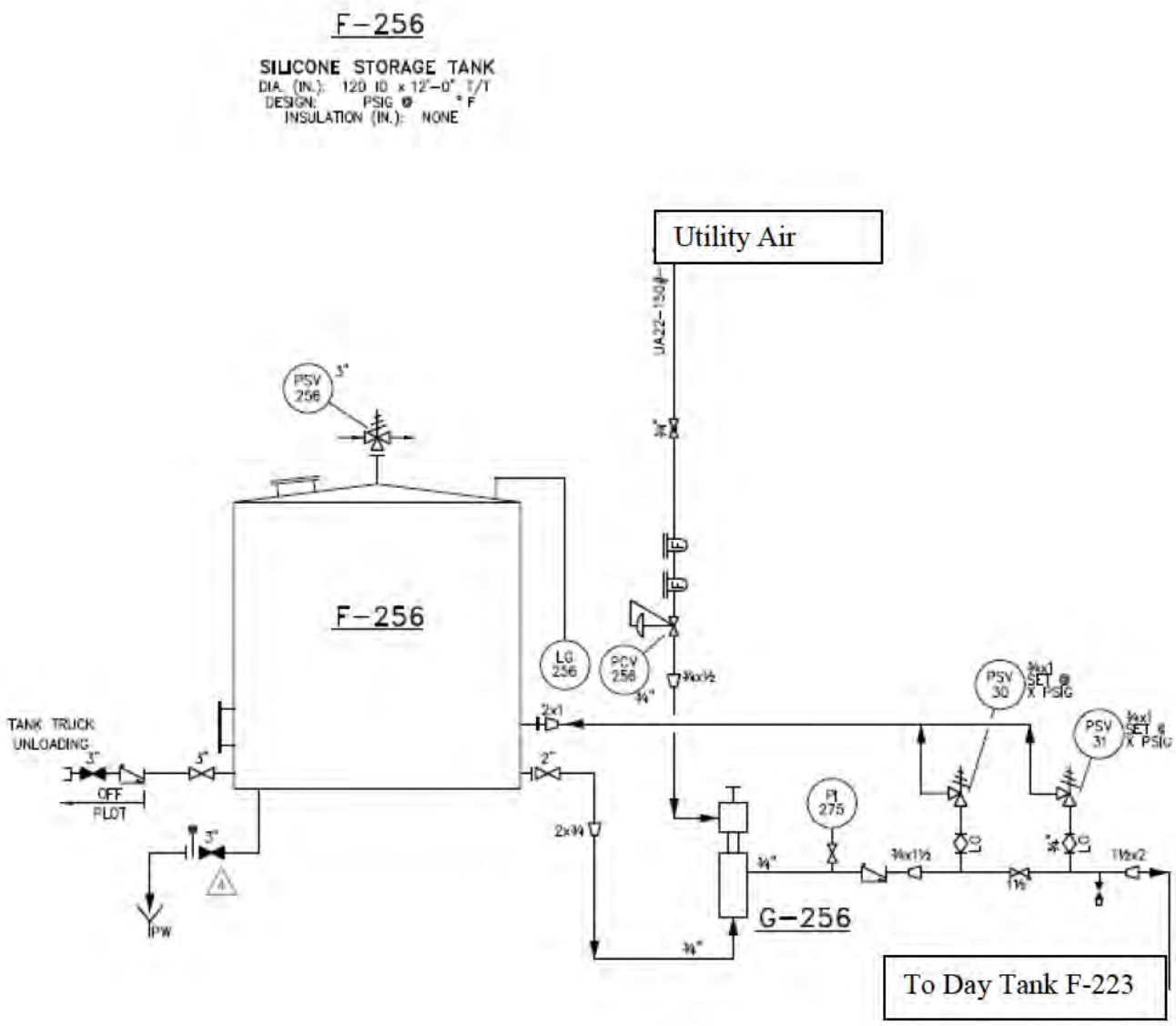


Coker Antifoam Fire 080215-1

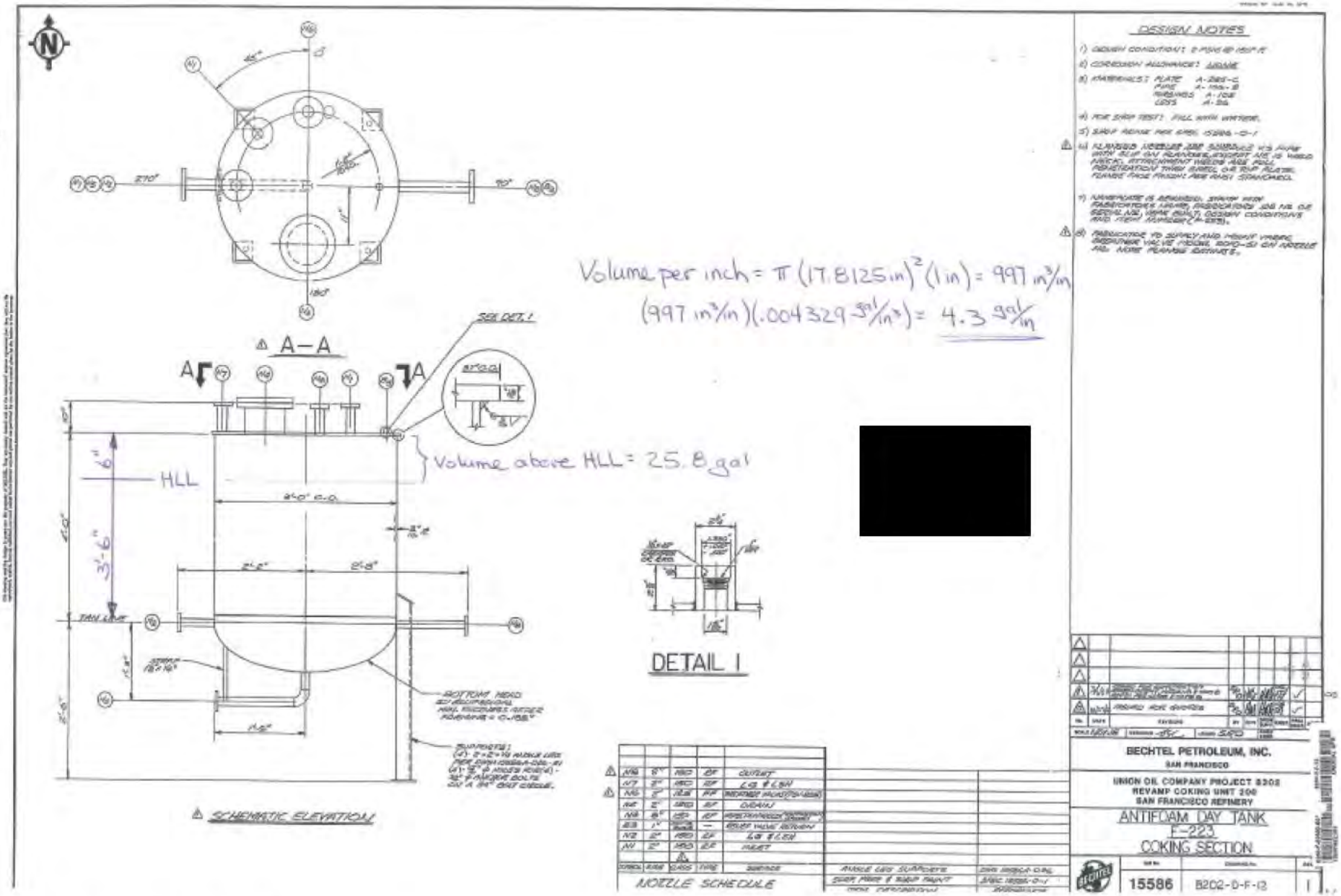
[redacted]

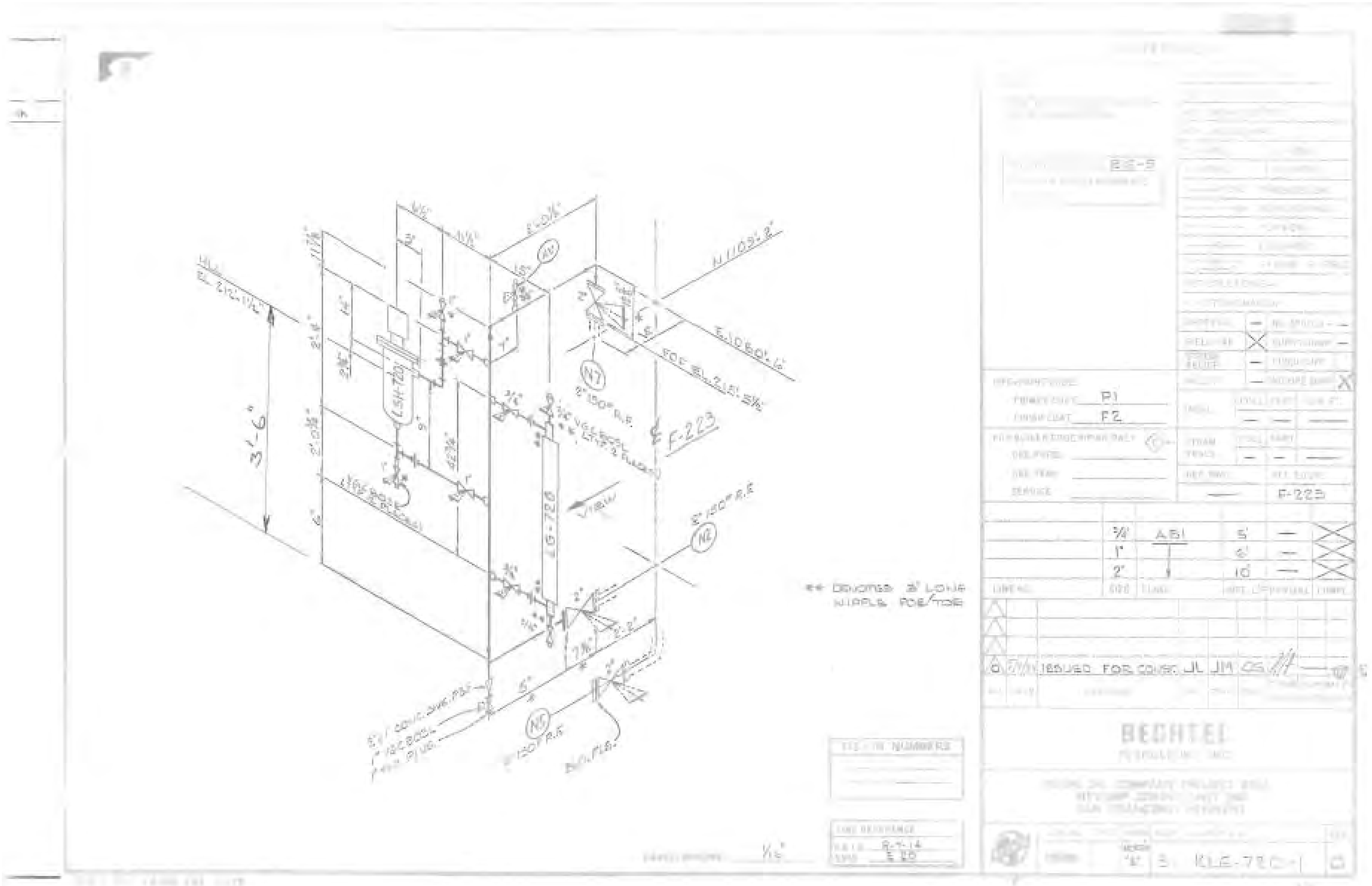
ATTACHMENT 2: Silicone System [from P&ID 0200-YD-010-004]




F-256
SILICONE STORAGE TANK
DIA. (IN.): 120 ID x 12'-0" T/T
DESIGN: PSIG @ °F
INSULATION (IN.): NONE
Utility Air
UA22-150#
PSV 256
3"
F-256
LG 256
PCV 256
¾"
¾x½
PSV 30
¾x1
SET @ X PSIG
PSV 31
¾x1
SET @ X PSIG
TANK TRUCK UNLOADING
3"
3"
OFF
PILOT
3"
PW
2x1
2"
2x¾
FI 275
¾"
¾x1½
1½
1½x2
G-256
¾"
To Day Tank F-223

ATTACHMENT 3: Antifoam Day Tank F-223 and associated level bridle drawings




3'-6"
LSH-720
LG-720
F-223
F-223
ISSUED FOR CONST.
BECHTEL

ATTACHMENT 4: PHOTOGRAPH

PICTURE OF DAY TANK WITH LEVELS MARKED