North Carolina Department of Labor
Occupational Safety and Health Division

Raleigh, NC

Field Information System | Operational Procedure Notice 140A

Subject: Special Emphasis Program for Food Manufacturing Facilities

A. **Purpose and Scope.**

This Operational Procedure Notice (OPN) describes the North Carolina Department of Labor (NCDOL) Occupational Safety and Health Division Special Emphasis Program (SEP) for inspections of establishments in NAICS 311, Food Manufacturing. The SEP will include interventions from the Compliance Bureau, the Consultative Services Bureau, and the Education, Training and Technical Assistance (ETTA) Bureau.

B. **Special Emphasis Program History.**

NCDOL data over the past five years shows several recurring hazards identified in the food manufacturing industry (see Appendix A for NAICS 311 list) . In response to this information, the food manufacturing industry was added to the strategic management plan. During the 2009 federal fiscal year, NCDOL researched and investigated different ways to eliminate these hazards.

C. **Background and Discussion.**

In 2008, Bureau of Labor Statistics (BLS) data indicated that the national total recordable case rate and the days away, restricted or transferred (DART) rate for NAICS 311 industry groups were higher than the rate for all private industry. The food manufacturing DART rate was almost double the rate for private industry.

2008 National BLS Data U.S. Industry	Total Recordable Case Rate	DART
All private industry	3.9	2.1
Manufacturing (NAICS 31, 32, 33)	5.0	2.7
Food Manufacturing (NAICS 311)	6.2	4.0

The loss statistics for North Carolina show the same. The Total Recordable Case rate and the DART rate for the Food Manufacturing sub-sector were both higher than the rates for the manufacturing sector as a whole and the combined rates for private industry in the state.

2008 BLS Data N.C. Industry	Total Recordable Case Rate	DART
All private industry	3.4	1.7
Manufacturing (NAICS 31, 32, 33)	4.2	2.3
Food Manufacturing (NAICS 311)	5.9	3.9

North Carolina is a world leader in manufacturing animal products such as poultry and pork. The food manufacturing industry is a significant employer in the state. As the industry has developed in North Carolina and around the world, increased competition has required the industry to respond and produce products in a more efficient and expeditious manner in an industry which has traditionally been labor intensive. The nature of the work requires employees to work in close proximity to rapidly moving equipment and systems. The industry has a wide variety of hazards and, as a result, employees are often injured. Based on North Carolina inspection data and consultative visits in the past five years, the following hazards have been found in food

manufacturing facilities: ergonomics, machine guarding, electrical, hazard communication, combustible dust, and process safety management.

D. **Program Procedures.**

NAICS 311 food manufacturing assignments will be generated through fatalities, accidents, complaints, referrals, site specific targeting (SST) and general industry schedule criteria. The assignments have priority based upon the schedule in FOM Chapter II.E.

E. **Compliance Inspection Procedures.**

1. **General.**

a. Compliance activities conducted under this SEP will include both programmed [the general industry schedule and the SST schedule assigned from the OSH Division's targeting system] and unprogrammed [FATCAT, accident, complaint, and referral] inspections.

b. Unprogrammed, partial-scope inspections conducted at NAICS 311 sites under this SEP will be expanded to include a review of the issues and standards listed in E.3.a below.

Any partial-scope inspection conducted at a NAICS 311 site may also be expanded to a full-comprehensive inspection based on the procedures listed in the North Carolina Field Operations Manual [FOM] Chapter II.C.

2. **Pre-Inspection Preparation.**

a. District supervisors will consider the objectives of this SEP and the processes and hazard categories expected at individual sites to determine whether to assign specific inspections to individual CSHOs or to assign an inspection as a team inspection. Individual inspections may be assigned as joint safety and health inspections where appropriate.

b. CSHOs assigned to conduct unprogrammed, partial-scope inspections must review the inspection history for the assigned site:

i. If the site has received a programmed, comprehensive safety or health inspection within the preceding three [3] years [or two [2] years for SST assignments], the partial expansion of the current unprogrammed inspection required under E.1.b may not be required. The CSHO will review the inspection file for the earlier inspection and confer with the district supervisor to determine which, if any, of the elements listed in E.3.a. should be addressed during the current inspection. The history of the prior programmed inspection must be documented in the OSHA-1 Narrative for the current inspection.

ii. If the CSHO receives information the site has a Consultative Services Bureau exemption, the CSHO will refer to FOM Chapter III – Inspection Procedures; Section D – Conduct of Inspections; Subsection 3 – Opening Conference; Subpart h – Exemptions from Compliance Inspections through Consultative Services for guidance about conducting the inspection. In general, Consultative Services Bureau exemptions will not apply to unprogrammed, partial-scope inspections.

iii. If the site has received an expanded unprogrammed, partial-scope inspection within the past three [3] years and the elements listed in E.3.a. were addressed in that inspection, the CSHO will conduct the assigned unprogrammed, partial-scope

inspection [FATCAT, accident, complaint, referral, etc.] but will not expand the current inspection as required by E.1.b. The history of the prior unprogrammed inspection must be documented in the OSHA-1 Narrative for the current inspection.

c. For all assigned inspections at NAICS 311 sites, CSHOs will consult with a Program Quality Verification [PQV] team leader or a PQV team member in their district to discuss whether or not the site is in the scope of 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

d. CSHOs assigned to conduct site inspections under this SEP will familiarize themselves with the following documents as appropriate:

i. NCFOM Chapter XVII – Ergonomics Inspection Procedures.
ii. CPL 02-00-135 – Recordkeeping Policies and Procedures.
iii. CPL 02-02-069 – Bloodborne Pathogens.
iv. CPL 03-00-008 – NEP Combustible Dust Explosion Prevention Program.
v. CPL 2.100 – Application of the Permit-Required Confined Spaces [PRCS] Standard, 29 CFR 1910.146.
vi. CPL 2-2.45A – Process Safety Management.
vii. CPL 2-2.38D – Inspection Procedures for Hazard Communications.
viii. CPL 02-02-074 – Inspection Procedures for Chromium (VI) standards.
ix. CPL 02-02-076 – NEP: Hexavalent Chromium.
x. OPN 135 – Health Hazards Special Emphasis Program [most current revision].

e. In addition to the program documents listed above, ETTA has developed industry-specific Industry Data Reports [IDRs] for several industry segments within NAICS 311 that describe the processes and identify the hazards common to these segments. The IDRs are accessible on the OSH intranet.

3. **Inspection Process.**

a. Unless exempted under E.2.b., CSHOs will evaluate the following safety and health program issues during all compliance inspections [programmed and unprogrammed] inspections conducted at NAICS 311 sites under this SEP.

i. **OSHA Recordkeeping**. Federal studies of the OSHA Data Initiative statistics have identified instances of under-reporting of OSHA recordable cases by employers in high hazard industries including employers with NAICS segments. During each inspection conducted under this SEP, CSHOs will evaluate the employer's recordkeeping process by completing the following:

A. Review the site's OSHA 300 and 300A forms for the preceding three [3] calendar years and the year-to-date OSHA 300 for the current year and evaluate these documents per the requirements of 29 CFR Part 1904 – Recording and Reporting Occupational Injuries and Illnesses and CPL 02-00-135 – Recordkeeping Policies and Procedures. Discuss any apparent discrepancies with the employer's OSHA 300 record keeper or the appropriate member of management.

B. Record the required data from each OSHA 300 and 300A forms for entry on the OSHA-1.

C. During employee interviews, question employees regarding work-related injuries they have had and/or their knowledge of work-related injuries involving other employees within the past three [3] calendar years. Where the incidents appear to meet the OSHA recordable criteria, ensure the incidents are properly recorded on the appropriate OSHA 300 log. Discuss any apparent discrepancies with the employer's OSHA 300 record keeper or the appropriate member of management.

Appendix B of this OPN contains an employee questionnaire form that can be used to record the employees' responses.

ii. **Combustible Dust.** NAICS 311 sites may contain organic dusts including, but not limited to: flour, sugar, grains, and animal feeds. CSHOs will evaluate the facility to determine if potentially combustible dust concentrations exist and the employer's processes and procedures for preventing or controlling the hazard. This assessment must include an evaluation of the dust collection systems in place at the facility. CSHOs will use CPL 03-00-008, NEP: Combustible Dust Explosion Prevention Program when conduction inspections related to combustible dust.

iii. **Confined Spaces.** Many NAICS 311 sites contain permit-required confined spaces including, but not limited to: silos, bins, below-ground pits, and limited-access spaces within production equipment that pose the potential for employee entrapment and serious injury. CSHOs will evaluate the employer's policies, procedures, and work practices for compliance with the requirements of 29 CFR 1910.146, Permit-Required Confined Spaces. Guidance is available in CPL 2.100, Application of the Permit-Required Confined Spaces [PRCS] Standard, 29 CFR 1910.146.

iv. **Electrical.** Electrical hazards at NAICS 311 sites can be aggravated by the presence of wet-process areas and the industry's sanitation standards that require the use of chemical products that may corrode electrical enclosures and equipment. CSHOs will evaluate the condition of electrical equipment such as panels, cabinets, motor control centers, conduits, etc.; evaluate the appropriate use of GFCIs; and evaluate the use of water-proof receptacles and enclosures. CSHOs will also evaluate electrical work practices for compliance with the requirements of 29 CFR 1910.147, The Control of Hazardous Energy.

v. **Ergonomics.** Many production processes at NAICS 311 sites require the performance of repeated and sustained manual handling and manual exertion work tasks. CSHOs will evaluate the employer's policies, procedures, and work practices to determine if they effectively eliminate and control ergonomic risk factors. CSHOs will review the employer's OSHA 300 forms to identify musculoskeletal disorders [MSDs] such as repetitive motion injuries, cumulative trauma disorders, etc. CSHOs will calculate the annual MSD incident rate for the three calendar years preceding the inspection to determine if the rates are increasing or decreasing. Where rates are increasing and/or the employer's policies, procedures, and work practices are not effective, CSHOs will refer to FOM Chapter XVII , Ergonomics Inspection Procedures.

vi. **Hazard Communication.** CSHOs will evaluate the employer's use of chemicals in the work environment for compliance with 29 CFR 1910.1200, Hazard Communication. CSHOs will use CPL 2-2.38D, Inspection Procedures for the Hazard Communication Standard.

vii. **Hexavalent Chromium.** For sanitation purposes, food manufacturing process equipment is made from stainless steel so that it can be cleaned without rusting. Additionally, the equipment is welded to prevent food from gathering in areas where the equipment would otherwise be bolted together. Employees who perform welding on this equipment as part of in-plant repairs or perform other activities to install new process equipment or lines may be exposed to hexavalent chromium.

Hexavalent chromium is covered under OPN 135, Exposures to Health Hazards. Additionally, the NCDOL is using, in part, the CPL 02-02-076, NEP for Hexavalent Chromium and CPL 02-02-074, Inspection Procedures for Chromium (VI) Standard. Since potential hexavalent chromium exposures are an emphasis area for the OSH Division, CSHO's conducting NAICS 311 inspections will need to address this potential hazard.

The CSHO will verify with the employer during the opening conference, and with employees during interviews, whether work activities/tasks are performed at the facility that may produce employee exposure to Cr(VI) [specifically welding on stainless steel equipment or components]. If it is determined that no activities with the potential for Cr(VI) exposure are performed, the CSHO will document this in the narrative portion of the OSHA-1.

If activities/tasks are identified that may involve employee exposure to Cr(VI) are identified, the CSHO will:

A. Determine when the tasks creating these exposures are performed. [Scheduled routine maintenance versus non-routine/unplanned repairs; which shifts; etc.]

B. Request copies of the employer's initial exposure monitoring results and any subsequent air monitoring results for Cr(VI).

C. Evaluate the air monitoring results and discuss with the district supervisor if there is a need to conduct further inspection activity for Cr(VI) in accordance with 29 CFR 1910.1026, OPN 135, CPL 02-02-074, and CPL 02-02-076.

If employees have performed work tasks that may have created an exposure to Cr(VI) and no exposure monitoring has been performed, the CSHO will either conduct air monitoring for Cr(VI) or make a referral to a HCO for sampling. If the sampling indicates an work exposure in excess of the Action Level or Permissible Exposure Level for Cr(VI), the CSHO will discuss with the district supervisor the need to conduct further inspection activity for Cr(VI) in accordance with 29 CFR 1910.1026, OPN 135, CPL 02-02-074, and CPL 02-02-076.

viii. **Machine Guarding.** Accidents resulting from employee contact with or entrapment in moving machine parts have resulted in serious injuries, including deaths at several NAICS 311 sites. CSHOs will:

A. Evaluate the employer's process for the inspection and evaluation of new and/or rebuilt machinery to identify and correct hazards before the machinery is released for routine operation. This will include a review of the documentation of this activity.

B. Evaluate the employer's process for preventative maintenance / periodic self-inspection of production and facility machinery to identify and correct hazards. This will include a review of the documentation of this activity.

C. Evaluate the employer's control of hazardous energy during machine maintenance and repair activities for compliance with the requirements of 29 CFR 1910.147, Control of Hazardous Energy.

D. Conduct a focused walk-through inspection of the employer's site to evaluate the guarding of machinery hazards. This inspection should include, but not be limited to:

1. Conveyors.
2. Points-of-Operation including: in-running nip-points, cutters, shears, saws, presses, and mechanical transmission devices.
3. Robotic equipment.

ix. **Process Safety Management.** NAICS sites with large refrigeration or freezer processes are likely to have hazardous chemical products in sufficient quantities to place them under the scope of 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals (PSM standard). The two products most likely to be found in amounts above the threshold quantity [TQ] at these sites are anhydrous ammonia [10,000 lbs. TQ] used for refrigeration and chlorine [1,500 lbs. TQ] used for water treatment.

A. CSHOs will interview the appropriate management representative to determine:

1. If any process at the site uses hazardous chemicals at or above the threshold quantities listed in Appendix A of the PSM standard. [The list of chemicals and threshold quantities is contained in Appendix C of this OPN.]

2. If any process at the site uses a flammable liquid or gas as defined in the PSM standard in quantities of 10,000 pounds or greater [excluding the quantity maintained in an atmospheric storage tank].

B. If the results of the screening interview indicate that highly hazardous chemicals listed in the PSM standard are present at or above the threshold quantity amount or if a flammable liquid or gas is present in a quantity at or above 10,000 pounds, CSHOs will determine if the employer has developed and implemented a process safety management program for the site.

1. If CSHOs confirm or suspect a site may be covered by the PSM standard, they will consult with their district supervisor or bureau chief regarding a referral for a process safety management inspection of the site.
2. If CSHOs have any questions regarding the PSM standard, they should contact any PQV team member, the division's process safety management coordinator, their district supervisor, or their bureau chief.

Note: The screening process for evaluating coverage under the PSM standard is contained in Appendix D of this OPN.

b. **Medical Records.** During the evaluation of the employer's OSHA recordkeeping or ergonomics program, it may be necessary for CSHOs to access and obtain copies of employees' medical records. Medical records are deemed to be confidential documents and are regulated by the US Health and Human Services Standards for the Privacy of Individual Identifiable Health Information [HIPAA]. 45 CFR 164.512(b)(1)(V) states that an employer [or its health care provider] can disclose and use confidential employee health information when conducting or evaluating workplace medical surveillance; or to evaluate whether an employee has a work-related illness or injury; or to comply with OSHA requirements under 29 CPR Parts 1904 through 1928; 30 CFR Parts 50 through 90; or under state law having a similar purpose. An Employee Medical Release Form and a HIPAA memo from NCDOL Legal Affairs are located in the memo folder on the OSH Field Information System website.

Medical records, as defined in FOM Chapter XVI, must be obtained and maintained in accordance with the requirements of FOM Chapters III, XIII, and XVI. CSHOs are reminded that all copies of employees' medical records obtained from employers or other sources are to be separated, coded, and maintained in accordance with FOM Chapters III and XVI.

c. **Consultative Services Bureau Exemptions.** If during the conduction of an unprogrammed, partial-scope inspection at a NAICS 311 site, a CSHO is advised the site is covered by a current Compliance inspection exemption issued by the Consultative Services Bureau [CSB], the CSHO will complete the inspection for the purpose of the assignment [FATCAT, complaint, referral, etc.] but will contact the district supervisor before implementing the partial expansion of the inspection required by Section E.1.b above. The district supervisor will determine the specifics of any CSB exemption that exists and determine if the partial expansion is implemented or not on a case-by-case basis.

4. **Post-Inspection Documentation.**

Following the completion of all inspections conducted at NAICS 311 sites under this SEP, CSHOs will complete the following:

a. **OSHA 300A Data.** CSHOs will enter the occupational injury/illness data collected from the employer's 300As into the OSHA-1 for the inspection. The CSHOs will print a copy of the OSHA 300A data sheet from the inspection's OSHA-1 and forward the data sheet to the bureau chief of the Planning, Statistics and Information Management Bureau (to be used by the Food Manufacturing SEP Team).

b. **Inspection Findings.** The CSHOs will complete their inspection documentation to include a summary of their findings regarding the safety and health program issues listed in E.3. above. This summary will be included in the safety and health programs section of the safety and health narrative portion of the OSHA-1. A sample template is contained in Appendix E.

c. **Citations.** If alleged violations of North Carolina's occupational safety and health standards are identified during an inspection, the CSHO will prepare citations as per the requirements of FOM Chapter V, Citations.

F. **Outreach.**

The Education, Training and Technical Assistance Bureau and the Consultative Services Bureau will conduct outreach in accordance with the goals set forth in the NCDOL Occupational Safety and Health Division's

Strategic Management Plan, including but not limited to, marketing of services offered, educational workshops, and hazard related publications. The Consultative Services Bureau will focus efforts in NAICS 311 to increase requests and surveys. Surveys will focus on the hazards described in section E.3 of this OPN.

G. **Recording and Tracking.**

There are no specified IMIS codes identified for the Food Manufacturing SEP since all inspections performed under the SEP are identified by the NAICS 311 Subsection.

Inspections conducted under the Food Manufacturing SEP may also cover topics addressed by other SEPs and/or focus issues such as combustible dust; exposure to health hazards such as asbestos, hexavalent chromium, isocyanates, lead, silica or ergonomics that have specific IMIS codes assigned. Where these focus issues or SEPs are covered by an inspection, the specific IMIS codes identified for these topics must be entered in the OSHA-1 for that inspection.

H. **Program Evaluation.**

BLS data will be used to determine the effectiveness of this industry emphasis. This statistical data is reviewed annually by the state with outcome results included in both the State OSHA Annual Report and the Federal Annual Monitoring and Evaluation Report. State activity is tracked on a monthly basis and is reported on the performance indicator report.

I. **Effective Date.**

OPN 140 is cancelled. This OPN is effective on the date of signature. It will remain in effect until revised or canceled by the director.

Signed on Original
Steve Davis
SEP Team Leader

Signed on Original
Allen McNeely
Director

10/13/2010
Date of Signature

Appendix A: NAICS Listings for 311, Food Manufacturing (Mfg.)

3111 Animal Food Mfg.
31111 Animal Food Mfg.
311111 Dog and Cat Food Mfg.
311119 Other Animal Food Mfg.

3112 Grain and Oilseed Milling
31121 Flour Milling and Malt Mfg.
311211 Flour Milling
311212 Rice Milling
311213 Malt Mfg.
31122 Starch and Vegetable Fats and Oils Mfg.
311221 Wet Corn Milling
311222 Soybean Processing
311223 Other Oilseed Processing
311225 Fats and Oils Refining and Blending
31123 Breakfast Cereal Mfg.
311230 Breakfast Cereal Mfg.

3113 Sugar and Confectionery Product Mfg.
31131 Sugar Mfg.
311311 Sugarcane Mills
311312 Cane Sugar Refining
311313 Beet Sugar Mfg.
31132 Chocolate and Confectionery Mfg. from Cacao Beans
311320 Chocolate and Confectionery Mfg. from Cacao Beans
31133 Confectionery Mfg. from Purchased Chocolate
311330 Confectionery Mfg. from Purchased Chocolate
31134 Non-chocolate Confectionery Mfg.
311340 Non-chocolate Confectionery Mfg.

3114 Fruit and Vegetable Preserving and Specialty Food Mfg.
31141 Frozen Food Mfg.
311411 Frozen Fruit, Juice, and Vegetable Mfg.
311412 Frozen Specialty Food Mfg.
31142 Fruit and Vegetable Canning, Pickling, and Drying
311421 Fruit and Vegetable Canning
311422 Specialty Canning
311423 Dried and Dehydrated Food Mfg.

3115 Dairy Product Mfg.
31151 Dairy Product (except Frozen) Mfg.
311511 Fluid Milk Mfg.
311512 Creamery Butter Mfg.
311513 Cheese Mfg.
311514 Dry, Condensed, and Evaporated Dairy Product Mfg.
31152 Ice Cream and Frozen Dessert Mfg.
311520 Ice Cream and Frozen Dessert Mfg.

3116 Animal Slaughtering and Processing
31161 Animal Slaughtering and Processing
311611 Animal (except Poultry) Slaughtering
311612 Meat Processed from Carcasses
311613 Rendering and Meat Byproduct Processing
311615 Poultry Processing

3117 Seafood Product Preparation and Packaging
31171 Seafood Product Preparation and Packaging
311711 Seafood Canning
311712 Fresh and Frozen Seafood Processing

Appendix B: Employee Questionnaire - Work-related Injuries and Illnesses

NAME: _____ JOB TITLE: _____

DEPARTMENT: _____ LENGTH OF SERVICE: _____

ADDRESS: _____ TELEPHONE: _____
_____

HAS YOUR EMPLOYER INFORMED YOU HOW TO REPORT WORK-RELATED INJURIES OR ILLNESSES?
YES: ____ NO: ____

WHAT IS THE REPORTING PROCESS?
_____
_____

DID YOU EXPERIENCE A WORK-RELATED INJURY OR ILLNESS DURING THE PAST THREE YEARS?
YES: ____ NO: ____ IF YES: DATE OF INJURY: _____

DESCRIBE THIS INJURY OR ILLNESS:
_____
_____
_____
_____

DID YOU REPORT THIS INJURY OR ILLNESS TO YOUR EMPLOYER? YES: ____ NO: ____

DID YOU RECEIVE MEDICAL TREATMENT FOR THIS INJURY / ILLNESS? YES: ____ NO: ____

WHO PROVIDED THIS TREATMENT? _____

DESCRIBE THE TREATMENT RECEIVED?
_____
_____

DID YOU MISS ANY TIME FROM WORK AS A RESULT OF THIS INJURY / ILLNESS OR MEDICAL TREATMENT? YES: ____ NO: _____

HOW MANY DAYS DID YOU MISS FROM WORK? _____

WERE YOU ABLE TO PERFORM ALL OF THE DUTIES OF YOUR JOB AND/OR WORK A FULL WORK SCHEDULE FOLLOWING OF THIS INJURY / ILLNESS OR MEDICAL TREATMENT? YES: ____ NO: ____

DETAILS OF RESTRICTIONS: _____

ARE YOU AWARE OF ANY WORK-RELATED INJURIES OR ILLNESSES EXPERIENCED BY ANY OF YOUR CO-WORKERS? YES: ____ NO: ____

DETAILS OF THESE INCIDENTS:
_____
_____
_____
_____
_____

Appendix C: PSM HIGHLY HAZARDOUS CHEMICALS – 29 CFR 1910.119, Appendix A

List of highly hazardous chemicals, toxics and reactives (mandatory). This appendix contains a listing of toxic and reactive highly hazardous chemicals which present a potential for a catastrophic event at or above the threshold quantity.

CHEMICAL NAME	CAS*	TQ**
Acetaldehyde	75-07-0	2500
Acrolein (2-Propenal)	107-02-8	150
Acrylyl Chloride	814-68-6	250
Allyl Chloride	107-05-1	1000
Allylamine	107-11-9	1000
Alkylaluminums	Varies	5000
Ammonia, Anhydrous	7664-41-7	10000
Ammonia solutions (> 44% ammonia by weight)	7664-41-7	15000
Ammonium Perchlorate	7790-98-9	7500
Ammonium Permanganate	7787-36-2	7500
Arsine (also called Arsenic Hydride)	7784-42-1	100
Bis (Chloromethyl) Ether	542-88-1	100
Boron Trichloride	10294-34-5	2500
Boron Trifluoride	7637-07-2	250
Bromine	7726-95-6	1500
Bromine Chloride	13863-41-7	1500
Bromine Pentafluoride	7789-30-2	2500
Bromine Trifluoride	7787-71-5	15000
3-Bromopropyne (also called Propargyl Bromide)	106-96-7	100
Butyl Hydroperoxide (Tertiary)	75-91-2	5000
Butyl Perbenzoate (Tertiary)	614-45-9	7500
Carbonyl Chloride (see Phosgene)	75-44-5	100
Carbonyl Fluoride	353-50-4	2500
Cellulose Nitrate (concentration > 12.6% nitrogen)	9004-70-0	2500
Chlorine	7782-50-5	1500
Chlorine Dioxide	10049-04-4	1000
Chlorine Pentrafluoride	13637-63-3	1000
Chlorine Trifluoride	7790-91-2	1000
Chlorodiethylaluminum (also called Diethylaluminum Chloride)	96-10-6	5000
1-Chloro-2,4-Dinitrobenzene	97-00-7	5000
Chloromethyl Methyl Ether	107-30-2	500
Chloropicrin	76-06-2	500
Chloropicrin and Methyl Bromide mixture	None	1500
Chloropicrin and Methyl Chloride mixture	None	1500
Cumene Hydroperoxide	80-15-9	5000
Cyanogen	460-19-5	2500
Cyanogen Chloride	506-77-4	500
Cyanuric Fluoride	675-14-9	100
Diacetyl Peroxide (concentration > 70%)	110-22-5	5000
Diazomethane	334-88-3	500
Dibenzoyl Peroxide	94-36-0	7500
Diborane	19287-45-7	100
Dibutyl Peroxide (Tertiary)	110-05-4	5000

CHEMICAL NAME	CAS*	TQ**
Dichloro Acetylene	7572-29-4	250
Dichlorosilane	4109-96-0	2500
Diethylzinc	557-20-0	10000
Diisopropyl Peroxydicarbonate	105-64-6	7500
Dilaluroyl Peroxide	105-74-8	7500
Dimethyldichlorosilane	75-78-5	1000
Dimethylhydrazine, 1,1-	57-14-7	1000
Dimethylamine, Anhydrous	124-40-3	2500
2,4-Dinitroaniline	97-02-9	5000
Ethyl Methyl Ketone Peroxide (also Methyl Ethyl Ketone Peroxide; concentration > 60%)	1338-23-4	5000
Ethyl Nitrite	109-95-5	5000
Ethylamine	75-04-7	7500
Ethylene Fluorohydrin	371-62-0	100
Ethylene Oxide	75-21-8	5000
Ethyleneimine	151-56-4	1000
Fluorine	7782-41-4	1000
Formaldehyde (Formalin)	50-00-0	1000
Furan	110-00-9	500
Hexafluoroacetone	684-16-2	5000
Hydrochloric Acid, Anhydrous	7647-01-0	5000
Hydrofluoric Acid, Anhydrous	7664-39-3	1000
Hydrogen Bromide	10035-10-6	5000
Hydrogen Chloride	7647-01-0	5000
Hydrogen Cyanide, Anhydrous	74-90-8	1000
Hydrogen Fluoride	7664-39-3	1000
Hydrogen Peroxide (52% by weight or greater)	7722-84-1	7500
Hydrogen Selenide	7783-07-5	150
Hydrogen Sulfide	7783-06-4	1500
Hydroxylamine	7803-49-8	2500
Iron, Pentacarbonyl	13463-40-6	250
Isopropylamine	75-31-0	5000
Ketene	463-51-4	100
Methacrylaldehyde	78-85-3	1000
Methacryloyl Chloride	920-46-7	150
Methacryloyloxyethyl Isocyanate	30674-80-7	100
Methyl Acrylonitrile	126-98-7	250
Methylamine, Anhydrous	74-89-5	1000
Methyl Bromide	74-83-9	2500
Methyl Chloride	74-87-3	15000
Methyl Chloroformate	79-22-1	500
Methyl Ethyl Ketone Peroxide (concentration > 60%)	1338-23-4	5000
Methyl Fluoroacetate	453-18-9	100
Methyl Fluorosulfate	421-20-5	100
Methyl Hydrazine	60-34-4	100
Methyl Iodide	74-88-4	7500
Methyl Isocyanate	624-83-9	250
Methyl Mercaptan	74-93-1	5000
Methyl Vinyl Ketone	79-84-4	100
Methyltrichlorosilane	75-79-6	500
Nickel Carbonyl (Nickel Tetracarbonyl)	13463-39-3	150
Nitric Acid (94.5% by weight or greater)	7697-37-2	500

CHEMICAL NAME	CAS*	TQ**
Nitric Oxide	10102-43-9	250
Nitroaniline (para Nitroaniline)	100-01-6	5000
Nitromethane	75-52-5	2500
Nitrogen Dioxide	10102-44-0	250
Nitrogen Oxides (NO; NO2;N2O4; N2O3)	10102-44-0	250
Nitrogen Tetroxide (also called Nitrogen Peroxide)	10544-72-6	250
Nitrogen Trifluoride	7783-54-2	5000
Nitrogen Trioxide	10544-73-7	250
Oleum (65% to 80% by weight; also called Fuming Sulfuric Acid)	8014-94-7	1000
Osmium Tetroxide	20816-12-0	100
Oxygen Difluoride (Fluorine Monoxide)	7783-41-7	100
Ozone	10028-15-6	100
Pentaborane	19624-22-7	100
Peracetic Acid (concentration > 60% Acetic Acid; also called Peroxyacetic Acid)	79-21-0	1000
Perchloric Acid (concentration > 60% by weight)	7601-90-3	5000
Perchloromethyl Mercaptan	594-42-3	150
Perchloryl Fluoride	7616-94-6	5000
Peroxyacetic Acid (concentration > 60% Acetic Acid; also called Peracetic Acid)	79-21-0	1000
Phosgene (also called Carbonyl Chloride)	75-44-5	100
Phosphine (Hydrogen Phosphide)	7803-51-2	100
Phosphorus Oxychloride (also called Phosphoryl Chloride)	10025-87-3	1000
Phosphorus Trichloride	7719-12-2	1000
Phosphoryl Chloride (also called Phosphorus Oxychloride)	10025-87-3	1000
Propargyl Bromide	106-96-7	100
Propyl Nitrate	627-3-4	2500
Sarin	107-44-8	100
Selenium Hexafluoride	7783-79-1	1000
Stibine (Antimony Hydride)	7803-52-3	500
Sulfur Dioxide (liquid)	7446-09-5	1000
Sulfur Pentafluoride	5714-22-7	250
Sulfur Tetrafluoride	7783-60-0	250
Sulfur Trioxide (also called Sulfuric Anhydride)	7446-11-9	1000
Sulfuric Anhydride (also called Sulfur Trioxide)	7446-11-9	1000
Tellurium Hexafluoride	7783-80-4	250
Tetrafluoroethylene	116-14-3	5000
Tetrafluorohydrazine	10036-47-2	5000
Tetramethyl Lead	75-74-1	1000
Thionyl Chloride	7719-09-7	250
Trichloro (chloromethyl) Silane	1558-25-4	100
Trichloro (dichlorophenyl) Silane	27137-85-5	2500
Trichlorosilane	10025-78-2	5000
Trifluorochloroethylene	79-38-9	10000
Trimethyoxysilane	2487-90-3	1500

*** Chemical Abstract Service Number.**

**** Threshold Quantity in Pounds (Amount necessary to be covered by this standard).**

Appendix D: Screening Process for Coverage under Process Safety Management

I. Basic Screening (Non-PQV Trained CSHOs):

A. Initiate any inspection activity through normal channels: (FATCAT, complaint, referral, SST, follow-up, general schedule, SEP, etc.)

B. Ask if the employer has a Process Safety Management Program. If the response is "no", ask the employer about the use of the following at this site:

1. Is there an ammonia refrigeration system in operation at this site? What is the quantity of ammonia used or stored at this site? [Does this quantity approach or exceed 10,000 pounds?]

2. Is chlorine used for water treatment or any other processes at this site? What is the quantity of chlorine used or stored at this site? [Does this quantity approach or exceed 1,500 pounds?]

3. What flammable liquids are used or stored at this site? What is quantity of flammable liquids are used or stored at this site? [Does this quantity approach or exceed 10,000 pounds?]

4. Are any of the chemicals listed in 1910.119 Appendix A, used or stored at this site? Which chemicals and in what quantities? [Appendix A chemicals are listed in Appendix C of this OPN.]

C. If there is ANY indication of possible process safety management coverage at this site, CSHOs will contact their district supervisor or a PQV team member to determine if a referral for a process safety management inspection is to be made.

II. PQV Team Member (Process Safety Management Trained CSHO):

A. Give the non-trained CSHOs a list of information for chemicals/amounts to obtain from the employer at the site.

B. After the post-inspection consultation with the CSHOs, gather the other information as required. (This may be accomplished through a follow-up telephone discussion with the employer's representative.)

C. Coordinate with the district supervisor or bureau chief to select most appropriate PQV team leader for a process safety management inspection at the site based on workload, abilities, availability, etc.

III. Division Resources:

A. **PSM Coordinator:** Howard Laurie, Office (910) 251-2678 / Cell (910) 617-7461

B. **Supervisors/Facilitators:** Lafayette Atkinson, Nicole Brown, Bruce Miles, and Robby Jones.

Appendix E: Sample OSHA-1 Narrative Template

SAFETY AND HEALTH NARRATIVE

INSPECTION NUMBER	

INTRODUCTION

SITE DESCRIPTION

PROCESS DESCRIPTION

SAFETY AND HEALTH PROGRAMS

During this inspection, the following Safety & Health issues were evaluated:

a) OSHA Recordkeeping:

b) Combustible Dust:

c) Confined Spaces:

d) Electrical Hazards:

e) Ergonomic Exposures:

f) Hazard Communication:

g) Machine Guarding Hazards:

h) Process Safety Management:

UNUSUAL CIRCUMSTANCES

GENERAL

PENALTY ADJUSTMENTS

CATEGORY	%	
Size		
History		
Safety & Health Programs		
Cooperation		
TOTAL		

CLOSING