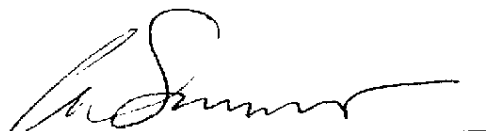


TO	M. Marshall	FIELD POINT OR DEST. & BLDG. NO.	DATE YOUR LETTER
FROM	W. Smith	Long Beach Plant	5/13/81
SUBJECT			

HS&E ASSURANCE AUDIT REPORT

The Long Beach Plant would like to thank Dan Dimas and Ms. Judith Harris of Arthur D. Little Inc., for their Health, Safety and Environmental Audit. This audit will enable us to comply with all laws and regulations. The plant's corrective action report is attached.


 Wayne Smith,
 Sr. Safety Engineer

Audit: 3/4-8

Due 6/13

cc: C. J. Nosal
 R. C. Kaminski
~~R. C. Kaminski~~
 W. C. Holbrook
 Staff
 file

B. Industrial Hygiene

1. Identification of Hazardous Chemical Substances in the Workplace (Regulatory)
- During our review of the facility's program to identify hazardous exposures in the workplace, we noted that the Long Beach facility has not developed a monitoring strategy to quantitatively measure potential employee exposures to hazardous chemicals including eight-hour time-weighted averages (TWAs), short-term (15-minute) exposures, ceiling concentrations, and mixtures of air contaminants. [29CFR 1910.1000]

Response:

The plant has identified all hazardous materials within the plant. We have also determined the job exposure for each employee within each department. The plant has requested assistance from the division's health/hygiene department in establishing monitoring priorities. Smith, Saxton

Plant monitor but no strategy

res. comp. 2

2. Material Safety Data Sheets (Regulatory)
- During a review of the facility's hazard communication program, we noted that the facility does not have material safety data sheets for:

- a. Approximately six "Masterbatch" chemicals;
- b. Rust-oleum paint spray cans;
- c. Slippery Loob; and
- d. Buffer solution SO-B-107.

[29 CFR 1910.1200(g)(1)]

Response:

Material Safety Data Sheets for all of the noted items have been obtained with the exception of the masterbatch chemicals (which are BFG ingredients).

Required

3. Noise Reduction (Regulatory)
- During a review of the facility's occupational noise exposures, we noted that the facility does not have a program to identify feasible engineering controls that would reduce noise exposures to below 90 dBA. [29 CFR 1910.95(b)(1)]

Not Required

Response:

The plant does attempt to conform to the BFG ENGINEERING STANDARD ST-409. However, we realize we still have some unsatisfactory noise levels in the manufacturing areas. In fact a detailed estimate is being done on the "A" line dicer room. More detailed surveys will be taken as required. If necessary we will bring in a noise consultant for his recommendations.

guy found > 85 d'her?

4. Hearing Conservation Program (Regulatory)
During a review of the facility's hearing conservation program, we noted the following:

- a. Three of 38 employees did not receive an annual audiogram during 1990. [29 CFR 1910.95(g)(6)]
- b. The facility cannot verify that all employees in the hearing conservation program have received annual training. [29CFR 1910.95(k)(2)]

Response:

- a. All employees have been tested.
- b. The plant records attendance at all meetings. However, the plant has not ensured that employees who may have missed a required meeting are re-scheduled for a future meeting. To correct this situation we will have in place a new computer program (SmartStar) to verify attendance for meetings and medical surveillance for every employee in the plant. This documentation program should be on line in June. Smith, Saxton.

5. Personal Protective Equipment (Regulatory)
During a review of the facility's personal protection equipment program, we noted the following:

- a. The facility does not have a written respiratory protection program. [29 CFR 1910.134]
- b. Employees who wear respiratory protection equipment have facial hair (beards) and, thus, a good face seal cannot be assured. [29 CFR 1910.134(e)(5)(I)]

*not a written -
need
proper fit.*

Response:

- a. The plant does have a written respiratory program; however, it is lacking in some specific details such as fit testing and facial hair. Our revised program will incorporate all required items. Expected completion date 3rd quarter 1991. Smith
- b. The facial hair problem is being addressed at this time. We have two employees who have facial hair and at times do require respiratory protection. These employees have been given the choice of shaving their beards or wearing company supplied air helmets. We also have a new hiring policy which prohibits facial hair.

6. Lead Exposures (Regulatory)

During a review of the facility's hygiene monitoring results, we noted that one sample (at the bag dump station) of nine taken to document lead exposure was at level of 85 ug/m3. The facility has not conducted additional monitoring to determine whether there is overexposure to lead. [29 CFR 1910.1025]

Response:

Historical monitoring data shows extremely low levels of lead exposure for the past three years. The plant feels that a calculation error was made in the lead analysis. Because of the questionable monitoring results, the employee was blood lead tested. The results of that test were: 8 ug/100g, it should be noted that the OSHA standard for safe lead blood level is 30ug/100. We will continue our annual lead monitoring of affected employees to ensure a safe work place. Smith, Saxton

7. Hazard Communication Program

During a review of the facility's hazard communication program, we noted that the facility does not ensure that every container of hazardous chemicals is labelled, tagged, or marked with hazard information. For example:

- a. Small containers that were observed at various locations within the plant were not marked with an indication of their contents; and
- b. Drums in the maintenance lube storage area do not have NFPA labels.
[29 CFR 1910.1200(f)]

Response:

- a. All containers of hazardous chemicals have been identified as to their contents.
- b. Drums requiring NFPA labels have been labeled.

8. Exposure and Medical Records (Regulatory)

During a review of the facility's program for access to employee exposure and medical records, we noted that the facility does not inform new employees at the time of hiring of their right to access these records. [29 CFR 1910.20(g)(1)]

Response:

The notification of employees rights to medical records has been placed on the New Employee Indoctrination Check List.

9. Asbestos Management (Regulatory/Good Management Practice)
During a review of the facility's asbestos management program, we noted the following:

- a. Employees hired after June 20, 1989, including contract employees (14 people total), have not been notified that asbestos exists in the workplace. [CA Health and Safety Code, Division 20, Section 1, Chapter 10.4]
- b. Asbestos insulation has not been clearly labelled. [Good Management Practice]

Response:

- a. The notification of asbestos within the plant has been placed on the New Employee Indoctrination Check List.
- b. All of the asbestos insulation has been re-labeled.

10. Control Systems (Good Management Practice)
During a review of the facility's control systems, we noted that ventilation systems are not routinely examined to ensure that they perform to design standards.

Response:

All process ventilation equipment will be inspected and air flow rates documented annually. Completion date 4th quarter 1991 Smith

11. Equipment Calibration (Good Management Practice)
During a review of the facility's equipment calibration practices, we noted the following:

- a. The balance used to weigh filters prior to industrial hygiene sampling has not been calibrated since August 1989;
- b. The oxygen and Lower Explosive Limit (LEL) meter are not routinely calibrated using gases of known concentration; and
- c. The spirometer (used to measure respiratory function) has not been calibrated since 1982.

Response:

- a. The balance used to weigh filters was calibrated in May 1991.
- b. A calibration program has been established with documentation of those calibrations.
- c. The Spirometer was calibrated in April 1991.

12. Exposure Monitoring (Good Management Practice)
During a review of the facility's exposure monitoring program, we noted that the facility does not send blank filter cassettes along with the actual filter cassette samples as a quality control method.

Response:

Blank filters will be sent along with all sampling cassettes. Smith, Saxton

C. Employee Safety

13. OSHA Recordkeeping (Regulatory)
During a review of the facility's records for injuries and illnesses, we noted that in 1989 standard threshold shift hearing losses for two employees were not recorded on the OSHA Form 200. [29 CFR 1904.2(a)(1)]

Response:

The plant has not included any threshold shift hearing loss on our OSHA 200 log. We are presently waiting for the OSHA directive due later this year regarding hearing loss and the 200 log recordings. The plant has discussed this with divisional personnel. Smith, Saxton

14. Lock-out/Tag-out Program (Regulatory)
During a review of the facility's lock-out/tag-out program, we noted the following:

- a. A facility permits the use of tags that have an easily detachable means of attachment (string).
[29 CFR 1910.147(c)(5)(ii)(c)(2)]
- b. The facility does not conduct at least an annual inspection to verify the effectiveness of the lock-out/tag-out program.
[29 CFR 1910.147(c)(6)(i)]

Response:

- a. Lock-out tags were ordered with plastic attachments. We will continue to use our present tags with the string attachments until they are depleted, approx. 2 mos.
- b. Verification of our lock-out program is an on going process. The lock-out procedure is verified by the foremen and other salary employees; however, this has not been documented in the past. A computer program will be implemented (SmartStar) for documentation of those verifications. We also conduct annual training for all affected employees regarding lock-outs. Estimated completion date 4th quarter 1991 Smith

15. General Plant Tour (Regulatory/Good Management Practice)
During a tour of the facility, we noted the following:

- a. Two butane cylinders near the acetylene storage area are not secured and do not have valve protection caps. [29 CFR 1910.252(a)(2)(ii)(d)]
- b. A section of the condensate line to the MI-1F jacket was not insulated. (Note: We were told that this had been corrected before the audit team left the facility.) [Good Management Practice]
- c. The portable steps at Compactor II are in poor condition and are unstable. [Good Management Practice]

Response:

- a. Two butane cylinders have been properly stored.
- b. Condensate line was insulated before the audit team had completed their audit.
- c. The portable steps at the trash compactor have been removed.

*what is new
was not
secured*

16. Vessel Entry (Company Policy)

During a review of the facility's vessel entry program, we noted that the facility does not require continuous oxygen monitoring. [Geon Division Safety Standard SA-106]

2/1/91

Response:

The plant has not required continuous oxygen monitoring due to the nature of our process. We do not have any hazardous gases (vinyl chloride or nitrogen) within the plant; our confined space entries are limited to equipment that contains basically dry compound pigments. Even so, we have ordered oxygen monitoring equipment and will incorporate its use into our revised vessel entry procedure. Smith

17. Equipment Inspections (Company Policy)

During a review of the facility's equipment inspection program, we noted that the facility does not inspect the following equipment annually:

- a. Low voltage lights. [Geon Division Safety Standard SA-105]
- b. Portable electrical equipment. [Geon Division Safety Standard SA-107]
- c. Chain falls. [Geon Division Safety Standard SA-118]

- d. Scaffolding materials. [Geon Division Safety Standard SA-122]

Response:

a. b. c. and d. The plant does have an inspection programs for low voltage lights, portable electrical equipment, chain falls and scaffolding equipment. However, we have been remiss in our documentation. These items will be included in the new SmartStar documentation program. Completion date 4th quarter 1991 Barkehanai

18. Powered Hand Trucks (Company Policy)

During a tour of the facility, we noted that powered hand trucks do not have the handle equipped with an emergency stop button that would immediately reverse direction of travel should the operator be pinned between the handle and an obstacle. [Geon Division Safety Standard SA-102]

Response:

The plant will purchase the emergency reverse button mechanism for our present equipment. In a discussion with Clark Equipment Company, it was their feeling that the emergency reverse button would become an OSHA standard within a year or so. Estimated completion date 4th quarter 1991 Barkehanai

19. Mill Safety (Company Policy/Good Management Practice)

During a review of the facility's mill safety program, we noted the following:

- a. The facility's safety procedure (SA-15) does not require mill inspections/tests.
- b. The mill roll stopping distance is not measured on a weekly basis.
- c. Mill rescue drills are not conducted monthly on each mill by each shift.
- d. Mill rescue equipment does not include:
 - Two wooden wedges
 - Two pinch bars
 - One eight-pound sledge hammer.

[Geon Division Safety Standard SA-113]

- e. The CM1 mill reverse switch is not labelled and has not been relocated next to the manual override switch. [Good Management Practice]

Response:

- a. SA-15 will be revised to include inspections and tests as required by the Company Policy. Estimated completion date July 1991. Smith
- b. Mill roll stopping distance will be verified weekly, including documentation. Hamlett
- c. Mill rescue drills will be documented monthly by each shift. Hamlett
- d. The plant asked for a variance for the missing equipment in 1989. With our present equipment configuration (curling wheel motors, reversing conveyors) it is impossible to use the pinch bar, wedges or the sledge hammer for rescue purposes. Some thought should be given to the possible revision of SA-113. Smith
- e. CM-1 mill reverse switch has been moved and properly labeled.

*Review with Hamlett
- Review for possible
revision July*

20. Training (Good Management Practice)

During a review of the facility's training programs, we noted that the facility does not verify that all employees who are required to receive training in such areas as lock-out/tagout, hazard communications, respiratory protection, etc., actually attended the scheduled sessions.

Response:

To ensure and verify attendance at all required meetings, SmartStar a computer program is being established. This program will also be used for medical surveillance and equipment testing and etc. Start-up date June 1991. Smith, Saxton

D. Loss Prevention and Emergency Response

Response:

None required.

E. Air Pollution Control

Response:

None required.

F. Water Pollution Control

21. Quarterly Monitoring Reports (Regulatory)

In reviewing the quarterly Industrial Wastewater Critical Parameter reports, we noted the following:

- a. Two of a total of four reports were submitted 13 to 44 days later than the indicated due date;
- b. Two of the four reports did not include the state identification number of the laboratory;

- c. One of the reports contained an error in transcription of the maximum daily water use;
- d. One of the reports contained an error in detection limit for vinyl chloride. (Industrial Waste Discharge (IWD) Permit No.690R-1)

Response:

- a. Timely reporting will be achieved. Smith
- b. The laboratory identification number will be included on all reports. Smith
- c & d. Reporting errors will be corrected before any report is sent out. Smith

22. Reporting of Sampling and Analysis Results (Regulatory)
During a review of sampling and analysis data in the facility's files, we noted the following:

- a. Results for the wastewater sample collected during the first quarter of 1990 were not included in the quarterly report for the period January 1, 1990 to March 30, 1990. Those results showed elevated levels of COD and suspended solids and an oil and grease value in excess of the permit limitation. (Note: We were told that the facility staff judged the results for the March 1990 sample to be anomalous. The results presented in the first quarter report were from a resampling in April 1990.)
- b. For samples collected in April, September, and December 1990, facility personnel obtained results for additional parameters (antimony, cadmium, and lead) shown in the Critical Parameter List. Those results were not reported to the County Sanitation District.
[IWD Permit No. 6900 R-1, Requirement List: #2]

Response:

- a. This was a an error in plant judgement, both analysis should have been submitted to the District.
- b. The plant samples for antimony, cadmium and lead for our Sara Title III reporting purposes only. These tests were for our information not for the Sanitation District's quarterly report. That is why they were not submitted. It should be noted that lead, which we currently sample for, was a chemical that was removed from our required sampling parameters by the Sanitation District a number of years ago.

23. Wastewater Flow Rate (Regulatory)

The average wastewater flow reported during 1990 differs by more than 25% from the quantity given in the approved permit application. Facility personnel have not submitted an application for a new or revised permit to reflect the lower flow. [IWD Permit No. 690 R-1, Requirement List: #9]

Response:

By providing innovation and sound engineering practices, the plant has continually reduced its wastewater flow over the past 4 years. We have not reached what we feel is the maximum reduction at this time. However, once we reach that volume, we will apply for a revised permit. Had we not taken this course, we would have had to revise our permit twice since our reduction program was started. In fact we question if we should apply for a permit showing reductions due to the drought conditions in California and mandatory water reductions.
Smith, Shore, Barkehanai

24. Wastewater Flow Monitoring (Regulatory/Good Management Practice)

During a review of records relating to the wastewater discharge flow monitoring system, we noted the following:

- a. The annual flowmeter calibration due in November 1990 was performed in January 1991.
[IWD Permit No. 690 R-1]
- b. The flow monitoring system maintenance records do not contain bi-weekly totalizer readings. Twenty-nine readings were recorded for the 48-week period between February 14, 1990 and January 21, 1991; the maximum gap between readings was 38 days.
[February 5, 1990 correspondence from the County Sanitation District]
- c. The flow metering system chart recorded bore a sticker (inaccurately) indicating November 12, 1987 as the date of last calibration. (Good Management Practice)

Response:

- a. The contractor who calibrates our equipment was not available when requested. The plant will allow more lead time when requesting technical services in the future. Smith
- b. Totalizer readings are taken weekly when the flow chart is changed. However, we will increase our totalizer recordings to bi-weekly. With the wastewater flow at 1-3 gallons per minute this

request of the Sanitation District seems to be not necessary and should apply to high rate dischargers Smith

- c. The sticker was removed! Smith

25. Wastewater Sampling (Regulatory/Good Management Practice)

During a review of wastewater sampling activities and interviews with facility personnel, we noted the following:

- a. The sample submitted for vinyl chloride analysis is obtained as a composite sample, not a grab sample. [EPA Method, cited in IWD Permit No. 690 R-1, Critical Parameters List]
- b. There is no written documentation of procedures used to collect, preserve, or transport samples or of sample container type and cleaning. [Good Management Practice]

Response:

- a. Vinyl chloride sampling will be a grab sample. Since we shut down the PVC plant in 1985 we have again asked the Sanitation District in 1990, to remove vinyl chloride from our parameter list for wastewater sampling. We have not received a reply to our request at this time. Smith
- b. The plant will consider this recommendation.

26. Wastewater pH Monitoring (Good Management Practice)
Facility personnel do not maintain records of pH meter calibration and maintenance beyond approximately three months.

Response:

Calibration and maintenance records will be retained for a period of one year using the SmartStar system.
Smith

G. Spill Control and Emergency Planning

27. SARA Title III, Section 313 Report (Regulatory)
The SARA Title III, Section 313 report for 1989 (filed in 1990) inaccurately indicates that the facility is an importer of antimony and compounds, lead and compounds, and dioctylphthalate (DEHP). [40 CFR 272.85]

Response:

We miss interpreted the word "Importer". In the future we will correctly indicate that the facility "processes the chemical as a formulation component".

28. Secondary Containment (Company Policy)

During tours of the facility, we noted the following:

- a. The drain/sump in the pavement immediately south of the diked tank farm area was not hydraulically isolated from the sump inside the diked area. (Note: The team was told that a valve for the pipe connecting the outside drain/sump to the inside sump was on order. While the team was on site, a temporary cap was installed on the pipe in the outside sump.)
- b. Two drums of heat transfer fluid, one drum labelled "gasoline," and one drum of gear lubricant were stored in an area lacking secondary containment near the maintenance shop lube storage area.
- c. Ten drums identified (by a sign) as containing "dike water" were stored in an area lacking secondary containment near the drum storage area south of the railroad tracks. One of the ten drums was observed to be leaking.

[BFGoodrich Health, Safety and Environmental Policy]

Response:

- a. The dike and sump has been isolated using a valve on the pipe connection.
- b. All three drums were moved to the proper storage area.
- c. The dike water (rain water) was disposed of.

H. Solid and Hazardous Waste Management

29. Hazardous Waste Training (Regulatory)

The facility does not provide a training program for all personnel potentially involved in hazardous waste management that:

- a. Is directed by a person trained in hazardous waste management procedures;
- b. Provides both initial training and annual review;
- c. Describes the job titles, skills, and duties of personnel; and
- d. Maintains training records.

[22 CCR 66508, 67105; CA Health and Safety Code, Section 25123.3]

Response:

Annual review and training of personnel involved in waste management has been in place since June 1990. However, documentation of those activities was not maintained as required. All future training and annual reviews will be documented using the SmartStar computer program. On July 25th, the Safety Engineer, Operator Certification Trainer and the Manager of Administrative Services, will attend a hazardous materials management seminar to satisfy their annual required training. Smith

30. Initial Accumulation Point Waste Labelling (Regulatory)
The facility's procedure (SA-34) and current practice for handling and storage of (spilled) regulated waste at or near the point of generation does not specify labelling of the waste container with:

- a. The initial date of accumulation; and
- b. Words that identify the contents of the container.
[CA Health and Safety Code, Section 25123.3]

Response:

- a. A waste accumulation date is placed on all waste that meet the RCRA waste criteria once the 55 gallon capacity of the container is reached.
- b. SA-34 specifies that the contents be identified generically due to the fact that more than one type of waste may make up the 55 gallon content of the container. The plant feels that this meets our interpretation of the regulation. However, we will investigate. Smith

31. Waste Accumulation Area (Regulatory)

The facility does not have a system for managing waste from the time it is identified for disposal until it is removed by the transporter. It does not maintain and operate a waste accumulation area (90-day storage area) that provides:

- a. An internal communication or alarm system;
- b. A device capable of summoning emergency assistance;
- c. Fire control, spill control, and decontamination equipment; and
- d. Water supply or water spray system.

[22 CCR 66508, 27110-27114]

Response:

The plant has specified that Bldg. 817 to be designated as the plant's waste accumulation area. Because of the nature of our waste materials from our compound plant, which are not life threatening, we feel that this bldg. will be adequate.

32. Waste Manifests (Regulatory/Good Management Practice)

During review of all 16 manifests on file for waste shipments in 1990 and 1991 (to date), we noted the following:

- a. Only one of five shipments of EPA D001 to D008 wastes included a "land ban" certification notice. [22 CCR 67702,67740]
- b. One manifest contained no state generator identification number and one contained an incorrect identification number. [22 CCR 66484,67740]
- c. Two TSDF copies of manifests were returned with a notice that the original waste code was incorrect. There was no indication that the facility personnel had reviewed the apparent discrepancies in waste code assignments. [Good Management Practice]

Response:

We rely on Chemical Waste Management to provide proper documentation and correct manifests. However, a close examination of all future manifests will be made by responsible plant personnel. Smith, March

33. Contingency Plan and Emergency Procedures

(Regulatory/Company Policy/Good Management Practice)

During a review of the facility's contingency plan and emergency procedures, we noted the following:

- a. The facility's SPCC plan does not explicitly address plans to minimize hazards to health or the environment from unplanned release of stored or accumulated regulated waste. [22 CCR 66508; 27120-27124; CA Health and Safety Code, Section 25123.3]
- b. The facility's Plant Emergency Evacuation (SA-10) and Emergency Response (SA-13) procedures do not explicitly address waste-related issues. [BFGoodrich Health, Safety, and Environmental Policy, Good Management Practice]

Response:

- a. A revised SPCC Plan will be issued addressing the minimization of hazards from unplanned releases of accumulated waste. Estimated completion date 4th quarter 1991 Smith
- b. The plant feels that our waste (usually liquids suspended in oil-absorbent) needs to be addressed in the SPCC Plan, not in the plants Emergency Evacuation Procedure. A revision to our SA-13 Emergency Response Procedure will include waste issues. Estimated completion date 4th quarter 1991 Smith

34. Waste Characterization (Regulatory/Good Management Practice)

In reviewing facility methods to characterize wastes generated, we were told that:

- a. Facility personnel do not request from the vendor who performs waste sampling and analysis, or retain in the files, waste analysis data that are used as the basis for waste classifications. [22 CCR 66492]
- b. Facility personnel rely heavily on a selected vendor (Chemical Waste Management) to perform waste characterization and to assign waste and DOT codes. They do not critically review the waste profiles and waste code assignments before signing the manifests. [Good Management Practice]

Response:

- a. The plant will request from our vendor, waste sampling analysis for file retention purposes to comply with regulatory requirements. Smith
- b. Chemical Waste management is a Divisional recommended vendor and we rely on them to provide accurate waste characterizations and proper DOT codes. We have been informed that Chemical Waste Management is audited by BFG.

35. Waste Minimization (Company Policy/Good Management Practice)

The facility does not have a formal written program to accomplish and document waste minimization activities. [BFGoodrich Health, Safety and Environmental Policy/Good Management Practice]

Response:

With the plant's submission of it's Waste and Release Reduction Code, and the annual Environmental Forward Plan we feel that waste minimization has been address. However, the plant will issue a formal written program. Estimated completion 4th quarter 1991 Smith

I. Product Responsibility

Based on the sample of activities reviewed, no exceptions were noted.

Response: None required

J. Responsible Care

Response: None required