

~~SECRET~~

SAC200153540000

THIS DOCUMENT IS
REDACTED

APPROVED BY:
ICSD

PROJECT HISTORY
of
LINE I OPERATIONS
Contract W-49-010-ORD-68

at

Iowa Ordnance Plant
1 January 1956 - 30 June 1956

Operating Contractor

MASON & HANGER-SILAS MASON CO., INC.

Engineers and Contractors

Burlington, Iowa

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
REVIEW DATE: 01/07/97	DETERMINATION (CIRCLE NUMBER(S))
THORITY: <input type="checkbox"/> AOC <input type="checkbox"/> ADC <input type="checkbox"/> ADD	1 CLASSIFICATION RETAINED
NAME: A. W. S. S.	2 CLASSIFICATION CHANGED TO:
DATE: 3-4-97	3 CONTAINS NO DOE CLASSIFIED INFO
DD	4 COORDINATE WITH: <i>MLK 9/7/00</i>
OTHER (SPECIFY): <i>7105, 384-454</i>	5 CLASSIFICATION CANCELLED
	6 CLASSIFIED INFO BRACKETED
	7 OTHER (SPECIFY): <i>7105, 384-454</i>

CONTAINS UCN1 - MLK 9/7/00 - UCN1 BRACKETED

Approved by:

Approved by:

Joel G. Holmes
Joel G. Holmes
Plant Manager

Wm. F. Bobzien, Jr.
Wm. F. Bobzien, Jr.
Lt Col, Ord Corps
Commanding

Prepared by:

Franz A. Ahlstrand

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
5650.2B	0
REVIEWED BY: <i>F. Ahlstrand</i>	1 CLASSIFICATION RETAINED
NAME: <i>F. Ahlstrand</i>	2 CLASSIFICATION CHANGED TO:
DATE: 8-7-95	3 CONTAINS NO DOE CLASSIFIED INFO
	4 COORDINATE WITH:
	5 CLASSIFICATION CANCELLED
	6 CLASSIFIED INFO BRACKETED
	7 OTHER (SPECIFY):

Completed: August 1956

Control No. I-16703

This document consists of 64 pages.

No. 6 of 11 copies. Series A.

CONFIRMED TO BE UNCLASSIFIED AS REPORTED
BRACKETED MATERIAL HAS BEEN REMOVED

NAME: *Franklin D. Kelly* ICSD, AC
AUTHORIZED CLASSIFIER (OIC)

DATE: 10/23/01

OK
27 Jan 65
HJ

EXCLUDED FROM GENERAL DECLASSIFICATION SCHEDULE

1333111911

~~SECRET~~

-1-

00SA20C000196

RESTRICTED DATA

This document contains restricted data defined in the Atomic Energy Act of 1954 or the disclosure of its contents in any manner to an unauthorized person is prohibited.

PART I
ORDNANCE ADMINISTRATION

VNU 941175 - 585

~~SECRET~~

1.000 ORDNANCE ADMINISTRATION

The assigned military strength of the installation as of 30 June 1956 was three (3), representing no change during this report period.

Civilian personnel count remains constant at twelve (12).

Management. The Ordnance offices of Contract Administration, Fiscal, Mail and Records, and Security activities associated with Division "B" operations, were physically moved during the month of June and were consolidated within the respective offices of Division "A". This move has resulted in better utilization of personnel, office facilities, and increased work efficiency.

Effective 11 September 1955, the payroll preparation function of this installation was terminated and the activity transferred to Joliet Arsenal, Joliet, Illinois.

As of the close of business 31 May 1956, the Division "B" Fiscal Station No. 13-058 was deactivated and the official fiscal records, formerly maintained, were physically transferred to the Ordnance Ammunition Command, Station No. 11-173. Memorandum fiscal records only are now maintained at the Iowa Ordnance Plant in implementation of the Ordnance Corps Command and Management System within the Ordnance Ammunition Command.

~~SECRET~~

VND 941195 - 326

~~SECRET~~

Upon approval granted by the Chief Signal Officer, the radio transmitting frequency was modified resulting in the placement of all security and emergency vehicles of Divisions "A" and "B" under one net, operating on the frequency of 163.425 mc. New radios will replace present obsolete units of the guard and fire network.

CB Yard of Division "B", Line I, was opened for operation on 6 February 1956.

The Iowa Ordnance Plant was assigned an overall rating of 'Excellent' as a result of the annual Inspector General inspection conducted during the month of January 1956.

Contract No. W-49-010-ORD-68, with Supplement No. 11, remains effective with total contract amount of \$71,852,146.47.

~~SECRET~~

2255 - 51114h ANU
VNU 941175 - 522

PART II

CONTRACTOR ADMINISTRATION

~~SECRET~~

- 2.000 CONTRACTOR ADMINISTRATION
- 2.100 CHANGES TO CONTRACT NO. W-49-010-ORD-68
- 2.200 MANUAL OF STANDARD PRACTICES
- 2.300 KEY PERSONNEL CHANGES

~~SECRET~~

1.45 - 011145 AM

~~SECRET~~

2.000 CONTRACTOR ADMINISTRATION

2.100 CHANGES TO CONTRACT NO. W-49-010-ORD-68

There were no supplements to the contract received during this period.

2.200 MANUAL OF STANDARD PRACTICES

A new Section, No. 14,000 series, Procedures to be Followed when Furnishing Contractor Services to Others, was approved 6 February 1956.

Copies of this Section were distributed to all holders of Standard Practices books, along with numbered pages for Sections 12.000 and 13.000 applicable only to Contract No. DA-11-173-ORD-85.

2.300 KEY PERSONNEL CHANGES

Refer to Key Personnel page following this section.

~~SECRET~~

VND 941175 - 200

~~SECRET~~

MASON & HANGER-SILAS MASON CO., INC.
IOWA ORDNANCE PLANT
KEY PERSONNEL

HOME OFFICE

Arthur J. Sackett	Chairman of the Board of Directors
W. Arnold Hanger	President & Director
Francis Donaldson	Vice President & Director
Miles I. Killmer	Vice President & Director
Robert L. Telford	Vice President, Director & Executive Officer
John M. Yates	Vice President, Treasurer & Director
Howard L. King	Vice President & Chief Engineer
Russell G. Cone	Vice President
Robert B. Jewell	Vice President & Deputy Chief Engineer
Henry T. Ireys	Secretary & Director

KEY PERSONNEL

Contract No. W-49-010-ORD-68

J. G. Holmes	Plant Manager
P. J. Bloomquist	Departmental Assistant
P. D. Holliday	Division Manager, Division "B"
J. W. Routh	Chief Engineer
D. E. Heffebower	Process Engineer
L. R. Rothstein Ph.D.	Chief Chemist & Supervisor of Pilot Plant
N. M. Riddick	Master Mechanic
L. F. Rutherford	Reproduction Department Supervisor
R. E. Carroll	Production Manager
R. H. Ihne	Production Superintendent, Plants "A" & "C"
E. R. Harrell	Production Superintendent, Plants "B" & "D"
O. E. Erickson	Superintendent, Production Control
W. E. Morrissey	Director of Inspection
W. B. Fleming	Chief Inspector
C. A. Simmons	Engineer, Radiology & Test Fire

~~SECRET~~

~~SECRET~~

KEY PERSONNEL (continued)

J. M. Higgins	Division Manager, Safety & Security
F. C. Laue	Chief Safety Inspector
L. J. Grier	Fire Chief
J. H. Nestle	Guard Chief
R. S. Ramsey	Division Manager, Fiscal & Services
D. L. Fimmen	Personnel Manager
M. J. Latimer, M.D.	Medical Director
T. A. Horstmeyer	Purchasing Agent
P. H. Hessing	Chief Accountant
R. P. Johnson	Chief Storekeeper
E. J. Kuntz	Paymaster
E. D. Elmore	Chief Timekeeper
H. J. DeLashmutt	Chief Investigator
J. P. Smith	Data Center Supervisor
C. N. Noel	Traffic Manager
W. C. Jackson	Supervisor, Sanitation & Laundry

~~SECRET~~

441175-524

PART III
ENGINEERING DIVISION

44175 - 500
30
has - 511141

~~SECRET~~

3.000 ENGINEERING DIVISION
3.100 PROCESS ENGINEERING
3.101 DESIGN AND MAINTENANCE
3.102 RESEARCH AND DEVELOPMENT
3.200 CHEMICAL LABORATORY
3.300 MAINTENANCE
3.400 REPRODUCTION

~~SECRET~~

~~SECRET~~

3.000 ENGINEERING DIVISION

3.100 PROCESS ENGINEERING

DELETED BT DOE

Surveillance operations performed during February included disassembly of three (3) Mk 3 assemblies and analysis of the H. E. components and the disassembly of MC-161 assemblies for the Los Alamos Scientific Laboratory.

-10-

~~SECRET~~

~~SECRET~~

DELETED BY DOE

The
TMS of the Mk 15 MC-590 was completed in March, while the TMS on the Mk 21/36 MC-592 was delayed until April by parts shortages. While the TMS of the MC-592 was in progress, it was noted that the longitudinal welds in the ACF-Buffalo case section were not located per specifications. This resulted in another hold order which required a determination of the weld locations in all of the case sections on hand. Those cases which did not meet specifications had to be deviated.

DELETED BY DOE

This type mold proved successful and only one slight modification was made to improve the stripping of the casting after cooling.

DELETED BY DOE

One was the annular riser type, and one was the single riser type. Considerable cracking and stripping problems were encountered on the initial casting, but improvements were made with further experimentation. This experimental and development work continued throughout the remainder of the period.

-11-

~~SECRET~~

~~SECRET~~

Major design and equipment changes accomplished during the reportable period include:

1. Modifications to Bldg. 1-61 Addition. The addition to Building 1-61 was originally designed for loading and unloading facilities. Later production scheduling required using the addition as an assembly area. To facilitate handling of production items, a concrete floor slab was poured, a 24' wide by 30' wide motor operated roll-up door was installed, and two speed steam unit heaters were installed.

2. Revisions to Wash Down Room, Bldg. 1-05-2. A new floor was installed in the north wash down room of the melt building where molds and other pieces of equipment are washed with hot water to remove explosives. The new installation uses an aluminum tread plate for flooring and panels of aluminum plate around the walls of the room for a permanent water tight construction. Previously, the concrete floor had to be repaired once a year and completely replaced every fourth year.

3. Gravel Roads to Cooling Towers. Access roads to cooling towers 1-155-1 and 1-155-4 were graveled to provide access for vehicles during inclement weather.

- 74 -

~~SECRET~~

01/11/15 - 2015

~~SECRET~~

4. Instrument Course. One engineer attended a 33-hour course on "Basic Physics of Instruments" conducted by Extension Division of the University of Illinois at Bradley University, Peoria, Illinois.

5. Balance Electrical Circuits - Data Center. Electrical circuits in the Data Center were balanced with equipment in operation to give a balanced load on all three phases. The balancing of circuits provides better operation of equipment and eliminates fire hazard due to overheating of wires.

6. Cooling Tower Water Treatment. Water treatment systems consisting of continuous feed of Orocol and Sulfuric acid and automatic control of conductivity were installed at cooling towers 1-155-4 and 1-155-5. The advantages of automatic water control systems are:

- a. Continuous feed of Orocol and acid to the tower basin will assure a homogeneous mixture of water and chemicals at all times.
- b. Variable feed of chemicals with load and airborne materials.
- c. Savings in chemicals because only the amount needed is added.
- d. Positive control of scale and corrosion.
- e. Longer life expectancy from equipment being protected.
- f. "Blowdown" is automatically controlled thus saving on water.

-15-

~~SECRET~~

104-517146
ANN

~~SECRET~~

7. Cooling Tower Fan Motors. Two-speed starters and controls for fan motors on cooling tower 1-155-5 were installed. Fan motors had two-speed windings but two-speed starters were not installed during erection due to long delivery schedules. Motors were difficult to start on "high speed" and there existed the danger of burning out motors due to excessive starting current. Fan motor operations are controlled by temperature of water returning from cooling tower.

8. Design of Tooling for XW-25 Program. Design of tooling for machining the XW-25 Program H.E. has been practically completed. A single headed spotter has been completed and works satisfactorily.

9. Spinning Molds. Hemispherical molds are required for the XW-25 Program and these were made by a spinning process. Spinning is a cold working of the material to make it conform to a shaped mandrel. This work was accomplished on a 32" Monarch engine lathe with a tracer attachment. The tracer, in conjunction with a template, is used to make the aluminum sheet conform to the shaped mandrel. It was determined that the most desirable aluminum for spinning was 1100 H14 and 3003H14 in 3/16" thickness or 6061-0 in 1/4" thickness. An annealing operation is necessary to remove the work hardening set up by cold working.

~~SECRET~~

702 - 011114h 011114h

~~SECRET~~

10. Move to North Test Fire Site. The H. E. test firing operation was moved from the south site to the north site resulting in reduced maintenance costs.

3.102 RESEARCH AND DEVELOPMENT

The activities of the Research and Development Engineering Section were substantially reduced during the period January through June 1956. This reduction was caused by a shortage of personnel and the necessity of utilizing existing personnel on more urgent projects in the other Engineering Sections. The following is a discussion of the progress made on research and development projects during the last half of the Fiscal Year 1956.

1. Universal Cutter Grinder. Several minor modifications were made to the prototype special Universal cutter grinder which increased the ease and efficiency of the grinding operation. A final report, together with an analysis of the versatility of this machine in conjunction with future programs, is being prepared.

2. Oven Cooling of Molds. Engineering design and preparation of working drawings for the experimental radiant oven was completed in January. Fabrication and installation of equipment and services were completed the first week in March and the first experimental castings were poured on March 12, 1956. Sound castings have been

~~SECRET~~

NNN 94175-407

~~SECRET~~

obtained using substantially shorter cooling cycles than those required for regular jacketed molds. An experimental program is being conducted to establish the operational procedures and techniques for this method of controlled cooling of cast explosives.

3. Furane Resin and Other Adhesives. The "Double Catalyst Method of Gluing with Furane X-2 Adhesive", developed under this project, was incorporated into regular production operations and the project has been closed.

4. Effects of Process Variables on Product Quality. Completed study of the effect of particle size and distribution of RDX on the transit time of Cyclotol 60/40 and calculated equations for firing rate versus particle size and sedimentation versus particle size. The results obtained confirmed previous investigations and calculations. They were not significant enough, however, to warrant continuation of similar studies for Cyclotol 75/25 as had been planned.

5. Improved Mold Design. Experimental tests using "Hydro-formed" shaped molds in an existing mold jacket, and also in a two-gang cooling tank, were completed. Sufficient data were obtained to establish the characteristics of this type mold for future production requirements. In addition, a method for local fabrication of a new type mold using a spinning process was developed. Kirksite forms were designed and fabricated and the spinning technique established

~~SECRET~~

hoh - 56114b GNN

~~SECRET~~

to a degree that should be completely satisfactory for future fabrication of production molds.

6. Ultrasonic Intrusion Alarm. Additional tests were conducted with the experimental explosion proof ultrasonic intrusion alarm equipment. However, no installation within the operating line has been accomplished to date.

7. Foaming Plastic. Additional experiments were conducted using various small shaped molds to standardize techniques and develop handling characteristics for the foam plastic formulations. Densities of these small pieces varied less than 0.1 pound per cubic foot. Methods for analyzing the raw materials were developed and the analyses checked closely with theoretical values. A full size Kirksite mold was designed and fabricated and all necessary auxiliary equipment set up to conduct an experimental program. Casting techniques, handling characteristics, and curing cycles were investigated and the experiment castings produced were checked for density and dimensional stability. The data obtained were used to design a prototype production mold, fabrication of which has just begun.

~~SECRET~~

~~SECRET~~

8. Outlying Assembly Facilities. This project was initiated to develop information and establish design criteria for proposed outlying assembly facilities. A project survey was conducted which involved a literature search and visits to various installations to obtain related information. Results of this survey were evaluated, calculations made, and a basic design established. Test slabs and panels were designed and fabricated to investigate the shock absorption characteristics of various types and arrangements of panel materials. In addition, a sub-contract was issued to the University of Illinois and they are currently conducting an investigation of shock degradation.

9. Scrap Recovery Plant. Equipment modifications and refinements, based on operational experience, were made to improve the efficiency of the scrap recovery operation. The Scrap Recovery Plant operated for two months during which time approximately 425,000 pounds of material were processed. An automatic deluge system was designed to operate in conjunction with the existing manual pull deluge system. Equipment to install the automatic deluge system is on order and installation is scheduled to begin in July.

-20-

~~SECRET~~

14ND 44112-400

~~SECRET~~

3.200 CHEMICAL LABORATORY

Techniques Developed and Improved Procedures.

1. Procedures have been developed for casting the desired shapes of Stafoam plastic materials. On the basis of these experiments, production molds are now being fabricated.

2. New gluing techniques involving Furane catalyst and Eastman Kodak 910 have been developed which will result in improved procedures for current programs.

Savings Effected. Miscellaneous operations, such as those mentioned in the July 1 - December 31, 1955 historical report, continued to effect substantial benefits.

3.300 MAINTENANCE

The usual functions were performed by the Maintenance Department throughout this period. Several equipment and building changes by engineering were accomplished during this period which will materially affect maintenance costs.

One instrument foreman and two instrument technicians attend a 33-hour course in "Basic Physics of Instruments" conducted by Extension Division of the University of Illinois at Bradley University, Peoria, Illinois.

~~SECRET~~

104-611146
NNNN

~~SECRET~~

A severe wind and rain storm on 19 June 1956 caused considerable damage on Line I. The following is a list of the damage and resulting costs:

1	Guy line pole located in the parking lot north of Line 1	\$ 60.00
3	Fire zone signs: 1 destroyed, 1 to reset, and 1 blown down	500.00
1	Oil storage shed roof	250.00
	Damage to cyclone fence at 1-11 slab	75.00
4	Production unit covers on 1-11 slab	280.00
	West ramp roof, Bldg. 1-04	95.00
	Roof shingles on Bldg. 1-137-3	150.00
1	Restricted area sign at the Burning Ground entrance gate	25.00
	Emblem signs on buildings	75.00
1	Overhead door to Bldg. 1-61 annex	<u>1,500.00</u>
	Total	\$3,010.00

3.400 REPRODUCTION

The usual functions were performed by the Reproduction Section throughout this period without any major changes in procedures, equipment, or personnel.

~~SECRET~~

905-51174b
NNV 941175-406

PART IV

FISCAL AND SERVICES DIVISION

1441113-408

~~SECRET~~

4.000 FISCAL AND SERVICES DIVISION
4.100 PURCHASING
4.200 PAYROLL
4.300 TIMEKEEPING
4.400 ACCOUNTING
4.401 MACHINE RECORDS
4.500 STORES
4.600 PERSONNEL
4.601 LABOR STATISTICS
4.602 INSURANCE
4.603 COLLECTIVE BARGAINING AGREEMENTS
4.604 FACILITY SUBMISSIONS
4.605 GRIEVANCES
4.606 PLANT NEWSPAPER
4.607 SUGGESTIONS SYSTEMS
4.700 MEDICAL
4.800 INVESTIGATION-IDENTIFICATION
4.801 MAIL AND SUPPLY
4.900 SERVICE GROUP

-23-

~~SECRET~~

44175-410

~~SECRET~~

4.000 FISCAL AND SERVICES DIVISION

4.100 PURCHASING

Purchasing assignments received during this period totaled 2,718 which is approximately seven and one-half per cent ($7\frac{1}{2}\%$) higher as compared to the previous period and is due to more frequent requisitioning based on a reduced Stores inventory. Dollar volume likewise increased to \$2,432,746.00 for this period as compared to \$2,206,711.00 for the previous period. This is due chiefly to the placing of some large orders for production materials, gaging acceptance inspection equipment, and machine replacement equipment. Continued use of the redesigned Purchase Requisition form, the additional establishment of Open-End Supply Contracts, and the recently instituted use in early June of the Stores Department Purchase Request Card on minor purchases in lieu of the Purchase Requisition has contributed to additional savings in man-hours to meet the increased load of purchase assignments. Also, more time has been allocated for purchasing activity by transferring all expediting duties during this period to a full time expediter who was added to the Purchasing Department staff in November of the prior period. Effective June 4, 1956 of this period, due to personnel promotions, Senior Buyer T. A. Horstmeyer was appointed Purchasing Agent and an additional buyer added to the staff to perform his previous purchasing activities.

~~SECRET~~

~~SECRET~~

The following is a tabulation of the work performed during this period:

<u>Month</u>	<u>Req'n Rec'd</u>	<u>P.O. Placed</u>	<u>Dollar Volume</u>
January	<u>441</u>	480	\$ 254,271
February	<u>414</u>	438	81,165
March	487	491	1,054,561
April	<u>447</u>	471	95,215
May	491	554	805,150
June	<u>438</u>	<u>411</u>	<u>142,384</u>
TOTAL	2718	2845	\$2,432,746

Effective June 1, 1956, Salvage Department activities were split into two departments to function as follows: One (1) salvage clerk and one (1) junior clerk were transferred to the Stores Department to perform necessary work of keeping salvage and surplus property records and preparation of salvage invitations to bid under the direction and responsibility of such department. All conduct of salvage sales and the keeping of pertinent records and the handling of fiscal matters pertaining thereto were retained by the Purchasing Department as the direct responsibility of the Purchasing Agent. All attendant paper work in this connection, formerly performed by the transferred personnel, will be performed by the Purchasing Agent's secretary. Prior to addressing and mail out, all salvage invitations to bid will be submitted to the Purchasing Agent for his review and approval at which time he will add all special condition clauses, etc. that are required.

~~SECRET~~

~~SECRET~~

The following is a report of salvage transactions:

Total	Surplus property beginning of period.....	\$713,113.45
Receipts	Surplus property during period.....	494,496.07
Disposal	Surplus property during period by donation.....	63,725.06
Disposal	Surplus property during period by sale.....	786,256.45
Disposal	Surplus property during period by destruction....	36,014.15
Disposal	Surplus property during period returned to Stores..	145,588.64
	Surplus property on hand end of period.....	175,024.92

Total income from sales during this period is as follows:

Surplus.....	\$43,534.00
Scrap.....	7,141.50
Total.....	\$50,675.50

4.200 PAYROLL

An increase of fifty (50) employees under the contract for Division "B" was reflected during this six months reporting period. At the close of the period, 30 June 1956, there were five hundred and twenty (520) employees on the payroll compared with four hundred and seventy (470) at the close of the previous period, 31 December 1955.

The total payroll for this six months period was \$1,141,559 which was a slight increase over the previous six months. By month the payroll figures were:

January	\$201,474
February	167,844
March	173,482
April	212,761
May	189,020
June	196,978

~~SECRET~~

NND 941195-413

~~SECRET~~

Personnel in the Payroll Department were maintained at six (6) throughout the entire period. There were no major changes in policies or procedures in this Department during the period.

4.300 TIMEKEEPING

There were no changes in techniques, procedures, methods, or personnel in the Timekeeping Section within this period.

4.400 ACCOUNTING

At the close of business on 30 June 1956, total Contractor expenditures to date amounted to \$60,376,900.62. During the first six months of calendar year 1956, the net Contractor expenditures totalled \$1,647,154.94. This amount was expended in the following manner:

Payrolls	\$930,950.01
Payroll Taxes	231,448.80
Material Purchases	341,499.53
Fees	52,500.00
Miscellaneous - Insurance, Travel, Inter-Contract Billings, etc.	443,429.64

Expenditures Recouped through Inter-Contract and Inter- Project Billings, etc.	(352,673.04)
--	--------------

\$1,647,154.94

In the first half of 1956, approximately 1,350 invoices were processed for payment with full realization of all discounts. Likewise, all expenditures were of a reimbursable nature.

~~SECRET~~

14-00000-144

~~SECRET~~

4.401 MACHINE RECORDS

There were no new functions assigned, although preliminary procedures are being instigated for the application of metal parts.

Techniques Developed and Procedures Improved. Computer procedures were programmed to prepare pre-punched production cards. This procedure has reduced card making time considerably and has simplified processing.

A procedure to reduce the present card volume necessary for production reporting by 50% is being formulated. It is believed that using the SC and IC analysis card for block masters will eliminate the necessity for duplicate card preparation.

A computer step was added to the Federal and State quarterly procedure to punch control and automatically eject cards of personnel that are completely non-taxable. Wholly non-taxable personnel are not reported on the Federal 941A Report. This has reduced reporting time considerably.

A new computer program was established to give a more complete analysis of the Gage Laboratory Report.

New procedures were established to show the total Store's stock balances and the balance in individual locations of any stock item. This will eliminate excess paper work in the Stores Department.

Computer and tabulator setups were adopted to report unit cost changes daily to the Stores Department.

~~SECRET~~

~~SECRET~~

Changes in Building Space and Equipment. An effort has been made to increase speed and flexibility of operation without having too great an increase in cost. Four (4) punches were purchased on Federal excess list and will be used to replace four (4) punches now on rental. A syncromatic and punch was purchased on excess for use on Division "B" stores and metal parts procedure. Four (4) mechanical sorters were released in favor of two (2) electronic sorters. One (1) 319-2 Electronic Collator was placed on rental to aid in better control of internal processing.

Electrical wiring was changed in order that machines could be placed in more favorable positions without overloading any one circuit and to maintain greater voltage control which is a necessity in the operation of electronic machines.

There was a decrease of one (1) employee during the reporting period.

4.500 STORES

The following is a resume of Stores and Property Department activities for the period 1 January through 30 June 1956.

General Stores Activities

1,962 Voucher numbers were assigned which constituted the following:

- 1,750 Receiving and inspection reports, and shipments returned to vendors.
- 53 Shipping documents to and from other installations representing approximately 585 line items.
- 33 Shipping documents from Division "A" representing approximately 103 line items.
- 38 Inventory adjustments representing approximately 511 line items.
- 22 Relief of liabilities representing approximately 47 line items.

~~SECRET~~

~~SECRET~~

Classified Stores Activities

1,081 Voucher numbers were assigned which constituted the following:

908 Receiving and inspection reports

152 Shipping documents, representing approximately 733 line items.

11 Property turn-ins to property disposal account representing approximately 250 line items.

10 Inventory adjustments representing approximately 50 line items.

6 Memo numbers were assigned.

4,669 Issues were made representing approximately 7,000 items.

63 Line items were circularized as excess - dollar value \$3,376.47.

Disposals from excess - \$470.20.

~~SECRET~~

~~SECRET~~

Additional activities of the Insurance Section were:

Savings Bond applications	23
Hospitalization claims paid	109
Total amount hospitalization claims paid	\$10,674
Surgical claims paid	51
Total amount surgical claims paid	2,956
Death claims paid	0
Total amount death claims paid	0

4.603 COLLECTIVE BARGAINING AGREEMENTS

Eight (8) collective bargaining agreements were completed with local unions during this period.

4.604 FACILITY SUBMISSIONS

Approval of IOP-89 pertaining to wage rates and job classifications for laborers, mechanics and foremen, overtime and premium pay and other fringe benefits, and various working rules and conditions of employment for employees of the rehabilitation project for Line I, was received from the Contracting Officer's Representative by letter dated 23 January 1956.

Approval of IOP-90, concerning the job description and applicable wage rate for the new non-exempt job classification of Editor, was received from the Contracting Officer's Representative by letter dated 24 January 1956.

Approval of IOP-91 was received by letter from the Contracting Officer's Representative 1 March. This concerned modification of the Company's group insurance plan and involved an increase in the employer's rate of contribution under the group life insurance part of the plan only.

~~SECRET~~

~~SECRET~~

Responsibility for the March of Dimes, Red Cross, Cancer Fund, and U. S. Savings Bond payroll deduction campaigns was given the newspaper during the six months. Each was considered very successful with excellent employee participation.

In the interest of employee relations, several special features were introduced in the paper. These included pictures and a description of the operations at the Water Treatment Plant; an explanation of the group insurance cash collection requirements for those employees who are absent when the insurance premium is deducted from payroll checks, and a feature article describing changes made on Line II during recent months.

In addition The Eye carried a number of stories and pictures in the interest of safety, both on and off the job.

4.608 SUGGESTION SYSTEM

There were no cash awards made to employees under Contract 66 for suggestions submitted during this period. Eight (8) suggestions were disapproved and three (3) were deferred for further consideration and investigation. A total of ten (10) new suggestions were received by the Suggestion Committee for the entire period.

~~SECRET~~

~~SECRET~~

863 were received and 284 LTL's were dispatched from the Plant.

Reporting procedures for the accumulation of necessary information to prepare the cost reports were revised during this period. The new procedure makes this information available at the first of each month.

Personnel in this Department remained stable throughout the period.

The Sanitation Section performed usual functions throughout the period.

~~SECRET~~

4224 - 426
44113
NNN

~~SECRET~~

5.000 INSPECTION DIVISION
5.100 PROCESS INSPECTION
5.200 TEST FIRE
5.300 RADIOLOGY

-40-

~~SECRET~~

~~SECRET~~

our electrical inspection and many failures of these items put a heavy work load on production. Throughout the entire period metal parts and electrical components caused many delays and added greatly to the inspection and production work load.

The quality of the products produced in both the machining and assembly areas was considered good, but as usual each area had its own difficulties.

11
~~DELETED BY DOE~~

5.200 TEST FIRE

The Test Fire Section continued operations during the period of this report with one (1) foreman, one (1) cameraman, two (2) test operators, and one (1) assessor.

~~DELETED BY DOE~~

These castings were also radiographed with our million volt machines.

-42-

~~SECRET~~

PAGE DELETED BY DOE

~~SECRET~~

6.000 PRODUCTION DIVISION

-45-

~~SECRET~~

~~SECRET~~

Mr. M. J. Stone, who was temporarily assigned to the Pilot Plant, was recalled on February 24th to fill the vacancy created by Mr. Ihne's resignation.

On January 24th the program known as "Vulnerability" was established. This program required the retention, for disposition by the Commission, of all Grade II end products and Grade II and/or reject H. E. components incurred.

The loss of one (1) front case section (MC-177) was discovered during January. Investigations indicate this item may not have been received by this station. At the close of this report period the location of this case has not yet been determined.

In an attempt to reduce the property damage resulting in the use of fork trucks by all departments, a safety meeting with a format pertaining strictly to this type of equipment was held in January. Every operator licensed to operate a fork truck of any description was required to attend this meeting. Based on the results of the meeting and the questions and problems discussed, it was decided a meeting of this type would be held quarterly.

Approval to use Igloos 1 and 2 in Yard CB for the storage of Squash items was received on February 6th.

-47-

~~SECRET~~

~~SECRET~~

<u>Date</u>	<u>Visitor</u>	<u>Representing</u>	<u>Purpose of Visit</u>
Mar. 19-27	Mr. E. H. Wickett	Sandia	Replacement of Defective End Rods on MC-592's
Mar. 19-27	Mr. T. A. Reinhardt	ACF-SAW	"
Mar. 20-27	Mr. J. H. Parsons	ACF-SAW	"
Mar. 20-22	Mr. W. G. Smith	ACF-SAW	"
Mar. 20	Mr. H. M. Meyer, AEC	ALOO	Discussion of Schedule 757
Mar. 20	Mr. J. F. Burke, AEC	ALOO	"
Mar. 23	Mr. J. H. Mitchell	P & G	Discussion of Const. for Future Operations
Apr. 3-6	Mr. M. A. Dittenhofer, AEC	ALOO	Annual SS audit of SS Station SFF
Apr. 3-6	Mr. E. Yates, AEC	ALOO	"
Apr. 9-10	Mr. J. Bliss	Sandia	Block control system
Apr. 9-10	Mr. H. Becker	Sandia	"
Apr. 16-20	Mr. J. Sperrazza	IASL	Vulnerability Program
Apr. 16-20	Mr. Morgan Smith	IASL	"
Apr. 16-20	Mr. Jack Deitrich	IASL	"
Apr. 23-25	Col. Hikel, USAF	Armed Services Explosives Safety Board	Line I safety inspection
Apr. 23-25	Mr. Perkins, Exp. Safety Engineer	ASESB	"
Apr. 30-May 4	Mr. Milton C. Krupka	IASL	MC-181 surveillance
Apr. 30-May 3	Mr. Robert Spaulding	IASL	"
Apr. 30-May 3	Mr. L. S. Hackenberry	IASL	"
Apr. 30-May 4	Mr. Frank Millikin	Sandia	"
Apr. 30-May 4	Mr. Leon Gotchell	Sandia	"
May 2	Mr. H. C. Heyde	Royal	Mk 21 evaluation
May 2	Mr. D. K. Peck	Royal	"
May 2	Mr. J. J. Kane	Sandia	"
May 2	Mr. W. T. Price	Sandia	"
May 2	Mr. A. L. Thornton	Sandia	"

~~SECRET~~

~~SECRET~~

Previously reported difficulty with powdered boric acid solidifying during storage was remedied by storing in a controlled temperature building. This action reduced the loss of this material by 43%.

2. Melt and Cast (Building 1-05-2)

Preliminary experimental melting and casting were performed in the 1-05-2 Building under the supervision of the Process Engineer. Experimentation with cooling cycles, check of water flow for new molds fabricated in Building 1-04 Machine Shop, and similar work was done on the XW-25 program.

DELETED BY DOE

Work was completed on the north wash room floor and the wash room was turned over to Production during the week of February 27th.

DELETED BY DOE

3. Research and Developmental Project (Building 1-05-1)

DELETED BY DOE

~~SECRET~~

~~SECRET~~

PRODUCTION SUMMARY - Plants "E" and "D"

In addition to the master schedules for this area the following "off-schedule" requisitions were processed:

IASL-IC-400
IASL-IC-461
IASL-IC-466
IASL-IC-414
IASL-IC-415
IASL-IC-425
IASL-IC-426
Sandia-72-3575
Sandia-72-3794
P & G PS-82
P & G PS-83
AFSNP 56-57

The TMS on the Mk 21/36 Program was processed during the week February 20th.

The concrete floor for the annex of Building 1-61 was completed on March 8th.

~~DELETED BY DOE~~

Part shortages, equipment failures, specification difficulties, and other problems which were constantly encountered throughout this report period have been purposely omitted due to security. However, a complete summary of these items, as well as the monthly accomplishments and deficits, may be obtained from the monthly report submitted to the Division Manager in charge of Production.

~~SECRET~~

PAGE DELETED BY DOE

PAGE DELETED BY DOE

SECRET

PRODUCTION SUMMARY - PLANTS "A" & "C" (CONTINUED)

RAW MATERIAL USAGE

	<u>JANUARY</u>	<u>FEBRUARY</u>	<u>MARCH</u>	<u>APRIL</u>	<u>MAY</u>	<u>JUNE</u>	<u>TOTAL</u>
TRINITROTOLUENE	8,230.00	8,630.00	7,820.00	10,048.72	7,123.04	7,153.87	49,005.63
COMPOSITION "B"	29,975.00	29,600.00	29,450.00	37,275.00	38,000.00	20,725.00	185,025.00
STEAROXYACETIC ACID	-0-	-0-	-0-	3.90	4.80	6.51	15.21
BARIUM NITRATE	-0-	-0-	-0-	6,809.00	6,169.00	8,943.00	21,921.00
BORIC ACID - GRANULAR	8,692.00	9,078.50	8,211.00	8,888.50	5,945.46	4,903.50	45,718.96
BORIC ACID - POWDER	4,465.00	4,026.00	3,657.00	3,770.50	2,611.00	2,163.50	20,693.00
MONOSTRAL GREEN DYE	.35	.47	.46	.46	.36	.25	2.35
NORMAL DECYL GALLOPHENONE	10.26	10.76	9.72	10.39	7.02	5.82	53.97
CYCLOTOL	21,275.00	23,825.00	23,053.00	20,658.00	23,044.00	20,601.00	132,456.00
ANTHRACENE	134.08	140.30	136.01	147.12	147.67	104.43	809.61
TNT-NC MIX	-0-	-0-	-0-	59.28	72.96	98.90	231.14
ORTHO-NITRO-TOLUENE	-0-	-0-	18.00	-0-	9.00	9.00	36.00

SECRET

PAGE DELETED BY DOE

PAGE DELETED BY DOE

~~SECRET~~

7.000 SAFETY AND SECURITY DIVISION
7.100 SAFETY DEPARTMENT
7.200 GUARD DEPARTMENT
7.300 FIRE DEPARTMENT

-59-

~~SECRET~~

~~SECRET~~

7.000 SAFETY AND SECURITY DIVISION

7.100 SAFETY DEPARTMENT

Safety Department inspectors investigated 56 first aid and accident cases during this six months period. There were no disabling injury cases in this report period.

The statistical record for Division "B" for the period 1 January - 30 June 1956 follows:

Total cases reported	56
Disabling injury cases	0
Man-hours worked	459,622
Frequency	.00
Severity	.00
Reportable motor vehicle accidents	2

The annual Inspector General inspection of this installation was made in January and an excellent rating was received.

Mr. J. M. Higgins, Division Manager of Safety and Security, attended RAD-SAFE training school at Los Alamos Scientific Laboratory during the month of March. Mr. Higgins also was in Albuquerque, New Mexico on 8, 9, 10 and 11 May to witness tests.

Also, in March a survey of the Iowa Ordnance Plant and the Green River Ordnance Plant was made by Mr. H. L. Dean of OAC. In April the semi-annual security survey was made by Captain Samuel H. Hostick and Mr. Edward J. McCarthy. Colonel Theodore R. Hikel and Mr. R. G. Perkins of the Armed Services Explosives Safety Board conducted an explosives safety survey at this Plant 23 through 25 April 1956.

~~SECRET~~

~~SECRET~~

During this report period the Safety Department lost two (2) Chief Safety Inspectors. One (1) resigned to accept employment elsewhere, and the other was transferred to our Company's operation in San Francisco, California. Work assignments were redistributed between the remaining Chief Safety Inspectors.

Employee group safety meetings again were held monthly during this period with films and flannel board presentations being used for the most part. Weekly safety meetings are held by foremen with their individual groups from topics and materials issued by the Training Section of the Safety Department.

Two (2) Red Cross first aid training courses and five (5) refresher courses in explosives safety training were held in this period.

Active participation in the Slow Down and Live campaign on the part of all IOP employees is being emphasized.

Considerable emphasis has also been placed on off-the-job accidents during this period.

Employee participation programs continue to be a feature of our safety program. For the past six months a tie in with the National Safety Council safety calendar contest has been offered employees with cash prizes for local winners and the winning captions sent to the National Safety Council for entry in the National contest. One (1) of IOP's employees won two (2) cash prizes in the National contest.

~~SECRET~~

~~SECRET~~

A new participation program is to start 1 August 1956. It will be an "Inquiring Reporter" type of program where employees will be asked to describe the current safety poster on all Plant safety boards. To the six (6) best descriptions will go a \$5.00 cash award for each, and an additional \$10.00 award to the best one of the six.

Fifty-three (53) of the Plant's professional truck drivers were cited for their safe driving records during a program held Wednesday afternoon, May 16th, in the Recreation Hall. Four (4) of the drivers received certificates for seven (7) years of accident free driving; two (2) for six (6) years; two (2) for five (5) years; twenty (20) for four (4) years; eighteen (18) for three (3) years; two (2) for two (2) years, and five (5) for one (1) year.

Joel G. Holmes, Plant Manager, spoke briefly to the men and presented the awards. Lt. Col. William F. Bobzien, Jr., Commanding Officer, also made a short talk of commendation.

Coverage was given the ceremony by the Burlington, Iowa radio station, and several newspapers.

Students of the Junior and Senior classes of the Danville, Iowa High School were guests at the Plant, Monday, March 19th. Besides hearing several short talks by representatives of the Company and looking at some products and safety equipment, the young folks were taken on a bus tour of the reservation. The tour ended at the Plant's main Machine Shop with an hour's visitation in the various shops.

~~SECRET~~

~~SECRET~~

7.200 GUARD DEPARTMENT

Normal functions were performed by members of the Guard Department throughout the entire period.

Lt. Col. David Doyle conducted the Inspector General inspection of the Department in January. A rating of excellent was received.

Eighty-one (81) members of the Guard Force received pistol range work this six months. Ninety-three (93) took a two-hour Red Cross first aid refresher course and all guards at roll call listened to new guard orders and safety memos.

There were several resignations during this period and several were recalled to work on the seniority basis.

7.300 FIRE DEPARTMENT

Out of the sixteen (16) fire alarms which the Department answered during this report period, eight (8) proved to be false alarms and three (3) were in answer for help off the reservation. Two (2) of the off-area calls were residence fires and the third was at the dumping ground in the town of Middletown, adjacent the Plant. None of the fires within the reservation were of a serious nature.

Members of the Department inspected 3,073 buildings and 11,020 fire extinguishers during the six months.

~~SECRET~~

~~SECRET~~

In connection with the Plant's safety training program during the month of May, the Assistant Fire Chief gave talks at seventeen (17) employee group meetings concerning home fire hazards and how to turn in fire alarms. He also was the instructor for two (2) Red Cross first aid refresher courses given thirty-five (35) Plant employees in April.

The firemen also received 17 1/2 hours of first aid training during the period.

~~SECRET~~

NNN 94175 - 454

PART VII

SAFETY AND SECURITY DIVISION