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RS 3466 (27837)

MONTHLY PROGRESS REPORT

of

SANDIA LABORATORY

for the period

APRIL 18, 1948 to MAY 18, 1948

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
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SANDIA LABORATORY PROGRESS REPORT

April 18, 1948—May 18, 1948

SLMS-3, Series A

This Report is a condensed compilation of the detailed Monthly Progress Reports submitted to the office of the Associate Director by the various Departments of the Sandia Laboratory, covering the period April 18, 1948 to May 18, 1948. A collection of the individual Division Reports is available separately as document SLMS-4.

The distribution of this document is as follows:

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PROJECTS REPORT

April 18, 1948 to May 18, 1948

ENGINEERING DEPARTMENT  
(SLE)

The following items were of particular importance to the Engineering Department during the current period:

(A). 1561 FM: Information has been supplied to the Road Department in response to requests for changes in kit items. Inspection and testing of the Mk III X-unit for the field program have been accomplished as required to date. A recommendation report on the Mk III Mod 2 X-unit is being prepared for release in June. The inspection tool program engineering phase is approximately 75 per cent completed and is on schedule as planned. Experimental work on the four-channel Delta Timer for the Mk II X-unit system is progressing satisfactorily. The Bowen Camera redesign is nearly completed.

Several components, including clocks and bars, are being redesigned for improved performance or to facilitate testing. All prototype test equipment has been fabricated except two items and the tester re-engineering program is nearly completed, production being planned on some items.

Schedules for the engineering work on the C-97 Chicken Pox installation are prepared and all the special equipment is available. A newly converted aircraft, No. 589, arrived on the afternoon of 14 May 1948. Equipment storage charts are well under way. This installation is intended to be the final checkout of the design.

The Dipsy Doodle tests were superseded during this report period by a bench type of test employing the Signal Corps Test Set TS-278/AP. A/C 818 has been equipped with Propagation Study Equipment and several test-flights were made. B-29 A/C 386 arrived 13 May 1948 for tests of B-50 prototype bomb-bay installation with associated handling equipment.

1561 FM Handling Equipment: Portable A-Frame first sample has been received and tested. Several minor changes are being made to expedite the release of this equipment. Fabrication of the Fishbone Trailer prototype model has been started.

Shipping cases for 1561 and Mk IV fabrication are behind schedule owing to lack of materials at Project Roger.

(B). Mk IV ballistic drops are being conducted on schedule. They are being conducted in such a manner that they will not be permitted to interfere with firing and fuzing drops or final approval of the gadget. The firing and fuzing drop schedules are established and will extend through October, 1948. All details pertinent to meeting these schedules

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are progressing satisfactorily. Production orders are being placed for basic firing and fuzing equipment, and also for the mechanical components as fast as items are semi-frozen in design. Handling equipment, including such items as the Cartridge Dolly, will be available as required since it parallels that for the 1561 FM quite closely. The final road entry schedule will be met.

(C). LB work is on schedule in preparation for transfer to Road. Parts lists, instruction manual drawings, and handling equipment designs are being prepared. Two gadgets have been prepared for possible military emergencies. This program is nearly completed. Progress of work at Projects Marsh and Lakeside is being closely followed. Additional shipments of parts of outstanding orders have been received during the report period.

(D). Several Standard Operating Procedures (S.O.P.) in relation to the routine work of this department have been initiated and others are being established, such as compatible Charge Order, Waiver, and Substitution System.

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PROCESS REPORT

April 18, 1948 to May 18, 1948

APPLIED PHYSICS DEPARTMENT  
(SLA)

(A). Considerable effort is being expended to secure personnel for the various divisions within the department; but, securing additional personnel brings up the problem of working space, and this will become quite acute in a very short time. The Abce project is very crowded for space, and new electronic development work, exclusive of Abce, cannot be started until additional space is available. This will be further complicated by additional personnel for this division which are expected to arrive in the next thirty days.

(B). Specifications have been prepared for the development of a new baro-switch. Contacts are being arranged, through the New York office, to present the problem to two development organizations. It is desirable to have a new unit available for Road work before existing stocks of the old switches are exhausted.

(C). A trip was made to the Los Angeles area to contact production activities, to learn the status and stocks of telemetering equipment and pickup units, to secure special equipment, and to attempt to locate test equipment for Archie units. In addition, several personnel contacts were made and probably will result in additions to the staff of SLA. Obtaining additional personnel again brings up the problem of working space.

(D). Available information from past drops is being assembled in order that the design of tail fins for the Mk IV can be established before July 1, 1948. The lack of sufficient data on the ballistic performance of any one design considerably hampers the selection of a most desirable fin shape. It is possible that data obtained for currently scheduled drops will assist in this selection.

Telemetering methods and equipment are being carefully scanned as to the amount and reliability of the data secured, with the pressure pickups in question. It is expected that more information will be available during the next thirty days on the reliability of these units. A conference with Col. L. E. Simon and Dr. L. A. Del Sasso of Aberdeen Proving Ground was held in SLA offices. Subjects discussed were: instrumentation, data reduction, aerodynamics, and model testing, with emphasis on tracking telescopes, and ballistic cameras.

(2). The weight, center of gravity, and moment of inertia were determined on several scheduled ST's during the past month.

Acceptance tests on the pilot model of the L-2-B can were completed.

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Mechanical analysis was performed on the acceleration of a spur gear on an internal gear for the Design Service Division.

(F). A commercial plastic, Durite, has been located which has the same conductivity and specific heat as does Comp. P. Tests are being conducted to determine its usefulness in substituting H.E.

The Hicatt combined cold and humidity chamber, capable of taking a complete Mk IV assembly and subjecting it to temperatures ranging as low as -100°F and relative humidities up to 95%, independent of temperature, is being installed and balanced in the laboratory. Some difficulty is being experienced with the valves, but it is anticipated that an early solution will be forthcoming.

The electric and pneumatic thermo-recording hygro-thermographs were received from the Bristol Company; tests indicated that they were not satisfactory for our purpose.

A member of SLA is enroute to Boston to investigate the new low-temperature unit developed by General Electric Corporation and installed in their Lynn River Works. It is possible that some adaptation of this unit could be used for the 22,000-lb shake table and cold chamber proposed for the laboratory. It is expected that the shake table portion of this project will be assigned to Sonntag Scientific Corporation which has just completed the installation in the laboratory of the 1,000-lb vibration machine, which is giving very satisfactory operation.

The new inverters for Road have failed to meet specifications and vibration requirements, due to faulty regulators. A means is being devised to correct this situation.

A large number of pressure pickups, manufactured by the Giannini Company, have been tested and several have been calibrated for drops. Vibration pickups have also been calibrated.

A member of the department is closely following the activities of the Raytheon Corporation as to the re-design and testing of the Mk III, Mod 2 X-unit, as well as the Mk IV X-unit.

(G). A review of the Abce project has resulted in a change in the emphasis on certain phases of the Abce project. This has resulted in the construction and assembly of a working breadboard model from which it is expected that certain components may be rejected or eliminated from the program. The information learned will undoubtedly effect a much earlier selection of the working components to provide a complete system. Two general paths are being followed. For the present, the special power supplies and antenna assemblies are being neglected in favor of working models from which data can be obtained.

The flights to determine the constant K (reflection coefficient) of the surrounding terrain have not been very satisfactory from the airplane point of view.

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Considerable difficulty is experienced in keeping flying schedules, as the airplane is being used also in other projects; however, the variation in the reflection coefficient seems to be extreme and varies from a factor of one to no return at all. It is believed that this portion of the program can be expedited only if the C-47, to be assigned to this project, is received.

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PROGRESS REPORT

April 18, 1948 to May 18, 1948

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FIELD TEST DEPARTMENT  
(SLF)

(A). Sixteen full-scale drops were completed during the period covered by this report. Eight more were scheduled in detail for the period covering 24 May through 28 May, and twelve drops have been scheduled for the period of 7 June through 11 June. Work will begin on this last set of units as soon as those for the 24 May schedule are completed.

All readings and calculations were completed for twenty-three operations, and clock calibrations from Hathaway records were carried out on eighteen operations. The Data Reduction Section is now up-to-date on the analysis of all operations with the exception of the actual plotting of trajectories and ground paths of the units.

(B). The Field Test Department, formerly in Building T-919, was moved to Building T-934, and the floor plan layout for the north half of the building was delivered to Architectural Liaison for contract. Equipment that is required for the Test Facilities Division for running essential tests on the units was moved to Building T-941 to enable the Assembly Section to carry out various operations concerning bomb preparation. The operations of the Assembly Section are hampered by lack of space. At present the space is being used on a loan basis, along with Mr. Rowe of SLF-4.

Thirteen 3B-2c units and four sets of components are under construction in preparation for the next drop schedule.

(C). A new circuit was designed by the Telemetering Division for recording a series of bare switch closures. Evidence pointed to proper operation of this circuit and erratic operation of the switches. More work will be done on this problem.

Considerable difficulty has been experienced with receiver noise on the release light system because of the high receiver gain required by the present low-modulation level on the aircraft transmitter. A program is under way to reduce the noise level at the receivers as much as possible and to increase the per cent modulation of the aircraft tone signal.

Special power requirements were obtained from the heads of all departments at Sandia Base and turned in to the Field Test Department Manager as part of a program to determine the present and future power requirements for the Sandia Laboratories. A report of the survey and recommendations have been forwarded to the Associate Director.

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Preliminary details of the control panels for the operators' consoles at the Salton Sea Base have been completed. Complete information for the detailed console design is now being prepared and will be submitted to the Engineering Department for final design.

A new type of recording clock photocell amplifier is being tested. Since difficulty has been experienced in making accurate time measurements with the cathode-follower amplifiers which produce a broad record pulse, the new amplifier is designed to give a very sharp record pip.

A new camera of the reflecting-mirror type is nearing completion. This small, 6-inch working model will be tried to extend the photographic coverage and to gain experience with this type of camera. Arrangements have been made with the Ballistics Research Laboratory of Aberdeen for construction of two 10-inch reflecting telescopes of the type now in use at White Sands Proving Ground. Preparations for a night test of Askania camera lenses were made. A sufficient crew is all that is needed to complete the tests.

A series of photographic tests were conducted to determine the difficulties involved in using faster recording clocks. The sample 10-rps clock obtained from the Hathaway Instrument Company will be the first to be tried.

(E). Freight to Salton Sea from Sandia Base amounted to 7,530 pounds, and 2,061 pounds of freight were shipped from Salton Sea to Sandia Base.

(F). The travel policy affecting those traveling to and from the Salton Sea Base is unsatisfactory to the extent that it is markedly disturbing to the morale of those required to be present during operations.

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April 18, 1948 to May 18, 1948

ROAD DEPARTMENT  
(SLR)

(A). The status of the Road Program was given in the Top Secret document, Road Status Report, dated 3 May 1948.

(B). Planning and Scheduling, SLR-1: This new organization has been making excellent progress in setting up the functions of the various sections and installing systems that will permit functioning of the division in a more efficient manner. The division is divided into five sections, as follows:

(1). Scheduling: Organized at the beginning of this month, this section has had little time to operate. Its primary duty is to determine the time necessary to process each item of Road material and to schedule such operations through the process divisions to meet the commitments of the Road Department. Necessary control cards and records have been devised and will be put into use in the near future.

(2). Purchase Requisitions and Expediting: The primary function of this section is to requisition all items required for the Road program and to maintain the status of the orders. Close coordination and liaison is necessary with the Procurement and Supply Department, as well as with the other divisions of this Department. It has to date put on requisition all items required for the Road program except those for which no specifications are yet available.

(3). Property Control: This section is responsible for all departmental property. Although its work is straightforward, it is behind in its work because of the tremendous volume of property handled and the shortage of personnel. It is hoped that progress on this deficiency can be made during the coming month.

(4). Expediting: The purpose of this section is to expedite all jobs in process for the entire Road Department. Although only recently placed in operation, it has been extremely successful in this respect.

(5). Records and Files: This section exists only so far as the organization chart is concerned, since no personnel are available to staff the organization.

(C). Inspection - SLR-2: This division covers mechanical and electrical inspection, as follows:

(1). Mechanical Inspection: This section has been engaged in setting up inspection procedures for incoming materiel and processing

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these material through the available facilities. The majority of the inspection work was confined to the material necessary for the emergency program.

The new mechanical inspection area is not yet available for processing the major mechanical assemblies. The overhead rail hoist required for this operation has not been installed, but is scheduled for completion by 21 May. At this time it is expected that normal operations can proceed without further delay.

Much time and effort was devoted to the planning and layout of the proposed new Road building which will be erected to replace present temporary facilities. A floor plan has been submitted to SLB for action.

Excellent progress has been made on the design of guages necessary for the inspection program. A representative of this section has devoted full time in liaison with a commercial organization engaged for the actual design of the guages. It will be necessary for our representative to continue on this program until the manufacture of these guages has been completed.

(2). Electrical Inspection: A large portion of the past month was spent in setting up the inspection and testing laboratory in its new location. It was necessary for personnel of this section to complete many items which could not be performed by the contractor. This involved the assembly and painting of benches, bins, and installation of various pieces of electronic equipment.

A large quantity of special test equipment was received and processed through the laboratory. Because of the urgent nature of the procurement the workmanship on many items was not completely satisfactory as received and it was necessary to perform a considerable amount of repair work on these items. The major faults lay in the soldering of the connections, loose nuts and bolts, improperly constructed cables and defective switch assemblies. It was obvious that this equipment had not undergone very rigid inspection prior to shipment from the factory. All test equipment was brought up to acceptable standards.

Work was continued on the emergency program as reported last month.

(D). Warehousing and Receiving, SLR-3: Mr. Carnody arrived 17 May to take charge of this division. Warehousing space is still extremely limited and only one closed warehouse is now available for the storage of Road equipment. Latest reports indicate that one group of five Butler buildings will be available by 1 June and the second group of five will be available by 15 June. This space will afford the necessary relief for our storage.

(E). Storage Activities, SLR-4: There was a decrease in the production activity in this division during the past month due primarily to transfer of the canning and packaging activities to the new location. The new facilities will be ready for full operation effective 18 May.

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Packaging of the materiel required for the emergency program was accomplished with the schedule previously established.

(F). Catalogs, SLR-5: Although this division was set up previously it was not staffed until the 26th of April. Its purpose is to prepare all catalogs pertaining to Road materiel and to keep all information current. Catalogs were previously prepared by the Road Department; however because of lack of personnel and other urgent programs it was not possible to maintain the catalogs in the most satisfactory manner. Excellent progress has been made in revising Catalog I pertaining to Bomb Components. Portions of this catalog have already been presented to the Road Panel and have been favorably received. The division is maintaining liaison with Army personnel for the preparation of the catalogs. Catalogs for the Mk III unit have already been started, but this work will be delayed somewhat until the philosophy is established for spares and spare parts.

Another function of this division is to serve as a liaison agency through which all requests for procurement substitutions or changes on any Road materiel will be channeled to the proper parties for decision. This is done for a twofold purpose, to expedite the necessary information, and to keep the catalogs up to date with the latest information.

(G). The Mk II units as stockpiled still contain substandard materiel. The A-Plate assembly is the sub-standard component, due to two sub-assemblies, the inverter and the R & J Box. This matter is repeated here because the problem is still unsettled. A representative of the electronic section has recently returned from a three-week trip to the vendor's plant where he was engaged in consultation on the inverter problem. The main difficulty with the inverter is that no temperature compensation has been incorporated in the design so that the voltage regulation does not meet specifications within the temperature limits specified. Several solutions have been suggested to overcome this difficulty; however, no decision has been made in this matter as of this date. The R & J Box has been re-designed and tested. The tests have proved satisfactory and the box has been turned over to Engineering Service for drafting of the production drawings.

(H). It is expected that within the coming month the Department will be able to operate in accordance with the organization chart, with all divisions functioning as planned. The problem as to space requirements appears to be settled; however, the personnel problem is still with us.

PROGRESS REPORT

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April 18, 1948 to May 18, 1948

SURVEILLANCE DEPARTMENT  
(SLS)

(A). Re-inspection of Model 1561 FM material in accordance with current specifications has been continued at reduced rate during the past month. Two additional shipments of this material were made to Site Baker, but others were delayed in view of the possibility of a railroad strike. Installation of Laboratory and Office facilities in Building T-149 has been completed to the extent that nearly all necessary functions can be carried on in this area. In view of the personnel situation, the co-operation of the Road Department has still been necessary in making certain tests to meet our schedules. A summary of all material inspected is covered in the detailed report of the Inspection Division.

(B). Compilation of data to provide a basis for review of the test limits and test procedures is being continued to the limit of personnel available. Emphasis has been placed on the inverter problem, followed by the delay relay, haw switch and Archie. New personnel are expected within the next month, which should permit acceleration of this program.

(C). Organization of a separately functioning quality control division is now underway, but to date insufficient personnel have been available to permit independent operation. Personnel currently assigned to this Division have been assisting the Road Department in the inspection of prototype test equipment arriving under emergency orders. The major load of quality-control inspection to date has been the review of new major mechanical assemblies. This work has been performed by the Inspection Division.

(D). Records of temperature and humidity of the igloos at Site Baker have been maintained since February. The humidity variations have been extreme, with long periods of high relative humidity. On this basis, one of the major assemblies is currently being checked for any possible deterioration. All electrical components are, of course, sealed in nitrogenized cans, and provision has been made to re-evacuate and re-nitrogenize these cans at the Site. Considerable leakage resulted during shipment of this material to Baker. In addition, the rough handling received on the railroad seems to warrant a spot check of the components to insure that no damage resulted. This will be done in the near future. Monorail equipment to handle all components has been fabricated and is now at Site Baker awaiting installation in Number 1 Igloo by the contractor at that site. The re-boxing of major assemblies at this area will be started as soon after this installation is completed as may be practical, depending upon the availability of the new boxes.

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(E). It is not anticipated that any work on destructive surveillance will be started for some time. Therefore, there is nothing to report at present. The basis for current planning is a memorandum from Schaffer and Treibel, dated 19 March 1947, Ref. LAB-Z-9.

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April 18, 1948 to May 12, 1948

TRAINING LIAISON  
(SLM)

(A). Administration: Training Liaison has received a number of PSQ's from the Personnel Division, and has selected six men to be hired as H.E. handlers to reinforce the present Road Assembly program. Old employees are being trained in all phases to allow integration with new employees to form separate teams.

(B). Road Assembly and Reinspection:

(1). The Road Assembly of H.E. bombs has proceeded at the rate prescribed by Mr. Paddison and Mr. Larsen, and during this period the quota was met.

(2). The Reinspection of Road Assemblies completed the list of "approved" units and has begun inspection on a few remaining new "approvals" furnished by Max Roy.

(3). Training Liaison has furnished equipment and men to load three shipments destined for dispersal points.

(4). During this period this department has furnished equipment, operators, and personnel to unload and store three airplane loads of H.E. per week for the AEC Custodian.

(5). Transportation and personnel have been furnished to move and relocate items stored in the Igloo Area.

(6). The 38th Eng. Bn. has used the Assembly Building, P605, for one practice assembly operation.

(7). The Assembly personnel have received two new 15,000-pound capacity fork lifts. One was tested and sent to site Baker for use there. The other has been modified with longer forks and a fork attachment which makes it possible to remove a bomb from its crate without the use of a crane. This will not be true of the new bomb crate.

(8). In the process of making train shipments, it was necessary to use a small fork lift within the box car. Training Liaison devised a platform with which a large fork lift could put a small fork lift into the box car.

(9). Owing to change in design of the pit box at Los Alamos, it was necessary to design a separate box at Sandia in which the Aluminum Plug and Boron Cap could be stored after the mechanical assembly was made.

(C). Liaison: Training Liaison has served with the Joint Manual Board and the Joint Road Materiel Board and has assisted the Army in normal liaison problems and catalog preparation.

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April 12, 1948 to May 18, 1948

ADMINISTRATION DEPARTMENT  
(SLX)

(A). During the month the reorganization of the Sandia Laboratory was carried through the division level by the newly appointed department managers. This completion of the reorganization further improved the general operating efficiency and morale of the laboratory.

(B). The laboratory staff has increased in size to 517 with an additional 24 employees still on loan to J Division. The rate at which the staff is expanding is steadily increasing. During the month, approximately 270 applicants were interviewed, 101 applicants were offered employment and 49 new employees were added to the payroll. The high caliber of the new employees is encouraging. The equity of the laboratory salary structure was improved by a review of the salaries of the professional employees.

(C). A maintenance contract is being negotiated through the U. S. Army District Engineer. Usual maintenance work and minor modifications to existing structures will be handled under this contract, which should be let within 15 days. It is believed that this new arrangement will materially improve the maintenance service. A priority system will be set for handling jobs under contract.

(D). Two Butler buildings, located outside the Technical Area, will be ready for occupancy by the Personnel, Travel, Fiscal, and Procurement Divisions about June 1. The AEC Security Office will also set up a pass office in one of these buildings. The Document Department will then be able to expand in the space vacated by the Personnel Division.

(E). The permanent housing project is progressing rapidly. Four of the two-bedroom efficiency apartment units and three of the individual houses are already well under construction. A priority system for the assignment of the permanent units will be set up at the earliest practicable moment.

(F). Mr. L. G. Hawkins has been appointed Business Manager of the Sandia Laboratory and is expected to arrive July 1, 1948. A cost accounting system is being developed and will be put into effect on July 1, 1948.

(G). The automotive equipment ordered in an emergency requisition, as mentioned in last month's report, has started to arrive. Most of the equipment that has arrived to date is handling-equipment: i.e., fork lifts, cranes, etc.

April 18, 1948 to May 18, 1948

SECRETARIAL TRAINING AND COORDINATION  
(SLC)

(A). The Secretarial Training and Coordination group has been mainly concerned during the past month with the Correspondence Manual. Although the Manual was completely re-written several weeks ago, it has been held up due to numerous changes in Laboratory procedures. Conferences have been held with Mr. Harris of the Documents Department and Mr. Toulouse of the AEC Security Information Office in an attempt to simplify methods of handling classified correspondence, and to incorporate simplified procedures in the Manual. Several sections have been re-written, and a new GM included. It is hoped that it will be ready for distribution within two weeks.

(B). A standard procedure has been worked out for setting up and maintaining Classified Receipt Books, and sample sheets have been prepared for distribution to all Departments and Divisions. It is anticipated that this system will be put into effect by Friday 21 May 1948.

(C). Plans are being made in coordination with the AEC Security Information Section to hold refresher courses in the handling of classified correspondence for all Laboratory secretaries. Although this will not be attempted for several months, material is being collected and plans for the course are being prepared.

(D). During the past month fourteen girls have been interviewed and given stenographic tests, and ten have been selected for employment. Three have reported for work and have been given temporary assignments in Divisions who have no secretarial help at present. These girls will be brought back into the pool at a later date for more complete training.

(E). Members of the pool have prepared 79 pieces of classified material and 103 pieces of unclassified material (involving 6 hours of dictation) for various Divisions and Departments of the Laboratory. The pool also aided the Procurement and Supply Department in their inventory by preparing 3500 inventory sheets for the warehouse and typing 3000 inventory cards.

PROGRESS REPORT

April 18, 1948 to May 18, 1948

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DOCUMENT DEPARTMENT  
(SLD)

(A). A large part of the activities of the Document Department during the past month have been devoted to devising, standardizing, and putting into effect systems of security controls. A new access system has been put into effect for the issuance of classified documents. The number of technical and general categories of access has been increased so as to provide more definite areas of access.

The functions of the Classified Document Room have been more clearly defined so as to permit distribution of the activities among the various personnel. Matters of policy and procedure, determination of document types, invention reporting, and similar matters are the responsibility of the Division Leader.

(B). A procedure for accomplishing, controlling, and recording the destruction of classified material has been drawn up and put into practice. Under the new procedure the Document Room is responsible for such destruction (with the exception of Top Secret material).

(C). Channels are being set up for acquiring technical reports from the various Services and other sources. A large influx of technical material is expected, starting this week with the receipt of forty-three NACA reports requested through the Washington AEC Office. These reports are being cataloged, and recataloging of all external reports under the new file system is progressing.

(D). The new ledger system for the Mail and Records Office, mentioned in last month's report, was put into effect on April 30. Accountability for classified memoranda and mail has been established, with the approval of AEC Security, at the Division level, the Divisions maintaining their own internal accountability. This procedure reduces considerably the labor of the Mail and Records Office and at the same time centralizes the accountability among the few Division offices in contrast to the previous large number of individuals.

(E). Following conferences with members of the Engineering Department a system was drawn up for accounting for engineering drawings and copies thereof. Drawings are divided into five categories according to type, and special instructions are outlined with regard to numbering, classification, authorization for prints, etc. The attached chart summarizes the requirements of the system. A particular feature of the system is its ability for accounting for pre-preliminary drawings (previously "check prints") as accountable papers until classification has been determined and affixed.

(F). With regard to technical manual preparation, the personnel pro-

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blem is most acute and the situation may become critical during the next six months inasmuch as the work load is expected to increase tremendously. It is very difficult to find persons suitable for manual writing. Rough drafts of the manuals on the Pump tester and Hi-Pot Tester are being edited and assembled, work on the Inverter Tester manual has been suspended pending redesign of the equipment. Work on the 1773 Detonator manual has likewise been discontinued pending a number of decisions.

A manual on the Baro-switch Tester has been started, and manuals previously in process have progressed to the following approximate degrees of completion: E & J Box Tester manual (75%); Cable Tester manual (60%); Cable Catalog (20%); Assembly and Handling manual (20%).

The Document Department and the Manual Preparation Division are participating in the activities of the Joint AFSWP—Sandia Lab Manual Board, two meetings of which were held during the month.

(G). During the month the Art and Drafting Section of the Document Department was organized. Its purpose is to act as a Service Group for producing all kinds of drawings and art renderings for technical manuals and various engineering purposes.

(H). Much work was done during the past month on revision of the many blank forms used in the various Sections. Word-order forms have been instituted for obtaining copies of tracings, for mimeo and ditto work, and for all kinds of photographic work. These forms have been adapted to the requirements of security, so that a much higher degree of security control now exists in all phases of reproduction. Forms were drawn up also for inclusion in the Secretary's Manual now being prepared, by means of which very accurate records can be kept of correspondence or other material originated, mailed, or received.

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PROGRESS REPORT

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April 18, 1948 to May 18, 1948

PROCUREMENT AND SUPPLY DEPARTMENT  
(SLP)

(A). The direct procurement channels as established and now in full operation between this Department and the various AEC and Univ. of California purchasing offices is noticeably bearing fruit. Direct liaison, both by telephone and teletype communication by our procurement specialists with the buyers in the purchasing offices, has resulted in quick delivery of merchandise for our accelerated programs at Sandia.

For example; an emergency requirement arising in the Road and received in form of a telephone request by this Department on May 13, for the immediate procurement of 4 Test Sets, TS-278/AP, for delivery to Sandia by May 17. The New York Office was immediately contacted and asked to purchase the above units from the Electro Impulse Laboratory, Red Bank, New Jersey, and ship them to Sandia, via Air Express. The units arrived at Sandia on Saturday morning, May 15.

Another example was the procurement of 500 Condensers for SLT-3, which were delivered to them within five days of the original request for the materials from SLT-3.

(B). Requisitions were placed with purchasing offices by the Department during the period of this report as follows:

USA's (Univ. of California)	346
LSA's (AEC, Los Angeles)	22
NSA's (AEC, New York)	4
RSA's (AEC, Project Roger)	17

RQT's were received by this office from the various Departments in the Laboratory for 1662 items; 762 teletypes were received; and 507 teletypes were sent from this office in expediting our requisitions.

A physical inventory was accomplished of the General Stores Division: 12,325 items were inventoried; 1,429 issues were made by the General Stores, each issue averaging 6 to 7 items.

New Personnel reporting during the period included one procurement specialist and one typewriter repair and service man. Seven clerk-typists reported for duty.

(C). A sub-receiving room has been established in Building T-925 for the purpose of receiving all Road materials. A representative of the Property Control Division is stationed in T-925 for the purpose of verifying checks made by Road Personnel and preparing issue tickets. This procedure expedites the deliveries to Road and relieves the congestion in Building P-500 receiving room.

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During the past month the Receiving and Shipping Section processed approximately 1,236,503 lb of material, of which 361,158 were outgoing shipments.

The reorganization of the Sandia Laboratory from a Group to a Departmental organization has involved the transfer of property from former Z Groups to the new Departmental levels. Consolidated lists of Class "B" and "CXX" property charged to the Groups are being prepared, and the first list (Z-8) should be forwarded to the Group within a week. It is hoped to have all lists prepared within the next 30 days. All property issued on or after April 26 is being charged on the Department level, and Department Jacket Files have been established in the Property Control Division.

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PROGRESS REPORT

April 15, 1948 to May 15, 1948

DEVELOPMENT FABRICATION  
(SLF)

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(A). Organization of the Development Fabrication Department (SLF) was effected during this period and assignment of personnel completed. Actual transfer of five persons was accomplished, but no further transfer of personnel is anticipated until new shop facilities are available. Property responsibility was transferred to the department level.

(B). A shop layout or floor plan of the proposed building to house SLF facilities was submitted to SLB (Architectural Liaison). Plans were somewhat revised, however, allowing more space for expansion.

(C). Orders for necessary equipment and machinery to equip the new SLF building have been placed. Some new items have arrived and during the interim period have been placed in service in existing shops, replacing that which is worn.

(D). Numerous applications have been reviewed during this period for personnel having certain skills. While limited shop facilities make it prohibitive to hire any number of persons at this time, it is apparent that personnel with the required skills will not be found in this locale. It will no doubt be necessary to obtain these skills from industrial areas. 8,746.5 man hours were expended by this department during this period.

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