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HEALTH PROTECTION APPRAISAL REPORT
LAAO, ZIA AND LOS ALAMOS COUNTY

by
Raymond L. Miller and Jerome D. Shaykin
November 29 - December 1, 1966

Summary

An in-depth appraisal of the health protection programs in effect for the Zia Company employees and residents of Los Alamos County was performed. The conclusions were that with few minor exceptions, the programs are adequate and the transfer of community health protection activities from federal to local control is progressing satisfactorily. Four recommendations were made and involved: (1) notification of IASH on planned discontinuation of environmental sanitation services by LAAO, (2) rubble cleanup on Contractor Row, (3) training of Zia Safety personnel in industrial hygiene and (4) increased utilization by Zia of the IASH Industrial Hygiene group's capability to evaluate Zia work areas. One suggestion concerned the review of operational efficiency of septic tanks in the technical area along Fajardo Road.

Introduction

An appraisal of the health protection programs provided by LAAO, Zia and Los Alamos County was performed by Raymond L. Miller and Jerome D. Shaykin on November 29 - December 1, 1966. The purpose of the appraisal was to review the practices in radiological safety, industrial hygiene, sanitation, occupational medicine, non-radioactive waste disposal and environmental pollution control. Extensive visits to Zia and County work areas afforded the opportunity to observe the practices and procedures in effect. Results of the appraisal were discussed with management personnel from LAAO and Zia at the conclusion of the visit.

Discussion and Conclusions

The transfer of some health protection programs from LAAO-Zia to the County appears to be progressing satisfactorily. County staffing and supervision have been adequate to insure orderly transfer to date and future plans indicate a continuation of the same. County land-fill and refuse collection are well oriented. Zia housekeeping (janitorial) services are particularly well organized and should be complimented on an exceptional job of ADP utilization. Zia radiological safety and occupational medicine programs appear adequate. Efforts on sewage plant effluent sampling and analysis and TA-3 Power Plant noise attenuation should be continued to solution.

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Section 81 of the report concerns disposal, assistance and organization of the community-located, government-owned facilities and methods of assuring orderly transfer to locally controlled operation.

In general, transfer of health activities is being accomplished whereby eventually the County of Los Alamos will be responsible for community and county areas and LASL-Zia will be responsible for technical areas. Towards this end, LAAD has contracted the County to: (a) collect refuse in the MGA and operate the land-fill, (b) operate the community sewage treatment plants (Bayo, Pueblo, East Road, White Rock) and maintain the sewer system and (c) operate and maintain specific portions of potable water distribution system in the MGA. The contract will expire on 7/1/67 and an Assistance Payments Agreement between LAAD and County of Los Alamos will be effected. The agreement will be similar to those currently in existence for hospital and school operations. It will extend for a nominal 10-year period and will provide AEC health protection appraisal through periodic operating statements, records examinations, budget reviews, etc.

In addition to the County's continued health activities as outlined in a, b, and c above, certain public health functions will be transferred from LAAD to County on 7/1/67. These include periodic food establishment inspection, laboratory analysis of water, milk, food, utensils, etc.; and evaluation of sanitary conditions at community schools, swimming pools, etc. As a result, the County is planning to establish a Health Department which would include a Director (N. D.-part time) and a registered sanitarian. Areas of responsibility will include refuse collection and disposal by land-fill, sewage disposal, food sanitation, hygiene of housing, communicable disease control, water distribution and other activities normally encountered by community sanitarians. The County Health Department director will be the Deputy District #1 Health Officer and function in concert with the State of New Mexico Public Health Department.

Health related activities and facilities in the technical areas at Los Alamos will continue to be operated by and be the responsibility of LASL-Zia. In effect this means that: (a) refuse from the technical areas will be removed by Zia, (b) sewage plants in the technical areas (TA-3, DP and S-site) will be operated by Zia and (c) potable water for both technical and community activities will be produced, distributed, disinfected, and stored by Zia. Because LASL and Zia are prime contractors they will be responsible in technical areas to insure that pest control, air and water pollution abatement and food preparation and serving programs are performed in accordance with acceptable methods. LASL and Zia may request services from the county in fulfilling their responsibility in areas of food handling and bacteriological water analysis.

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If a physical exam is necessary, it is performed and the results are included in the permanent record maintained by H-2. If it is impossible for the employee to be examined, he may relieve Zia from its obligation by signing a waiver (Exhibit B). About 98% of all terminees are processed through H-2 for medical purposes.

Elevated noise levels in TA-3 Power Plant have been discussed in previous survey reports (6/8-10/66, 12/7-9/65, 6/23-25/65, 6/2-5/64 and 12/9-11/63). The latest noise level measurements were made on June 20, 1966, and are included in Exhibit C. The most recent report on annual audiometric tests as performed on TA-3 Power Plant personnel is included in Exhibit D. Some relocation of operator stations has been effected with a resulting reduction in noise level exposures. Exposure times vs db levels have been established and Zia action is set forth in Exhibit G.

Radiological Safety. Responsibility for assuring radiation safety for the 700 employees at Zia assigned to LASL technical areas has been assumed by LASL's Health Physics group (H-1). All surveys, evaluations, precautionary instructions, protective equipment, etc., are provided by H-1. LASL's safe work permit system has been extended to provide approval for Zia personnel working in LASL areas. Copies of all permits are forwarded to Zia Safety (about 25 per day).

Results of all film badges worn by Zia employees are received from H-1. Results of all urinalysis for radioactive materials are received from LASL's Industrial Hygiene group (H-5). AEC Forms 190 and 191 for 1965 indicate that 959 employees were monitored and the maximum annual individual exposure did not exceed 1 rem. Badge results for 1966 through 9/31/66 indicate a maximum individual exposure of 2.00 rem (1.14 beta-0.86 gamma). All bio-assays indicated insignificant depositions of radionuclides.

Industrial Hygiene. Although Zia Safety is responsible for industrial hygiene aspects in Zia work areas, they do occasionally solicit the technical assistance of H-5. Example of H-5 capability in industrial hygiene assistance is attached as Exhibit E. The inspection report was prepared as a result of Zia requesting H-5 assistance on the quarterly shop contest on January 18-20, 1966, in order to fulfill MC Appendix 0528 I. Zia's indication of actions planned or taken is included as Exhibit F.

Sanitary Land-Fill. The County assumed operation on a contract basis of the land-fill and refuse collection throughout MGA on 7/1/65. A total of 15 county employees are involved and provide refuse collection Monday through Saturday and land-fill attendance 7 days each week. The land-fill is fenced to prevent scavenging, but is open from 8:00 a.m. to 6:00 p.m. six days each week. The attendant directs dumping activities, wets down and compacts putrescible wastes, prevents burning, covers putrescible wastes with earth on a daily basis, etc. Three truck-train collection units and 2 Dumpmasters are used throughout the MGA for collection. Annual costs of the refuse disposal program are about \$125,000.

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