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TO: Dean Meyer, H-1

FROM: John Enders, H-1

SUBJECT: Contaminated trash disposal annual report for 1957 into Pit #6,
Area C., Materials Waste Area

FORWARD:

This report includes data for the last quarter of 1957. Data has been broken down by quarters and annual totals given on the breakdown sheet attached.

Pit #1, Area "G", Mesita del Buey, was completed this year. Cost figures quoted in this report for this pit are not included in the costs for "routine" trash as the pit was used this year only for disposal of building material (M bldg., H bldg., TA-1) and equipment from the General Tank Area, D. P. West.

VOLUME OF TRASH: (3,164 cubic yards-total)

1. Boxes:

26,138 cardboard boxes were taken to the Dump this year. The total volume would equal 2,274 cubic yards. A figure of .087 cubic yards per box was used.

2. Barrels:

1,322 fifty-five gallon barrels were taken to the Dump from Waste Treat lab and Building 35, D. P. West. Using a figure of .368 cu. yds. per barrel, this gives a volume total of 485 cubic yards.

3. Other Trash:

This would include property items and Dempster Dumpster boxes from Bayo as well as unboxed trash. An estimated volume of 378 cubic yards was placed in the Dump this year.

4. 5 mil Plastic Bags:

These bags are placed into Dempster Dumpster boxes without first

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being put into cardboard boxes. 743 bags were sent to the Dump. Using a figure of .037 cubic yards per bag a total volume would equal 27 cubic yards.

DISPOSAL COSTS:

Some cost figures used for the 4th quarter are higher than for the rest of the year. The cost of the cardboard boxes as quoted to me by Don Rice, Zia Tech Janitorial section, is now 19¢ each.

Janitor costs have been increased for the 4th quarter to reflect wage increases and a more accurate average figure for this work.

Cost data was supplied by Don Rice, Zia Tech Janitorial section, Dale Coburn, Eng-4 and Ken Leibee, SP-2.

BOXES:

26,138 boxes cost a total of \$3975.93. For the first 3 quarters a unit cost of 14¢ was used and for the 4th quarter a figure of 19¢ each was used.

BARRELS:

The same figure of \$2.60 each was used for this year. The total for 1957 would then be \$3,437.20.

5 mil PLASTIC BAGS:

743 bags at \$00.1435 each would total \$106.62 for this year. During the 3rd quarter 1,000 were ordered at this unit price. In December another order for 5,000 was placed. SP-2 quoted a unit price of 13¢ each for this order. This bag is now a stock item and carries a stock number of #1735.

2 mil THICK PLASTIC BAGS:

An estimated 16,300 bags were used. At \$00.054 each, the total cost would be \$870.00.

MASKING TAPE:

2 inch masking tape is used to seal cardboard boxes and the 5 mil plastic bags. It also is widely used for sealing other items too large for boxes.

In order to seal 26,138 boxes and 743 plastic bags as well as other items mentioned above, an estimated \$882.92 would be the cost for this year.

An estimated 10 feet of tape is used for sealing boxes and 2 feet for bags. An arbitrary figure of 12 rolls (2,160 ft) was used for other sealing purposes.

EMPTYING DEMPSTER DUMPSTER BOXES:

These boxes are used to hold contaminated trash at the CMR Building (Wings #2 and #4), TA-2 (Omega Site) and TA-35 (Ten Site). The Zia Refuse Dept., empties these boxes. The total 1957 cost was \$119.15. A comparative report will be attempted at a later date on the usage of Dumpster boxes.

COVERING TRASH:

This figure includes wages, overhead, equipment rental and maintenance. The covering job is done by the Zia Roads section. A charge of \$300.21 per month on the D-8 Caterpillar tractor stationed at the dump is also included. The total for 1957 is \$5,499.54.

JANITOR COSTS:

This is a questionable item, but is reported since the Zia janitors do package the contaminated trash. An increase in the cost figure for the fourth quarter was used to reflect wage increases and other cost increases since the last study was made in 1956 by Pascual Chavez, H-1, and Don Rice, Zia Tech Janitorial section. The fourth quarter figure is \$7,535.84 and for the other three quarters the figure of \$7202.52 was used. For 1957 the total cost is \$29,143.40.

H-1 VEHICLE (#0325- 1/2 ton Chev. Truck)

The fourth quarter charges were as follows: October: \$42.80, November: \$42.80, December: \$42.80. This truck is used on the Dump run about 7/8 of the total time, so the fourth quarter figure (7/8 of \$128.40) of \$112.35 added to the charges listed for the other three quarters equals \$466.38.

H-1 SUPERVISION OF TRASH REMOVAL:

An H-1 monitor is used about 7 hours per day for this. Using the same figure for the fourth quarter as was used for the rest of the year (\$1,990.51) the total cost for 1957 would be \$7,962.04. An average hourly wage of \$2.50 was used and an arbitrary overhead factor of $\frac{3}{4}$ of this (\$1.88) was added to this for figuring quarterly costs. 520 hours per quarter (173.333×3) is used to determine total quarterly time. $\frac{7}{8}$ of 520 equals 455 hours.

PROTECTIVE CLOTHING:

Using the same figure (\$50.00) for the fourth quarter as for the balance of the year, this cost would then equal \$200.00 for 1957. The Zia Roads Section are required to wear protective clothing during the covering of the Dump and the two Zia men who pick up the trash are required to wear protective clothing. They make two complete changes per day.

FENCING AROUND PIT #6, Area C:

This cost is reduced at the rate of $\frac{1}{10}$ per year. The quarterly rate is \$96.67. For 1957 the total would be \$386.68. At the end of the fourth quarter of 1957 the balance remaining is \$3,093.55. The original cost was \$3866.92.

EXCAVATION COSTS:

The total cost (\$7,211.12) for digging pit #6 has been charge off at the rate of $\frac{1}{4}$ per quarter. The last quarter charge (\$1802.78) thus completes the cost write off for Pit #6, Area C.

TABULATION OF VOLUME OF TRASH AND COSTS BY QUARTERS FOR 1957 ARE AS FOLLOWS:

| <u>Packaging Materials:</u> | Totals for 1956 | 1957 First Quarter | 1957 Second Quarter | 1957 Third Quarter | 1957 Fourth Quarter | 1957 Totals |
|-----------------------------|-----------------|--------------------|---------------------|--------------------|---------------------|-------------|
| Number of boxes | 26,471 | 6808 | 6519 | 6801 | 6010 | 26,138 |
| Number of barrels | 638 | 189 | 295 | 622 | 216 | 1,322 |
| No. 2 mil Plastic bags | 16,800 | 4500 | 4000 | 4000 | 3800 | 16,300 |
| No. 5 mil " " | None | None | None | 63 | 680 | 743 |
| Rolls 2" masking tape | 1,182 | 302 | 290 | 314 | 568 | 1,474 |
| <u>Volume of Trash:</u> | | | | | | |
| (in Cu. yds) Boxes | 2302 | 592 | 567 | 592 | 523 | 2,274 |
| Barrels | 235 | 69 | 108 | 229 | 79 | 485 |
| 5 mil plastic bags | None | None | None | 2 | 25 | 27 |
| Property & other items | Not tabulated | 139 | 163 | 51 | 25 | 378 |
| <u>TOTALS:</u> | 2537 | 800 | 838 | 874 | 652 | 3,164 |

TABULATION OF COSTS:

| | | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Boxes | \$ 3727.12 | \$958.57 | \$917.88 | \$957.58 | \$1141.90 | \$ 3,975.93 |
| Barrels | 1658.80 | 491.40 | 767.00 | 1617.20 | 561.60 | 3,437.20 |
| 2 mil plastic bags | 864.00 | 243.00 | 216.00 | 216.00 | 195.00 | 870.00 |
| 5 mil plastic bags | None | None | None | 9.04 | 97.58 | 106.62 |
| Trash Pick Up | 13,424.39 | 3653.92 | 3818.24 | 4345.55 | 3485.87 | 15,303.58 |
| Cover Trash | 6352.91 | 1587.07 | 1377.39 | 1170.64 | 1364.44 | 5,499.54 |
| H-1 Vehicle | 556.18 | 134.07 | 81.77 | 122.14 | 112.35 | 450.33 |
| Empty Dumpster boxes | None | None | None | 63.55 | 55.60 | 119.15 |
| Janitor Costs | 28,810.08 | 7202.52 | 7202.52 | 7202.52 | 7535.84 | 29,143.40 |
| Masking tape | 791.94 | 202.34 | 177.84 | 178.98 | 323.76 | 882.92 |
| H-1 Monitor | 7,962.04 | 1990.51 | 1990.51 | 1990.51 | 1990.51 | 7,962.04 |
| Excavation Pit #6 | 7,211.12 | 1802.78 | 1802.78 | 1802.78 | 1802.78 | 7,211.12 |
| Fencing, Pit #6 | 386.69 | 96.67 | 96.67 | 96.67 | 96.67 | 386.68 |
| Protective clothing | None | 50.00 | 50.00 | 50.00 | 50.00 | 200.00 |
| | \$71,745.27 | \$18,412.85 | \$18,498.60 | \$19,823.16 | \$18,813.90 | \$75,548.51 |
| Cost per cu. yds | \$ 28.27 | \$23.01 | \$22.07 | \$22.68 | \$28.85 | \$23.90 |

PART TWO

1957 ANNUAL REPORT ON DISPOSAL OF CONTAMINATED TRASH

PIT #1, AREA "G"

This pit was dug in the spring of 1957. It is the first of a series of pits that are to be located in this area (Mesita del Buey). Each pit is to have about 44,000 cubic yards excavated.

Engineering Department has maps of this area that show locations for 38 pits. The map reference number is ENG-C18462.

Considerable work was involved in locating this Pit at this site. The access road (approximately 11,150 feet) was constructed after the necessary grubbing and clearing of trees and shrubs was finished. There are several Indian ruins on this Mesa. Five were excavated under the supervision of Mr. Worman, H-4. Other ruins will have to be excavated at a later date.

A fence and gate was placed around the area where Pit #1 and Pit #3 are located. The excavated dirt from Pit #1 was piled on Pit #3 site.

The materials placed in Pit #1 during 1957 consisted mainly of the unburnable remains of H and M Buildings, TA-1. In addition about 30 wing tanks from Kirtland Air Force base, Albuquerque, New Mexico were also put into Pit #1.

There is an estimated 1,500 cubic yards of trash in Pit #1 as of December 31, 1957. As this material was not "routine" trash and because there is no way of determining hauling costs, it is impossible to determine the cost per cubic yard for this material.

The costs for constructing the access road, clearing trees and shrubs, excavation of Indian ruins, excavation of Pit #1 and relocating fencing around Pit #1 were as follows:

| | |
|---|-------------|
| 1. Roadway and clearing work | \$ 8,831.10 |
| 2. Excavation of 5 Indian ruins | 2,041.24 |
| 3. Excavation of Pit #1, Approx. 44,000 Cu.Yds. | 12,571.75 |

| | |
|---|-----------|
| 4. Re-locate Fencing | \$ 874.14 |
| 5. Remove fencing around Gamma Bldg., | 426.50 |
| 6. Re-Locate fencing from TA-3 motor pool at new pit | 78.92 |
| 7. Re-location of fencing from west perimeter fence of D.P. Laundry (in Omega Canyon) to new Pit | 4,661.40 |

The total cost of the fencing around the new pit was \$6,040.96. This Cost can be written off over a 10 year period.

Other costs, such as road construction, excavation of ruins can be written off over a 20 year period since it has been estimated the pits to be dug on this Mesa will hold contaminated trash from the laboratory for twenty years. These costs total \$10,872.34.

The cost of pit excavation (\$12,571.75) can be written off over the period the pit is in use. It will probably start getting routine trash sometime during the last part of 1958.

1-14-58
John called had cost of cleanup picked up was 11 cents a box
cost of truck picks up was 60 cents a box