To: Dean Meyer, H-1
From: John Enders, H-1
Subject: Quarterly Report on Disposal of Contaminated Waste,
from April 1, to June 30, 1957.

GENERAL:

During this quarter the pick up and disposal of contaminated waste
and property was supervised by this section. All waste was placed in Pit
#6, Area "C". Exposed material was covered once during this period. This
was the center portion of layer #3. Material currently being put in the
Dump is the start of the 4th layer, North section.

A new disposal area, known as Area "C", has been located on Kasita dal
Buey (near Fajarito Site). Pit #1 in this area has been dug and fenced.
Material from M Building TA-1, was burned in this pit. Present plans call
for disposal of M Building, TA-1, in this pit before regular trash deliveries
are started. At the present rate of fill in Pit #6 it appears that regular
trash can be delivered to Pit #6 until the new Pit is available.

 Dempster Dumpster boxes were delivered to Wings #2 & 4 of the ORR Bldg.,
on June 27. It is planned to put boxed contaminated trash in these boxes and
deliver the filled boxes to the Dump. Operation of this type of disposal
is to be watched closely for if it proves to be economical other Dempster
Dumpster boxes will be placed at the other lab wings of the ORR Building for
holding boxed trash. Based on the current rate of fill the Dumpster boxes may
hold about 3 weeks accumulation of boxed trash.

One of the Dempster boxes has been provided with a walk-in type door.
The other box has the usual side and top loading doors. Two observations
can now be made about this: One, the box with the walk-in type door is much
easier to load, and the door should be fixed so it could be opened from the inside; also a chain could be provided so the door could be held open while putting in trash.

**VOLUME OF TRASH:**

**Boxes:**

During this period there were 6,519 boxes put into the Dump. Using the figure of 0.037 cubic yards per box, this gives a total volume of 567.153 cubic yards.

**Barrels:**

These are 55 gallon drums used at the Waste Treatment Plant to hold sludge. 295 barrels were sent to the Dump. The estimated volume of a barrel is 0.363 cubic yards so $295 \times 0.363 = 108.569$ cubic yards.

**Other trash:**

Property items as well as other unboxed trash placed in the dump during this period is estimated to have a volume of 163 cubic yards.

**TRASH DISPOSAL COSTS:**

**Plastic Bags:**

During this quarter, Supply and Property Dept. checked out 1,600 bags. It is reasonable to assume that 1,000 bags were used for holding trash. These bags are 2 mil thick and measure 13" x 13" x 26". The cost, according to Supply & Property Dept., is $52.00 per thousand. Based on this price 1,000 bags would cost $26.00.

**Masking Tape:**

2 inch masking tape is used to seal plastic bags and cardboard boxes. About 8 ft of tape is needed to seal a cardboard box. 6,519 boxes were sent to the Dump this quarter. To seal this number of boxes it would take 270 rolls (100 ft per roll). At 57c per roll the total cost would then be $165.30.

Tape is also used to seal plastic bags. About one foot of tape is used...
for this. To seal 4,000 bags it would require 22 rolls. \( \frac{37\%}{\text{cost per roll}} \) times 22 equals \$12.54.

**Boxes:**

5,519 boxes were taken to the Dump this quarter. At 0.1403 cents each, the cost for boxes would be \$917.33. These boxes measure 13" x 13" x 24" and are supplied by the Zia Company.

**Pick up and delivery of Trash to the Dump:**

The charges for this service include the cost of operating a 1\(\frac{1}{2}\) ton Reo Stake truck, wages of one driver and laborer and overhead. The total for this quarter is \$3,919.24. Charges for April were \$1,362.51; May \$1,319.99; June \$1,297.74.

**K-1 Supervision and escort of Pick up service:**

An K-1 monitor is assigned to supervise the pick up and disposal of trash and property. This duty takes about 7 hrs per day. Using an average wage of \$2.50 per hour, this cost would then be \$1,990.50 for this quarter. This figure includes wages plus overhead.

**Janitor Costs:**

This charge is for the services of Zia janitors who package contaminated trash. Using the same rate figure for this quarter as was used in the first quarter, this charge would total \$7,202.52.

**Excavation Cost:**

One quarter of the balance of the cost for excavation of pit \#6, Area "O" amounts to \$1,502.78.

**Fencing around Pit \#6:**

The original cost was \$3,330.22. In 1956, 1/10th of this amount was charged, so for this quarter \( \frac{1}{2} \) of this amount (\$66.67) is reported.

**Protective clothing:**

The Zia truck driver and laborer are required to wear full protective clothing while picking up trash and delivering it to the Dump. The Zia Heavy
Equipmen t personnel who back fill at the Dump are also required to wear full protective clothing while covering trash at the Dump. An estimate of the costs for protective clothing for this quarter would be $50.00 for this quarter.

Barrels:

295 barrels were sent to the Dump. At $2.60 per barrel the cost for this quarter would be ($2.60 x 295) or $767.00.

Covering Trash:

Although trash was covered only once during this quarter there is a monthly "rental" charge on the D-3 Caterpillar tractor which is kept at the Dump and used only at the Dump. The total charge for this quarter includes salaries, heavy equipment charges and overhead. It amounts to $1,377.39.

The charges per month are as follows: April -- $321.00; May -- $20.46;

June -- $335.93.

Cost of operation of Dodge pick up #7849 and Chevrolet pick up #0325.

These two pick ups were used during this quarter by the H-1 Monitor supervising the trash disposal operation. 7/8 of the total cost is reported as the vehicle is used on this job on an average of 7 hours per day.

On June 12, 1957, Dodge pickup #7849 was turned into the Motor Pool and Chevrolet pickup #0325 was issued as the replacement.

For this quarter the cost of operating these two vehicles was $33.15. 7/8 of this amounts to $31.77.

Conclusion:

The estimated total volume of trash put into the Dump for this quarter was 838.713 cubic yards. The total estimated costs was $12,498.59. By dividing the cost ($12,498.59) by the total volume (838.713) a cost per cubic yard of $23.01 is obtained. For the first quarter of 1957 the cost per cubic yard was $26.00, using the same method to determine the cost.
Tabulation of costs for this quarter:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boxes (6,519 @ $0.1408/ea.)</td>
<td>$917.83</td>
</tr>
<tr>
<td>Plastic bags (4,000 @ $54.00 per 1,000)</td>
<td>$216.00</td>
</tr>
<tr>
<td>Masking tape (312 rolls @ $7/ea.)</td>
<td>$177.34</td>
</tr>
<tr>
<td>Pickup and delivery of Trash</td>
<td>$3,318.24</td>
</tr>
<tr>
<td>H-1 Supervision of Trash Pick up</td>
<td>$2,072.27</td>
</tr>
<tr>
<td>Packaging trash (Janitor Costs)</td>
<td>$7,202.52</td>
</tr>
<tr>
<td>Pit #6 excavation ($1/3 of balance)</td>
<td>$1,802.78</td>
</tr>
<tr>
<td>Fencing around Pit #6 ($1/10th of total cost)</td>
<td>$96.57</td>
</tr>
<tr>
<td>Protective clothing</td>
<td>$50.00</td>
</tr>
<tr>
<td>Barrels (295 @ $2.60 each)</td>
<td>$767.00</td>
</tr>
<tr>
<td>Covering trash</td>
<td>$1,377.39</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>$12,498.59</strong></td>
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</tbody>
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