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LLW DUMPSTER STUDY

Subcontract: 9-L58-1633F-1
Task 009

by

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Principal Mechanical Engineer

for

LOS ALAMOS NATIONAL LABORATORY
Waste Management Division
HSE-7

August 1989

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*Final Report
Task 009*

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EXECUTIVE SUMMARY

Over a span of several years, the public has reported visible leakage emanating from ten cubic yard Dumpsters used to transport Low Level Radioactive Wastes (LLW) from LANL generation sites to the disposal site at TA-54, Area G. The purpose of this study was to:

- Investigate probable causes of leakage,
- Inspect existing Dumpsters in the field,
- Propose immediate short-range solutions to the problem, and
- Propose long-range solutions based on predicted future requirements.

Field investigations indicated that LLW is handled carefully and professional at the individual generation sites and again during pick-up, delivery, and disposal at TA-54. It was also apparent, however, that Dumpsters not designed for LLW service are used to store this radioactive material for extended time periods while being subjected to the full range of Northern New Mexico weather conditions.

All Dumpsters inspected had 1/8 in to 2 in gaps in their closures (loading doors and discharge ramps) through which driving rain or melting snow could easily enter. Seven Dumpsters were located outside secure areas.

No cases of actual contamination were discovered, only the appearance of contamination i.e. the dripping of collected rainwater or melting ice and snow from Dumpsters being transported over public roads. In this, LANL has been most fortunate.

Short and intermediate range recommendations include the following:

- Limit the number of Dumpsters in the field by removing those from service that are picked up no more than nine times per year.

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- Service low volume generation sites on a "milk-run" basis i.e. immediate pick-up on demand, using qualified TA-54 personnel. A special enclosed van with integral labor-saving devices is recommended for implementing this plan.
- Renovate existing Dumpsters that remain in service at high volume generation sites (TA-3, TA-21, TA-48, TA-53, and TA-55). Minimal renovation recommended includes replacement of sheet metal side doors with lightweight marine type hatches and the addition of metal guides to separate the cardboard LLW cartons from contact with internal surfaces of the Dumpster shell. Top loading Dumpsters should be removed from service. Maximum renovation recommended includes inflatable rubber seals for the discharge ramps. Relative costs are included in the Cost Estimate.
- Provide slightly elevated (approximately 18 in) platforms for Dumpsters remaining in service. Platforms would be fitted with timber contact surfaces to reduce damage to the Dumpsters and would maintain the discharge ramp above drainage elevation.
- The use of fabric containers for noncompactible LLW Dumpsters is recommended.

Based upon existing information and projected LANL requirements, long-range recommendations do not include drastic changes in the present truck-and-Dumpster system.

A conceptual design for a six cubic yard (D-2) Dumpster that would interface with the automated LLW handling and monitoring system being developed for TA-55 is included in the report. This design would also be compatible with existing manual loading operations as well as operations requiring handling of contaminated soil and large, bulky objects. Receiver stations for existing and/or planned Controlled Air Incinerator facilities would need to be upgraded to interface with the D-2 Dumpsters so that double enclosure of LLW is maintained at all times.

Investigation into the feasibility of on-site compaction of LLW prior to loading into standard 1 ft x 1 ft x 2 ft cardboard cartons is recommended as a means for reducing highway transportation by a factor of 3.0 to 4.0. Alternate technologies for handling LLW were researched and described. Only one

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system investigated appeared to have a possible long-range application: large (40 cubic yard) enclosed and modified sludge containers with integral hydraulic ejection systems that could store approximately 500 standard cartons. Relative advantages vs. disadvantages are discussed in the report.

All LANL and Pan-American personnel contacted during the course of this study were extremely helpful and co-operative.

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1. INTRODUCTION

This study is the result of long standing problems inherent with on-site handling, storage, and transportation of low level solid radioactive wastes (LLW) at Los Alamos National Laboratory (LANL). Problems reported and addressed are those resulting from the use of standard ten cubic yard Dumpsters to store and handle LLW.

The primary problem reported has been that of visible water leakage from Dumpsters while en route to the waste disposal site. Other problems such as weathering and deterioration of cardboard cartons containing LLW, deterioration of the Dumpsters themselves due to wear and damage over an extended time period, and improper siting of the Dumpsters were also reported and are addressed in this report.

No instance of actual contamination as a result of handling LLW in Dumpsters was discovered during this study.

2. PROJECT SCOPE

The scope of this study was twofold:

2.1. Investigation.

To investigate the condition of dedicated containers presently used in the over-the-road transportation of radioactive wastes generated at various LANL sites, as well as the type of routine operations to which these containers are currently subjected. Results of this investigation include cost-effective recommendations for short range solution of the leakage problem inherent with the type of bottom discharge units currently employed at LANL for both compactible and noncompactible radioactive wastes.

2.2. Recommendations.

To make long-range recommendations for optimum, overland transportation systems and equipment to be compatible with both existing and future requirements. Typical future requirements include, but are not limited to, the following:

2.2.1. Transportation of radioactive wastes as received from the automated waste handling system being developed for TA-55.

2.2.2. Unloading of LLW at the recovery station of the incinerator currently in the planning stage as well as to the existing Controlled Air Incinerator (CAI) at TA-50, Bldg. 37.

2.2.3. Handling and transportation of large, bulky, contaminated objects using equipment as nearly interchangeable with that required for routine container transfer as is practical.

2.2.4. Handling and transportation of contaminated soil.

2.2.5. Handling of radioactive wastes in steel drums.

3. GENERAL

Location of the Dumpsters currently in service is shown on the plot plan in the Drawing Section of the Appendix. The site for direct disposal of non-compactible LLW is located at TA-54, Area G, along with a manually operated compaction facility for processing compactible LLW prior to its handling by means of dedicated fork lift trucks.

For purposes of this report, the terms "compactible" and "combustible" will be used interchangeably since it is planned to route most or all "compactible" LLW to the CAI located at TA-50, WM 37 as soon as its renovation into a production unit is complete and permitted. In the meantime, compactible LLW is being routed to the TA-54 disposal pits.

First priority of this study is to emphasize in the strongest terms that potential for contamination exists through the continued use of leaking Dumpsters to transport LLW across public roads and through urban and residential areas.

Of almost equal importance, is the requirement that LANL maintain public confidence while transporting LLW over public roads and highways. The fact that rainwater seen dripping from a rusted, unsightly Dumpster onto Pajarito

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Road is not contaminated is lost upon concerned citizens, some of whom are openly hostile to the very existence of DOE Laboratories. In this regard, it is necessary to maintain a "Caesar's wife" attitude toward the handling of all radioactive wastes.

The general results of this study can be summarized as follows:

- LLW is handled very carefully and professionally while it is inside the generation sites and while it is loaded inside the Dumpster and documented.
- LLW is handled very carefully and professionally during pick-up, delivery, and disposal at TA-54.
- During the interim period from the time the first carton is loaded inside the Dumpster to the time the full load is picked up and delivered, LLW is stored in a relatively neglected state inside deteriorating cartons and Dumpsters that are not sealed against the weather.

This is apparently not the fault of the managers and personnel directly involved. It seems rather that it is the result of one of the apparently inevitable gaps that occur between areas of interfacing responsibility in any complex organization.

4. DEFINITIONS

For purpose of this report, the following definitions were used:

4.1. Compactible Waste. (1.)

Compactible waste is solid waste that consists of trash such as paper, plastic, rubber, and small items of glassware up to a one-gallon size; and small items such as short lengths of pipe conduit and small pieces of wood or sheet metal. Excluded are larger noncompactible items, waste chemicals, free or absorbed liquids, biological waste, pressurized containers, powders, and other particularly hazardous materials. Compactible wastes are currently packaged in standardized 1 ft x 1 ft x 2 ft cardboard cartons. The terms

"compactible" and "combustible" are used interchangeably in specific sections of this report since long-range plans include incineration of LLW presently being compacted prior to disposal at TA-54, Area G. (Reference Section 3.)

4.2. Noncompactible Waste. (2.)

Noncompactible waste is large or bulky waste exceeding the maximum dimension for compactible packages (16 in. x 19 in. x 36 in.) or other obvious noncompactible common waste such as heavy pipe, angle iron, equipment, lumber, building rubble, and soil. Also included is tritium waste with an activity greater than 20 mCi/m³.

4.3. CAI

Controlled Air Incinerator

4.4. Dumpster.

Any of three configurations of ten cubic yard portable containers that are handled by the same type of hydraulic lift truck and are used exclusively to store and transport low level radioactive wastes from individual generation sites to on-site disposal. Dumpsters are manually loaded, usually through one of two side doors, but occasionally through top doors of one of the configurations. All Dumpsters included in the scope of this project have the following features in common:

- All are rated at ten cubic yard capacity,
- All are the bottom discharge type that employ a hydraulically activated, hinged ramp that is lowered at the driver's signal,
- All are provided with security locks at all doors and on the bottom discharge ramp, and
- All are clearly marked for radioactive waste only and are used exclusively for that purpose.

The name "Dumpster" was originally the registered trademark of Dempster Systems, Inc. of Toccoa, Georgia, but the term has been popularly expanded to include all similar portable containers that meet the same federal regulations, that are compatible with the same type of vehicles, and that are used for the same purpose, regardless of manufacturer.

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4.5. LLW.

An acronym for "Low Level (Radioactive) Waste." Waste material whether compactible or noncompactible that meets all regulations for minimal radioactivity (less than or equal to 100 nCi/gm) and is presently temporarily stored and handled in ten cubic yard Dumpsters.

4.6. HLGS.

An acronym for "High Level Generation Site." A facility that, according to the records of a six-month survey, produced ten or more Dumpster loads of LLW during that period.

4.7. LLGS.

An acronym for "Low Level Generation Site." A facility that produced fewer than four Dumpster loads of LLW during the six-month survey.

4.8. MLGS.

An acronym for "Medium Level Generation Site." A facility that produced from four to ten Dumpster loads of LLW during the six-month survey.

4.9. D-1.

An arbitrarily assigned model number of an existing or new Dumpster that has been modified for weather tightness.

4.10. D-2.

An arbitrarily assigned model number of a Dumpster, yet to be developed, that will be compatible with the automated LLW monitoring and handling system currently being planned for TA-55 and other existing and planned facilities.

5. FIELD INVESTIGATIONS AND RESULTS

The field survey conducted as part of the LLW Dumpster Study was implemented in four phases as follows:

- Visual inspection of individual Dumpsters for general condition, damaged components, potential avenues for weather in-leakage, and suitability of location. (Results of the inspection program are noted on individual data sheets in the appendix.)

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- Observation of actual LLW Pick-up and delivery operations from high volume generation sites to TA-54, Area G compaction facilities and disposal pits.
- Interviews with personnel concerned with on-site LLW handling and the specific problem of Dumpster leakage. Conference reports, completed questionnaires, and telephone records are included in the appendix.
- Review of field records for LLW pick-ups and delivery over a six month period from October 1988 to April 1989.

5.1. Visual Inspection of LLW Dumpsters.

An inventory listing of all containers for both hot and cold service at various technical areas was obtained and used as a guide in locating and inspecting specific ten cubic yard LLW Dumpsters. (1.)

The inventory listed 72 LLW Dumpsters. The actual number located and inspected is noted in the appendix.

A subsequent review of pick-up frequency over a six-month period indicated that five technical areas generated 86% of LLW Dumpster loads for that period. According to the inventory list, then largely verified by on-site inspection, only 38 of 72 Dumpsters (52.8%) are located at these high volume facilities:

TA-3 - South Mesa Site	17
TA-21 - D.P. Site	7
TA-48 - Radio Chemistry	5
TA-53 - Meson Physics	6
TA-55 - PF Site	<u>3</u>
Total	38

To facilitate inspection and attempt to define criteria for evaluation and eventual disposition of the LLW Dumpsters, a Dumpster rating system was devised and is included in the Appendix.

The inspection program, including subsequent review of the accumulated data sheets, indicated that there were sufficient consistent similarities between the LLW Dumpsters at all locations visited to warrant the following conclusions:

5.1.1. Three types of Dumpsters are used throughout the various technical areas: Round Top, flat top with two top loading doors (in addition to the side doors), and flat top with no top loading doors.

5.1.2. Only LLW having a very low moisture content is loaded into the Dumpsters. This material is first sealed inside a plastic bag then packaged and sealed into a standard watertight 1 ft x 1 ft x 2 ft cardboard carton. It is, therefore, a safe assumption that all reported leakage was due to the intrusion and collection of driving rain, the melting of snow that was drifted against the side of the Dumpster, or heavy drainage entering around the discharge ramp.

5.1.3. Regardless of configuration or manufacturer, the Dumpsters were not designed or fabricated to seal out weather or to be used in LLW service. Although adequate for general sanitary service, the Dumpsters do not provide any means for positive weather sealing. Specifically: the 36 in. x 36 in. side loading doors are too flimsy and do not close adequately even when new and undamaged. There is no weather stripping around the sheet metal doors and no adequate surface for elastomer material to seal against. Most doors were bent and warped due to damage from routine operations and exhibited a gap of 1/4 in. to 1 in. when closed against the door latch and locked. When unlatched and held closed only by the security lock and hasp, the gap increased to as much as 2 in. The handles of several doors were bent too far out of alignment to close.

Most side doors could be opened far enough against the lock and hasp to visually inspect the interior of specific Dumpsters. In several cases, the side doors were unlocked by a technician on the site so that a more thorough examination could be made. In all cases, daylight could be seen through the opposite side door closure and around the perimeter of the discharge ramp. These gaps varied from approximately 1/8 in. to 1/2 in., but were all sufficient to allow water to enter the Dumpster with very little flow restriction.

5.1.4. The flat top Dumpsters having two top doors appear to be the worst offenders in providing avenues for in-leakage of water. Most top doors were badly warped and did not fit the shell properly. Several attempts have

obviously been made by area personnel to seal the top doors with plastic or rubber. Top doors on other Dumpsters have been welded shut.

5.1.5. Several Dumpsters had damaged side plates (the triangular section on both sides that forms part of the bottom discharge ramp). Some side plates were out of alignment by as much as two inches and were not contacting their guide plates. This condition left wide gaps turned up to collect rainwater.

5.1.6. Dumpsters apparently do not have to leak water from the container section to give the appearance of dripping "contamination," e.g. the channel stiffeners welded to the bottom of the discharge ramp are open, thus providing a handy reservoir for the collection of drainage water. A scenario wherein drainage collects in the channels, freezes overnight, then melts onto the highway while in transit to TA-54 appears to be realistic. It is calculated that five 4 in. channels 7 ft long could hold nearly 9 gal of water.

5.2. Specific Inspection Results.

Although not typical of all sites and Dumpsters inspected, the following specific examples serve to emphasize the causes of Dumpster leakage and to emphasize the severity of the problem:

5.2.1. At TA-43, the handle of one Dumpster side loading door was so badly bent from impact during transportation that it could not engage the latch. The door was also badly bent and was standing ajar with only the security lock and hasp preventing it from opening completely. The resultant gap was nearly two inches wide. Cartons of LLW were stacked to a level above the bottom of the loading door so that they could be easily touched with a forefinger. The Dumpster was located in a non-secure area less than 500 ft from the Los Alamos Medical Center emergency ward. Needless to say, a vandal could easily cut open or even set fire to the accessible cartons.

5.2.2. At TA-3, SM 142, one Dumpster for handling compactible wastes (primarily coveralls, shoe covers, and smocks that were too contaminated for re-use after cleaning) was located at the loading dock.

The side doors had been welded shut so that all loading is accomplished through the two top doors. The top doors were in fairly good shape and not as

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warped as many others inspected. However, no attempt had been made to weatherproof the doors with elastomer seals. This unit was located directly below the building eaves so that runoff from rain and snow could directly impinge on the Dumpster top.

5.2.3. A Dumpster at TA-50 had been field modified through the addition of two 36 in. x 36 in. loading doors that were vertically aligned to provide a 72 in. high "Dutch Door" effect. One bottom corner of the bottom door was sprung open about 1/2 in. with the open space less than 2 in. above grade.

5.2.4. The doors of Dumpsters at several locations including TA-3, SM 66 had 1/2 in. x 1 1/2 in. inspection slots cut in them. The cardboard cartons inside could be touched with a forefinger or soaked by a driving rain.

5.2.5. The heavy rain occurring on 14 July 1989 provided an opportunity to observe the effects of a deluge on specific Dumpsters. The two Dumpsters of TA-50, WM 37 are located within inches of the flow pattern of water draining from one of the main building gutters. They are also located under a small tree. A scenario wherein even a small tree limb falling across the drainage flow pattern could cause water to back up into one or both Dumpster appears to be realistic. Water 1 3/4 in. deep would contact the lowest cartons. These and other Dumpsters re-inspected during and shortly after the heavy rainfall verified the presence of water entering the side loading doors and running down the inside of the Dumpster shell.

5.2.6. An empty Dumpster was inspected at the rear of the CMR facility. It had apparently not been used for a significant time period. There were no locks on either door or on the discharge ramp. An attempt had been made to secure one door in closed position with what appeared to be baling wire. One padlock, probably from the Dumpster, was located in a gutter approximately 100 ft away.

5.2.7. Also, at the rear of the CMR Building, there are two identical signs fastened to structural columns that are bolted to the main loading dock. These signs both read "Building Air Intake. Do not leave your engine running." A fully loaded Dumpster was located directly under each sign. The

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effect that even a small fire in either Dumpster could have on personnel working inside CMR is fairly obvious.

5.3. Personnel Interviews.

Communication with LANL and Pan American personnel involved with on-site transportation of LLW in ten cubic yard Dumpsters was accomplished by personnel interview, telephone conversation, and through the use of questionnaires. Meeting reports, telecons, and completed questionnaires are included in the Report Appendix. Input from several sources was used in compiling data and formulating recommendations. Discussions were held with the MEE-3 Engineering team that is currently developing an automated handling and monitoring system for TA-55 and preliminary requirements for developing a special Dumpster to interface with their equipment were established. The MEE-3 design will probably be included as part of the waste handling system for the new SNM facility and eventually retrofit into the other high volume LLW generation sites at LANL as they become automated. Therefore, any custom Dumpster developed to interface with the MEE-3 design will probably evolve into a standard container within the foreseeable future.

Discussions of long range plans for LANL waste management indicated that while development of a single universal Dumpster may or may not be economically feasible, the following services should be considered during all development programs:

- Automated loading of compactible/combustible wastes and delivery to new compaction or incineration receiving stations.
- Continued delivery of noncompactible wastes to the TA-54 disposal pits.
- Continued delivery of 1 ft x 1 ft x 2 ft cartons of combustible wastes to the existing CAI.
- Manual loading of either type of wastes on a contingency basis.
- Manual loading and delivery of large, bulky contaminated objects.
- Manual or machine loading and delivery of contaminated soil, gravel, and construction materials.
- Waste material handled in 55 gal drums (chemicals, wastes scheduled for WIPP delivery, incinerator ash and residue).

5.4. Observation of LLW Pick-up and Delivery Operations.

Due to the importance of the handling operations, despite repetition of some comments, the field report of 4 May 1989 is included herein in its entirety:

Field Study of LLW Dumpster Operations

On Thursday, May 4, 1989, I accompanied Mr. Andrew Vigil as he picked up three ten yard Dumpster loads of low level waste (LLW) material and delivered them to the disposal site, TA 54, Area G.

One load was delivered from TA 3, SM 29 and two were delivered from TA 55, PF 4. I inspected the contents of the two TA 55 Dumpsters since Mr. Vigil indicated that they were typical of the deliveries he was called upon to make. In Dumpster No. 2405, ninety (90) 12 in. x 12 in. x 24 in. assayed, weighed, and sealed cardboard cartons containing compactible wastes were packed in a very orderly, space efficient array. Total gross weight (contents plus cardboard cartons) was 443.12 kg (975 lbs) according to the Radioactive Solid Waste Disposal Record. In Dumpster No. 632, eighty (80) cardboard cartons containing noncompactible wastes were similarly packed. Total gross weight was 520.6 kg (1145.3 lbs).

The internal surfaces of the empty Dumpsters were visually inspected upon return to the pick-up site. None of the sealing surfaces between the container shell and the bottom (discharge) closure appeared to be badly damaged from LANL service although it was evident that most of the steel around the closure had been flame cut during fabrication and that no attempt had been made to provide a moisture tight seal since this feature is not required for most Dumpster operations. Internal surfaces of the two Dumpsters opened were uniformly and completely rusted. The 36 in x 36 in loading doors of both Dumpsters had an air gap between 1/8 in. and 3/8 in. wide between the bottom edge and the container shell. Daylight was plainly visible from the inside of each Dumpster.

A total of ten Dumpsters were inspected externally and the following was noted:

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There are apparently at least three types of 10 yard Dumpsters in service:

- The rounded top,
- The square top with top opening doors (in addition to side doors), and
- The square top without top opening doors.

The top opening doors inspected have closure flanges that are manufactured from thin, badly warped carbon steel and are obvious sources of in-leakage from rain and snow.

All Dumpsters are badly in need of repainting. In sanitary waste service, a small amount of external rust on a Dumpster is not too critical. However, if brown streaks discoloring the sides of an LLW Dumpster are interpreted as being "contamination" by members of the public traveling Pajarito, an indelible and unpleasant image can be left in their minds. One of the most visible locations of external rust noted to date is just below the top 3 in. angle used as a stiffener on the rounded top Dumpsters. The 84 in. long angle has been intermittently welded to the external surface of the Dumpster shell (normally an acceptable fabrication technique) so that rain water is free to enter the pocket formed by the two legs of the angle, then stagnate and form rust that is washed down the sides by the next rainfall. To the casual and/or hostile observer this looks like "leakage."

Of the ten Dumpsters in LLW service that have been inspected to date, only two (Numbers 3898 and 3899 at Building 37, TA 50) have had TA and Building numbers plainly stenciled in prominent locations on the sides. These two, plus Dumpsters 632 and 2405 at TA 55 also had part numbers hand painted in small white letters on the front. Identifying markings could not be located on the other six Dumpsters inspected to date.

Several retaining lugs on the side of the Dumpsters are becoming severely damaged and worn from normal service. These projections are used as a point of stabilizing contact with the arms of the vehicles' hydraulic handling system. Total loss of either of these lugs could adversely affect a Dumpster's stability while loading or unloading.

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Mr. Vigil, a Pan-Am employee, has transported over 90% of all the LLW (in both ten yard Dumpsters and in drums handled in open skids) for several years. He is a very adept and careful driver and appears to be equally competent in the day-to-day, specialized transportation of LLW. As an example, when Mr. Vigil discovered that a Radioactive Solid Waste Disposal Record had not been properly signed, he refused to touch the Dumpster in question until the situation had been clarified and proper authorization obtained.

The vehicle regularly used in LANL LLW Dumpster service is an International S1900 with an integral Perfection Cobey "Liftainer" Hydraulic handling system. This unit has recorded about 71,000 miles of service and appears to be in very good, well maintained condition. By estimating that each Dumpster weighs approximately 3000 pounds empty and adding 1200 pounds of net LLW, then observing the pick-up and delivery operations it was evident that the total vehicular unit was adequately powered for the required service.

Mr. Andrew Catanach of HSE-7 at TA 54, Area G supplied me with LLW pick-up and delivery information that, when analyzed over a recent six month period, will, without doubt, provide an excellent indication of low level waste generation and the relative usage of the 72 ten yard Dumpsters at 17 specific locations.

John Harper and all TA 54 personnel contacted were extremely helpful and cooperative in assisting me with this field study.

5.5. Review of Field Records.

Records for LLW pick-up and delivery for the period of October 1988 to April 1989 were obtained from the TA-54, Area G office. Detailed records for this period had been accurately and meticulously kept and were invaluable in analyzing ongoing pick-up/delivery operations.(2.)

The pick-up/delivery of LLW for each generation site requiring service during the time period analyzed is charted in Table I.

It can be noted that of 151 calls, 130 (86%) originated from the five HLGS locations, and that 96 (64%) originated from the largest LLW producers: TA-3 and TA-55.

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TABLE I

SIX-MONTH DUMPSTER SERVICE - BY LLW GENERATION SITE

NUMBER OF TEN YARD LLW DUMPSTERS PICKED UP AT
GENERATION SITE AND DELIVERED TO TA-54, AREA G
BETWEEN OCTOBER 18, 1988 AND APRIL 19, 1989

<u>Generation Site</u>	<u>Compactible</u>	<u>Non-Compactible</u>	<u>Rating</u>	<u>Not Noted</u>	<u>Total</u>
TA-2, Omega Site	1	1	L (1.)	0	2
TA-3, South Mesa Site					
SM-16	0	1	L	0	1
SM-29	20	11	H	0	31
SM-66	4	8	H	0	12
SM-102	1	6	M	0	7
TA-15, R-Site	0	1	L	0	1
TA-16, S-Site	0	2	M	2	4
TA-18, Pajarito Laboratory	1	2	L	0	3
TA-21, DP Site	3	7	H	0	10
TA-33, HP-Site	0	1	L	0	1
TA-35, Ten-Site	1	0	L	0	1
TA-43, Health Research Lab	3	0	L	0	3
TA-48, Radio Chemistry Site	6	5	H	0	11
TA-50, Waste Management Site	2	4	M	0	6
TA-53, Meson Facility	0	11	H	2	13
TA-55, PF-Site	<u>33</u>	<u>12</u>	H	<u>0</u>	<u>45</u>
TOTALS	75	72		4	151

(1) Records were originally interpreted to mean that 8 Dumpsters were picked up and delivered in one day due to demolition of an existing facility. Actually, TA-2 called 8 times for one pick-up. Total pick-ups was changed from 159 to 151.

Code: H = High Volume (10 or more pick-ups)
M = Medium Volume (4 to 9 pick-ups)
L = Low Volume (3 or less pick-ups)

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A LANL plot plan showing the relative LLW generation rates as measured by calls for service over the six month period is included in the Appendix.

It can also be noted that for the period analyzed, the number of Dumpsters containing compactible LLW was almost exactly equal to the number of noncompactible Dumpsters serviced. Personnel interviewed estimated that this 1:1 ratio was fairly constant over extended time periods.

6. RECOMMENDATIONS

It was originally estimated that investigation into the LLW Dumpster leakage problem would yield both short and long range recommendations for solutions. However, during the course of analyzing the problem vs. potential solutions, it became apparent that although no one single inexpensive curative is immediately available, several actions can be taken almost immediately that will help alleviate Dumpster leakage. Recommendations are therefore divided into three chronological phases: Immediate, Intermediate, and Long Range.

Neither Immediate nor Intermediate recommendations made herein include major or radical changes in operation or equipment. The current system appears to be direct, uncomplicated, relatively efficient and cost effective. The system itself appears to be well suited to handling LLW since the sealed cartons can be manually loaded through the side doors and stacked uniformly to prevent crushing and/or puncturing on sharp corners and edges. Handling by truck and discharge of cartons at both the existing compactor and direct disposal pit facilities is relatively gentle. There appears to be little cause for the cartons to rupture during handling by experienced personnel.

In short, there does not appear to be a justification for incurring the expense of changing to a drastically different system, particularly when any system implemented will be on an interim basis until it will be largely replaced by the automated carton monitoring/handling systems planned for major generation sites. Refinements in equipment and operations are proposed instead.

Since technology for the safe handling of hazardous wastes continues to evolve, there may eventually arrive on the market one or more processes that

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could justify augmentation or total replacement of the existing truck-and-Dumpster system. Several of these processes are listed in the Alternate Technology section of this report. It is recommended that these and other developing systems be regularly monitored for compatibility with long-range LLW disposal requirements at LANL. However, for future requirements as can be forecast from this study, no drastic systemic changes are recommended.

6.1. Recommendations for Immediate Action

Project scope did not include time-consuming research into specific case histories of Dumpster leakage that have been reported, according to HSE-1, for more than ten years.^(1.) It is doubtful that this research, if conducted, would have pin-pointed the specific Dumpsters that were leaking, the exact cause of leakage or even contributing factors at the time.

Investigations, therefore, were restricted, as previously reported, to inspection of the Dumpsters, discussions with personnel directly familiar with the problem, and observation of current operations.

Field data derived from these sources were used to postulate causes for leakage reported in the past as well as conditions that could reasonably cause reoccurring Dumpster leakage.

Specific Recommendations for Immediate action include the following:

6.1.1.1. Reduce the number of Dumpsters presently in use. Inventory lists 72 active ten cubic yard Dumpsters including a minimum of three held in reserve at TA-54, Area G. It appears that by reducing the number of Dumpsters that are constantly exposed to all weather conditions, the incidence of Dumpster leakage will be reduced by the same factor. TA-54 field records indicate that at least 30 Dumpsters at 11 different technical areas are unloaded no more than once every two to six months.

This recommendation should in no way be construed as a base plan for reducing LLW pick-up/delivery service to low volume generation sites. On the contrary, it is recommended that pick-up/delivery service be provided on a "milk-run" basis by TA-54, i.e. a vehicle from TA-54 will be scheduled to service a location as soon as LLW is generated, processed, packaged and

monitored and not after it has been allowed to accumulate and deteriorate for weeks or months in a Dumpster not designed for the application. Any significant surges in LLW production at a specific site, such as might be caused by demolition of an obsolete facility or a large spill, can be handled by temporarily supplying reserve Dumpsters as needed from the TA-54 storage yard.

Based on the data obtained from TA-54 files, then extrapolated over a 12 month period, 50 LLW Dumpsters per year are picked up at low and medium volume generation sites and delivered to disposal facilities. By conservatively estimating that all 50 Dumpsters are each loaded with (90) 1 ft x 1 ft x 2 ft cartons, 4,500 cartons/year would be handled directly by TA-54 from generation site to disposal. It appears that if TA-54 were provided with one relatively inexpensive pick-up truck outfitted with a custom designed and fabricated container similar in configuration to a small camper van, pick-up and delivery of 4,000 to 5,000 cartons of LLW per year would not represent an onerous task.

A van having an approximate useful storage volume of 192 ft³ (8 ft long x 6 ft wide x 4 ft high) could contain (54) 1 ft x 1 ft x 2 ft cartons.(2.) This would represent an average of between one to two trips per week over a 50 week period.

6.1.2. The use of fabric containers for cartons containing all non-compactible LLW as a minimum is recommended.

These containers would be coated (non-breathing) polypropylene fabric as manufactured by BONAR Industries and others. This type of container has been successfully used in handling graphite at SM 66.(3.)

(4.)The fabric container system has a number of advantages including the following:

6.1.2.1. Fabric container when sealed represent extra containment against dispersion of airborne particles.

6.1.2.2. Fabric containers are tough, durable and very difficult to tear or puncture.

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6.1.2.3. LLW confined inside sealed cartons and sealed fabric containers should require much less back fill at the disposal site.

6.1.2.4. Fabric containers can be economically manufactured in various sizes and configurations and with options as required for nuclear service.

6.1.2.5. Fabric containers manufactured with "duffel" configurations can be located inside metal containers for temporary indoor storage of three to six cartons.

6.1.2.6. Fabric containers can be fitted with extra reinforcing straps plus loops for lifting with a hoist or other mechanical device.

6.1.2.7. Fabric containers can be manufactured with "compactible," "combustible," or "noncompactible" permanently marked on their outer surface. They can also be color coded to further distinguish between different types of waste.

6.1.2.8. (5.) Fabric containers can probably be purchased in large volumes of relatively small sizes at prices that will make them economically viable for disposable service. The series 2200, code S 65 containers that were 44 in. x 74 in. with a 3 1/2 mil inserted liner cost \$21.40 each in lots of 50 in 1987. If fabric containers capable of holding and sealing six cartons each could be purchased and stored in volume lots for \$10 to \$15 each, it appears that \$9,000 to \$13,500 per year would not be an excessive amount to pay for the added benefits plus the elimination of the cost of Dumpsters, handling truck, and driver from eleven locations.

6.1.3. "Milk Run" Operations. In operation, the user at the generation site would call for service approximately two days in advance to allow for security sealing and protection of the LLW and to allow for scheduling by TA-54.

The metal containers holding the sealed fabric containers would be rolled out to meet the TA-54 pick-up van and the fabric containers would be loaded aboard using a 1/4 ton hoist on a short telescoping boom that is integral with the vehicle. Both compactible (combustible) and noncombustible LLW could be

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loaded into separate compartments of the van on either side of an integral partition. Color coding throughout would minimize errors in routing. It is estimated that six cartons in a flexible container would average 100 lbs each, gross weight.(6.)

Depending upon available space in the van and/or operating procedure, the vehicle would travel directly to TA-54, Area G for unloading, or stop en route to pick up additional LLW at other generation sites.

It appears feasible that the van could be fitted with a remote controlled hydraulic discharge door and an ejector ram system so that the LLW could be unloaded at the disposal site by the driver from inside the vehicle without opening his door to the dusty pit atmosphere.

6.1.4. As with any new system, there are questions to answer and potential problems to address before it can be implemented, including, but not limited to, the following:

6.1.4.1. What will be the optimum, size of the fabric container?

6.1.4.2. Reference compaction vs. combustion in future operations:

- Will some compactible LLW still be routed through the existing or new compaction operation to disposal at TA-54, Area G, or will compaction be eliminated altogether after the two CAIs are permitted and operational?
- How will LLW in fabric containers interface with the compaction operations?
- Will a new automated compaction system be provided that will accept LLW in fabric containers discharged from the TA-54 van as well as from the new D-2 Dumpster being planned for TA-55?
- The conveyor system of the existing CAI will accept only 1 ft x 1 ft x 2 ft cardboard cartons while the new CAI will accept both cartons and bulk LLW. Will this present an additional and serious segregation problem?

6.1.4.3. It is estimated that each fabric container will weigh from four to six lbs. What effect will 1,800 to 2,400 lbs per year of polypropylene have on the heat balance and emissions of the new CAI?

6.1.4.4. Should fabric containers be considered only for noncompactible LLW? Cartons containing combustible and/or compactible LLW would be manually or mechanically loaded into D-1 or D-2 Dumpsters or the TA-54 without further packaging in much the same way they are presently handled.

6.1.5. It is recommended that a fabric container be designed that will best answer the above questions (plus others that will inevitably arise) and that a trial order be purchased and field tested.

6.1.6. Advantages. Overall advantages of restricting the routine use of permanently assigned Dumpsters to TA-3 (major generation sites only), TA-21, TA-48, TA-53, and TA-55, then using TA-54 personnel to pick up and deliver LLW in a special van from all low and medium generation sites on a "milk run" basis are as follows:

6.1.6.1. The number of Dumpsters allowed to remain outdoors collecting moisture from rain and snow will be reduced by a factor of 0.4 to 0.6. This should reduce the probability of actual and reported leakage by the same factor.

Review of the enclosed location site plan shows that the five major generation sites are grouped relatively close to each other and to the TA-54, Area G disposal site. By eliminating Dumpsters at out-lying, low production generation sites, the incidence rate of public encounters with rusted, leaking Dumpsters marked "Radio-active Wastes" will be significantly reduced in most areas and completely eliminated in others. Instead, LLW will be handled in an unobtrusive, streamlined van that will not be nearly so visible to the public.

6.1.6.2. The cardboard cartons will not be exposed to the elements for months at a time, but will be picked up almost immediately and delivered to the proper disposal site.

6.1.6.3. Although only a few defective areas were observed that actually weaken present day containment capability, the existing Dumpsters are in very poor condition and will require replacement over the next few years in order to maintain even a semblance of structural integrity. In 1989 dollars, a new Dempster Dumpster retails for \$5,640 each.^(7.) As indicated in the inspection reports, the existing Dumpsters are not designed or fabricated to provide the degree of weatherproofing required for handling LLW so that under many weather conditions, new un-modified Dumpsters will very likely leak. Subsequent damage and wear serve only to exacerbate an existing problem. Estimating that \$3,455^(8.) minimum will be required to weatherproof each Dumpster, the estimated unit cost escalates to an estimated \$9,100. By eliminating 32 Dumpsters, the total project cost will be reduced by \$291,200.

6.1.6.4. Dumpsters brought in from low volume generation sites can be weatherproofed and used to replace worn and damaged units currently located at the high volume sites. This can be accomplished on a systematic but gradual basis without interrupting pick-up/delivery service. Dumpsters not meeting inspection standards for modification can be stored at TA-54 and cannibalized for parts and material (hinges, chain adapters, stiffeners, side plates, discharge ramps, pick-up bars, side lugs, and some sections of the shell). This plan will not only represent considerable cost savings, but will reduce the amount of steel requiring eventual disposal. In the event that all 72 old LLW Dumpsters were to be scrapped and 72 new Dumpsters purchased, the eventual disposal problem would amount to the following:

$$\text{Tons of (bulky) steel} = (72 + 72)(3,000 \text{ lbs/unit}) / 2,000 \text{ lbs/Ton} = 216 \text{ Tons}$$

If only ten new Dumpsters have to be purchased (assuming conservatively that only 30 weatherproof Dumpsters of the 35 to 40 required can be modified from existing units), the 216 ton figure drops to $(72 + 10)(1.5) = 123$ tons plus approximately five tons of unusable steel left over from cannibalized Dumpsters and 10 tons of newly purchased steel. Disposal of this 138 tons can be accomplished gradually over a 15 year time period as the modified Dumpsters wear out, are damaged beyond repair, or are phased out by Dumpsters developed for automated systems.

6.1.6.5. Limiting a few number of Dumpsters to high volume generation sites that are closer to TA-54 will streamline the pick-up and delivery of LLW from both high and low volume location. Extrapolation of data acquired during the six month log reports indicate that approximately 50 of a predicted total of 320 LLW deliveries involving ten cubic yard Dumpsters would be eliminated by the Dumpster reduction plan. This is slightly less than 16% of predicted total annual deliveries, but since many of the low volume generation sites are found in Tech Areas remotely located from TA-54, Area G, and since the maximum speed limit for handling LLW over area roads is 35 Mph, the actual time saved in eliminated Dumpster service at these sites could be as much as 30 to 40% of total yearly transportation time. Time thus saved could be used by the Dumpster handling truck driver for inspecting units at the generation site for damage and existing or potential leakage. LLW pick-up and delivery service at low volume generation sites would be handled on a more frequent schedule by waste management specialists who would be trained specifically for this duty, as LANL employees and not sub-contractors.

6.2. Dumpster Siting.

It appears, from the inspection phase of the project, that Dumpsters have been located using the following criteria (listed not necessarily in order of priority):

- Proximity to temporary indoor storage of the sealed cardboard cartons,
- Access to the Dumpster by the handling truck, and
- Prevention of congestion and interference with other operations in the area.

These are excellent siting criteria in themselves, but apparently little or no thought has been given to sheltering the Dumpsters from the weather and drainage.

6.2.1. It is not recommended that full shelters be designed and constructed for the individual Dumpsters since they would, almost by definition, hamper the pick-up operations to the point of inefficiency, and would cost too much to construct in accordance with nuclear building regulations.

6.2.2. It is recommended that standard platforms similar to the design on the conceptual drawing in Appendix 12.5 be constructed for Dumpsters at high volume generation sites. The platforms would elevate Dumpsters well above the highest level of normal drainage water and would minimize the effects of drifting snow. By constructing the platform beams from pretreated structural timbers, the Dumpsters would be provided with a flat, uniform bearing surface that would absorb much of the impact and frictional forces inherent with returning the unit to the generation site.

Timber back-up bars are shown that serve as a bumper when returning the Dumpster to the platform and to locate it for the next loading cycle. Further investigation may indicate that rubber padding and/or a spring mount similar to a railroad car bumper may be required to adequately prevent damage to the Dumpster.

It should be noted here that all damage to Dumpsters inspected definitely appeared to be due to either normal wear or almost routine, yet accidental, collisions with rigid objects. No evidence of willful or negligent equipment maltreatment was observed. Maneuvering 3,000 lb, 295 ft³, containers in cramped quarters around concrete and steel structures inevitably produces incidental damage that would be acceptable for Dumpsters handling other types of waste.

The unit installed cost for each Dumpster platform is estimated to be \$1,225 including site preparation, piers and footings, fabrication, installation, and field painting. Total estimated cost for 40 units is \$49,000.(9.)

6.2.3 It is not recommended that the locations of the individual Dumpsters be drastically changed, although detailed discussions with users, handling truck drivers, and TA-54 personnel should be conducted prior to implementation in order to determine whether or not location improvements can be made and addition Dumpsters efficiently eliminated.

6.3. Improved Dumpster Inspection.

6.3.1. It is recommended that as the number of Dumpsters in service is reduced, that the handling truck driver be given additional responsibility for routine inspection of the Dumpsters. It should become a routine operation for

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the driver to give each Dumpster a thorough visual inspection preferably after the Dumpster has been emptied, after it has been monitored and while it is still connected to the truck so that the discharge ramp can be lowered and the interior inspected from below. Routine inspection is presently provided but the drivers do not now have sufficient time between pick-ups for thorough inspection nor the mechanism for reporting damage. Damage should be immediately noted on the inspection report sheet and reported to TA-54 along with comments on any recent repairs to the Dumpster. This data will also be very valuable in evaluating newly modified Dumpsters.

6.3.2. In addition, a procedure for regular, unscheduled and independent inspections should be inaugurated by TA-54. In addition to verifying routine damage reports submitted by the handling truck drivers, the TA-54 inspector should look for and note all rust streaks and surface discoloration that could indicate recent leakage, even that emanating from stagnant rain water trapped behind external components. The TA-54 inspector should have the authority required to order structural and mechanical repairs as well as re-painting from a maintenance facility assigned to service TA-54 waste management requirements.

6.3.3 A comprehensive preventive maintenance program for Dumpsters should be planned that will compliment more thorough inspections. This program should be implemented through TA-54 and would be functionally concentrated on Dumpster areas that have been most frequently associated with leakage e.g. the loading doors, the discharge ramp, external stiffeners, elastomer seals (for D-1 Dumpsters) plus hinges, side lugs, and chain adapters.

6.3.4. Standard Dumpster identification numbers, either existing part number or new numbers for modified units, should be permanently and prominently marked on the same location on all units and personnel should be instructed to note the identification number on all data sheets, maintenance work orders, and other correspondence. A continuing effort should be made to track all Dumpsters at their generation site and to record their service record (pick-up dates, number of cartons, gross weight, volume) by I.D. number as well as by location. A centrally located Dumpster situation board is

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recommended along with procedures for regular updating and location verification. Inspection dates per 6.3.2. could also be noted in one column of the situation board.

6.4. Security Considerations.

Although not strictly within the scope of this study, it is recommended that immediate security improvements be made as follows:

6.4.1. Remove all LLW Dumpsters from service that are located outside secure areas. Most of these are located at low volume generation sites and, if Recommendation 6.1.1. is accepted will be removed anyway. They should be given first priority in retirement of little used Dumpsters from active service.

6.4.2. Expedite door replacement and insure that new doors close completely and do not open against the security lock when unlatched.

6.4.3. In view of increasing and more organized hostility towards all DOE laboratories, it is recommended that a very defensive attitude be taken against the possibility of vandalism against any piece of equipment carrying the Radio-active material sign. Any person hostile to LANL could very easily duplicate the section of the inspection route made outside secure areas and take the following actions for publicity or other motives:

6.4.3.1. Photograph cartons of LLW inside Dumpsters located in an urban area,

6.4.3.2. Pierce several cartons and plastic bags with a sharp instrument then retrieve samples of LLW, and/or

6.4.3.3. Set fire to the cardboard cartons. (If a Dumpster door leaks water, it will certainly not impede gasoline or kerosene deliberately injected.)

6.5. Recommendations for Intermediate Action.

The basic Dumpster design should be modified to provide a more weather-proof container. A conceptual design for total sealing is shown on the drawing in Appendix 12.5. Design features are arranged so that modifications can be made on a progressive basis, i.e. a test program is proposed herein that could yield sufficient data for intelligently deciding whether or not the

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expensive inflatable seal is justified for long term field testing. If a Dumpster is fitted only with marine-type watertight doors and horizontal guides on the discharge ramp then still leaks excessively during initial testing, the inflatable seal feature can easily be retrofit.

The following are proposed modifications in order of priority.

6.5.1. Marine-type watertight doors. Existing sheet metal doors and formed doorway edges will be removed and sheet metal adapter plates seal-welded across the existing holes.

6.5.2. Horizontal Guides on the Discharge Ramp. Structural steel angles should be welded parallel to the direction of carton discharge in order to elevate the bottom cartons of a flooded Dumpster load above the water-line. They will also add strength and rigidity to the discharge ramp.

6.5.3. Drain Sump. This feature converts one (or possibly more) of the existing 4 in. channels welded as stiffeners to the bottom of the discharge ramp into a sump for collecting water that has leaked into the Dumpster. A valved nozzle that is protected by a sturdy cover plate should be provided that will allow a technician to inspect for leakage after a heavy rain or snow, and to draw the water off into a vacuum bottle for monitoring and disposal.

6.5.4. Vertical Guides. This feature consists of welding vertical, deep, sheet metal channels along the sides and ends of the Dumpster to minimize contact between the LLW cartons and the surfaces of the Dumpster shell that may be wet because of in-leakage or condensation. As is the case with the horizontal guides, additional strength and rigidity is obtained that should extend the useful life of the Dumpster.

6.5.5. Inflatable Ramp Seal. This feature consists of a molded rubber sealing element that is adapted to the lower perimeter of the Dumpster by means of machined seal housings and structural angles as shown on the drawing in Appendix 12.5. When inflated to 10 psi the element expands against the discharge ramp and forms an effective weather seal. When air pressure is released, the seal element retreats inside the housing where it is protected

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from impact by the moving cartons as they are discharged. Seal air can be provided by a portable air tank carried by the driver or from dehydrated plant air extended in a line to the Dumpster location. The air pressure/vent valve should be located inside the Dumpster in an area protected by the vertical guides and manually actuated through a covered access port.

6.5.6. Solid Ramp Seal. An elastomer seal retained by a steel bar bolted continuously around the internal periphery of the shell is an option to the inflatable seal. This device would cost much less but not seal as well as the inflatable type and would probably require more maintenance since it would be routinely involved in random collisions with discharging cartons.

Both designs incorporating ramp seals should also enclose a protected vent with integral HEPA filter to prevent pressure build-up in hot weather.

6.5.7. Several factors appear to dictate that a short term test program be devised and implemented that will indicate the optimum degree of watertight integrity that can reasonably be obtained by the various sealing methods:

6.5.7.1. It is not known how much or under what conditions in-leakage occurs through the discharge ramp closure. This has always been a function of weather, Dumpster conditions, and location.

6.5.7.2. There is too much cost differential between the three alternatives to recommend the most positive (and most expensive) solution as is tabulated:

<u>Modification Condition</u>	<u>Degree of Dumpster Modification</u>	<u>Unit Cost (\$)</u>	<u>Total Cost/40 Units (\$)</u> <u>and Reference</u>
I	Modification with no ramp seal	\$1,934	\$ 77,396 (9.2.1, pg 45)
II	Modification with solid elastomer seal	3,821	152,840 (9.3, pg 46)
III	Modification with inflatable seal	8,918	356,720 (9.5, pg 48)

6.5.7.3. The modified Dumpsters will represent an interim solution to the LLW leakage problem and should be cost effective over a 5 to 10 year period.

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6.5.8. Dumpster Test Program.

6.5.8.1. It is recommended that two Dumpsters be modified: One to Condition I and one to Condition II, then tested using one or more non-modified Dumpsters as control units. Comparative tests can be conducted in two modes: (1) heavy streams of water directed against the side loading doors, and (2) immersion of the Dumpster in approximately 6 in. water. Primary cost of testing would consist of modifying the two Dumpsters for a total of \$5,755.

Additional costs would be:

- Calibrated test tank measuring about 10 ft x 10 ft x one ft deep (\$300).
- Miscellaneous test apparatus: temporary water piping, hoses, stop watches, etc. (\$500).
- Two technicians for one week: $2 \times 40 \text{ hrs} \times \$55/\text{hr} = \$4,400$. Total cost of one weeks testing would be \$10,955, including Dumpster modification.

6.5.8.2. These preliminary tests should indicate whether or not it is necessary to repeat them with a Condition III (inflatable seal) Dumpster included for comparison. The second test phase would cost an estimated \$20,000. At the end of the two initial test phases, the three prototype Dumpsters should be placed in actual service during which they would be inspected regularly. Periodic re-testing for leaks would give an indication as to their respective durability. Field tests would define operational problems that could be corrected in subsequent units.

6.5.9. Disadvantages of the Dumpster Modification Program. Some immediate disadvantages of the modified interim Dumpster are evident, including

6.5.9.1. Additional weight will be added to each Dumpster, according to the condition to which it is converted:

- (a) Condition I - 900 lbs
- (b) Condition II - 1,200 lbs
- (c) Condition III - 2,100 lbs

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6.5.9.2 Since the original Dumpsters weigh approximately 3,000 lbs and the LLW payload is an estimated 90 cartons @ 15 lbs = 1,350. Total gross weight would be 5,250; 5,550; or 6,450 lbs. These weights do not appear to be excessive for the existing equipment since equivalent density of the heaviest condition is:

$$\text{Density} = (6,450 - 3,000) / (10 \text{ yds} \times 27) = 12.8 \text{ lbs/ft}^3$$

or about that of wet household garbage.

6.5.9.3. Of more consequence is the reduction of the number of cartons through the addition of the vertical guides and the continuous seal (solid or inflated) which reduces the cross sectional areas of the Dumpster. An average of 80 cartons can now be easily loaded into a round top Dumpster and 90 into a flat top. This figure could be reduced to between 70 and 80 for both types after modification to D-1 status.

6.5.9.4. In order to provide a continuous and fairly effective seal, the triangular cut-out on both sides of the Dumpster should be closed in with sheet metal. It appears that since all LLW will be packed in cartons, very little side pressure will be exerted against the sides as is the case with loose sanitary wastes. The Dumpsters should continue to discharge cartons with no more problems than those existing currently. Field prototype pre-testing will indicate the presence of any new discharge problems.

6.5.10. Recommendations for Long Range Action. In addition to periodic monitoring of new technology handling LLW, immediate work should start on developing a long range Dumpster for handling wastes from the automated system being planned for TA-55. A meeting report that defines preliminary criteria for this type of versatile container is included in the appendix.(10.) In addition to the criteria defined in the meeting report, the long range Dumpster should be capable of being fitted with a large fabric container for sealing and depositing each load of noncompactible wastes as an integral, identifiable unit.

Based on pre-conceptual design requirements only, it appears that each prototype container will cost approximately \$55,000.(11.) Five to six units

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will probably be required to insure that TA-55 is properly serviced. Prototype design and development work should start in the very near future so that a Dumpster will be available to handle LLW produced by TA-55 automated system as it is started up within the next two years.

It is also recommended that development work be started on a system and equipment for on-site, glove box reduction of LLW at high volume generation sites.

The 1 ft x 1 ft x 2 ft sealed carton appears to be suitable for handling LLW but radioactive material disposal records reviewed during the course of field operations observations indicated that average gross carton weight was approximately 15 lbs for a resultant average gross density of only 7.5 lbs/ft³.

In the event that it proved to be technically and economically feasible to increase the average bulk density to 30 lbs ft³ and pack it into sealed cartons, the requirement for temporary storage and on-site transportation would be greatly reduced and could quite possibly be handled on a "milk-run" basis. The 4:1 to 6:1 compaction ratios appear to be reasonable and do not present the problems of "super-compaction."

As an example, over a six month period, Dumpsters at TA-55 were loaded with compactible LLW on an average of every 7.3 days ranging from two days minimum to 21 days maximum. This represents an average generation rate(Rg) of:

$$(R_g) = 90 \text{ cartons/Dumpster} \times 15 \text{ lbs/carton} / 7.3 \text{ days}$$

$$R_g = 184.9 \text{ lbs/day}$$

$$\text{Maximum generation rate } R_{g(\text{max})} = 90 \times 15 / 2 = 675 \text{ lbs/day}$$

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An automated equipment line capable of reducing the volume of wastes generated at the rate of 675 lbs/day could, quite probably, be efficiently installed in custom glove boxes in a reasonable amount of space e.g.

$$\text{Hourly feed rate (PPH)} = \frac{(675 \text{ lbs/day})}{6 \text{ hrs/day operation}} \times 1.2 \text{ (factor)} = 135 \text{ lbs/hr}$$

$$\text{Volumetric feed rate (CFH)} = 135/7.5 = 18 \text{ CFH}$$

$$\text{Volume after reduction} = 18/4 = 4.5 \text{ CFH}$$

With equipment sized for 20% over expected maximum, a very small raw LLW surge capacity would be required.

Typically equipment would consist of the following:

<u>Item</u>		
<u>Number</u>	<u>Quantity</u>	<u>Description</u>
1	1	Conveyor/metal separator - magnetic/ultrasonic for both ferrous and non-magnetic metals.
2	1	Shredder - slow speed hydraulic, with automated self cleaning feature - Komar, Saturn or equivalent.
3	1	Hammermill - coarse screen with automated junk trap - Jefferys or equivalent.
4	1	Hammermill - fine screen - Mikro-Pulverizer or equivalent.
5	1	Compaction press - Pneumatic or Hydraulic e.i.: Consolidated, Dake, Modern, Mohawk, Nugier, Williams-White.
6	1	Internal (to glove box) dust collection and recycle system.

Ideally, LLW could be presorted and introduced into the compaction system in plastic bags, then be processed and finally monitored and discharged into the second generation (D-2) Dumpsters without having the cartons exposed to room atmosphere. Through the use of flanged and sealed interfaces at incinerator receiver stations, the cartons would also be protected from outdoor atmosphere during transit. By using a re-defined sorting criteria, it is very likely

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that a much higher percentage of LLW could be classified as "Compactible" than the approximately 50% presently being handled. This could represent a reduced load on the limited TA-54, Area G disposal site and its manual compaction system. Pre-compaction at the generation site could obviously reduce the size and cost of the long term Dumpsters as well as overall field handling costs. The estimated cost for an automated LLW reduction line is \$710,000 installed.(12)

It has become evident during this study that each generation site has its own slightly different LLW disposal requirements. Based on current data, it appears that if the new SNM facility is operational by the year 2,000 A.D. so that generation of LLW at each location remains approximately the same (some LLW generating facilities having relocated to SNM), the scenario for LLW collection as tabulated in Table II is not unrealistic.

Assuming that by year 2,000 A.D. the existing CAI will be operational and that all compactible wastes are incinerated, the number of deliveries per year per type of handling equipment is estimated as follows:

Type LLW	Equipment Type			Totals
	D-1	D-2	Van	
Combustible	0	25	26	51
Noncombustible	<u>159</u>	<u>0</u>	<u>19</u>	<u>178</u>
	159	25	45	229

7. ALTERNATE TECHNOLOGIES

During the course of the study, several industry-proven material handling systems were considered for compatibility with long range LANL requirements. Among systems considered were the following:

7.1. Overland Belt Conveyor.

This system would have loading stations at the five high volume generation sites (with branch conveyors at the three primary sites within TA-3) and a single discharge station at the TA-54, Area G disposal site. The entire belt, idlers, and belt return system would be totally enclosed and ventilated with a continuous walkway and maintenance access ports along its full length.

TABLE II

PROJECTED LLW COLLECTION - 2,000 A.D.

Generation Site	Lbs/yr LLW		Cartons/yr LLW		Deliveries Per Year		Equipment Type		Loading System		Disposal Facility		Discharge System	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
TA-2	2,700	2,700	180	180	3	3	Van	Van	Manual	FC	CAI	TA-54	Open	Open
TA-3:														
SM 16	0	2,700	0	180	0	3	---	Van	---	FC	---	TA-54	---	Open
SM 29 (1.)	54,000	29,700	600	1,980	8	25	D-2	D-1	Auto.	FC	CAI	TA-54	Closed	Open
SM 66 (1.)	10,800	21,600	120	1,440	2	18	D-2	D-1	Auto.	FC	CAI	TA-54	Closed	Open
SM 102	2,700	16,200	180	1,080	2	14	Van	D-1	Manual	FC	CAI	TA-54	Open	Open
TA-15	0	2,700	0	180	0	3	---	Van	---	FC	---	TA-54	---	Open
TA-16	0	10,800	0	720	0	9	---	D-1	---	FC	---	TA-54	---	Open
TA-18	2,700	5,400	180	360	2	7	Van	Van	Manual	FC	CAI	TA-54	Open	Open
TA-21 (1.)	8,100	18,900	90	1,260	1	16	D-2	D-1	Manual	FC	CAI	TA-54	Open	Open
TA-33	0	2,700	0	180	0	3	---	Van	---	FC	---	TA-54	---	Open
TA-35	2,700	0	180	---	2	---	Van	---	Manual	---	CAI	---	Open	---
TA-43	8,100	0	540	---	10	---	Van	---	Manual	---	CAI	---	Open	---
TA-48 (1.)	16,200	13,500	180	900	2	11	D-2	D-1	Auto.	FC	CAI	TA-54	Closed	Open
TA-50	5,400	10,800	360	720	7	9	Van	D-1	Manual	FC	CAI	TA-54	Open	Open
TA-53	0	35,100	0	2,340	0	30	---	D-1	---	FC	---	TA-54	---	Open
TA-55 (1)	89,100	32,400	990	2,160	12	27	D-2	D-1	Auto.	FC	CAI	TA-54	Closed	Open
Totals (2.)	202,500	205,200	3,600	13,680	51	178	---	---	---	---	---	---	---	---

Estimate is based on: Eighty 15 lb cartons per D-1 Dumpster,
 Eighty (minimum) 90 lb cartons per D-2 Dumpster,
 fifty-four cartons per van.

- (1.) Indicates 6:1 on-site compaction system
 (2.) Totals do not include LLW produced by the SNM facility

Code: D-1 = Existing ten cubic yard Dumpster
 D-2 = Dumpster for Automated System
 CAI = Controlled Air Incinerator

C = Compactible LLW
 NC = Non-Compactible LLW
 FC = Fabric Container

Compactible wastes would be pre-compacted and delivered by D-2 type Dumpsters or Vans to the CAI at a rate of 50 to 75 runs/year as recommended previously.

The advantages of the overland belt conveyor are as follows:

- The existing ten cubic yard Dumpsters (designated D-1 for purposes of this report) will be completely eliminated and highway transportation of LLW will be reduced to a minimum.
- Cartons in flexible containers could be sealed and identified then routed immediately to TA-54 where they could be distributed in the pit by a single technician in a small vehicle that would never leave the area.
- The belt conveyor concept probably represents the gentlest and most reliable method of handling boxed LLW.
- There would probably be a decrease in operating personnel required.

Disadvantages are as follows:

- First and foremost, the safety and security problems that immediately arise when considering the belt conveyor concept are extreme to the point of being prohibitive.
- The expense of engineering and constructing an overland conveyor system of this magnitude could be prohibitive.
- Maintenance would be a nightmare.

7.2. Overland Pneumatic Tube Conveyor.

In operation, compactible LLW would be loaded and sealed at the generation sites into large disposable rigid plastic rabbits then pneumatically conveyed overland to TA-54. Advantages are essentially the same as those of the overland belt conveyor with the added benefits of reduced maintenance, faster delivery, and elimination of belt return problems.

Disadvantages are also the same except that pressurized air would be ruled out as motive power due to safety considerations and the system would probably not function using vacuum only. In the event the system could be made to work with vacuum, the volume of potentially contaminated air to be filtered would represent an additional prohibitive cost factor.

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7.3. Large Carton Containers.

The only alternate to the intermediate and long term recommendations made in other sections of the report that was seriously considered is the following: eliminate inactive Dumpsters as previously recommended, then replace the existing units at high volume generation sites with two each large (40 to 45 cubic yard) containers as manufactured by Accurate Industries, Custom Metal Industries and others. One of two types of large containers could be utilized:

- A modified semi-solid sludge container that would unload by dumping in a manner similar to that presently used.
- A similar container using a hydraulic ejection system for positive discharge. This more expensive unit would be recommended if tests indicated that a positive discharge is required for delivering a large number of LLW cartons enclosed in fabric containers.

Advantages of these two systems are as follows:

The number of deliveries per year could be drastically reduced. Theoretically, the larger 40 cubic yard containers could be loaded with (500) 1 ft x 1 ft x 2 ft cartons. The theoretical number of annual deliveries is tabulated in Table III.

Theoretically, only two large containers per site would be required: one each for compactible (combustible) LLW and one for noncompactible for a total of 12. This, however, does not take into consideration the distance between buildings where LLW is generated within the technical area. Based on the present inventory (in some cases the number of Dumpsters at a location is excessive) and projecting the use of large containers, the quantity can be tabulated as follows:

Generation Site	Number of Large Containers Required for Efficient Handling
TA-3:	
SM 29	2
SM 66	4
TA-21	4
TA-48	4
TA-53	3
TA-55	<u>2</u>
Total	19

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TABLE III
LARGE CONTAINER SERVICE REQUIREMENTS
Theoretical LLW Deliveries Per Year
From High Volume Generation Sites
Using 40 Cubic Yard Containers

Generation Site	Lbs/yr LLW		Cartons/yr LLW (@ 15#/carton Density)		Average Number Of Deliveries Per Year	
	C(1.)	NC(2.)	C	NC	C	NC
<hr/>						
TA-3:						
SM 29	54,000	29,700	3,600	1,980	7.0	4.0
SM 66	10,800	21,600	720	1,440	1.5	3.0
TA-21	8,100	18,900	540	1,260	1.0	2.5
TA-48	16,200	13,500	1,080	900	2.0	2.0
TA-53	0	35,100	0	2,340	0.0	5.0
TA-55	89,100	32,400	5,940	2,160	12.0	4.0
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTALS	178,200	151,200	11,880	10,080	23.5	20.5

(1.) C=Compactible/Combustible LLW

(2.) NC=Non-compactible LLW

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Estimated costs of the large container concept are tabulated below:

Large Container Costs:

Since it is doubtful that the large containers as purchased would comply to the degree of water tightness required by storage of LLW and since they would, by definition, be storing over 500% more cartons than the existing ten cubic yard units, it appears to be a reasonable assumption that a factor for special leak-proof containers be added to the estimate of their cost. The figure of \$3,455/unit for medium range modifications as derived during cost analysis of weatherproofing the existing Dumpsters appears at this point to be a reasonable figure. Estimated equipment costs are shown in Table IV.

An additional cost factor that must be considered is disposal of the existing Dumpsters. It appears to be a reasonable assumption that approximately 12 Dumpsters in best condition would be maintained at TA-54 along with their handling truck for contingency service. This would leave the other 60 Dumpsters (approximately 90 tons as compared to five tons left over from modifying existing ten yard Dumpsters) that would require immediate disposal. If the rule-of-thumb that estimates the cost of proper disposal to be roughly equal to the current cost of new equipment holds true, then another \$300,000 should be added to the large container option.

Apparent disadvantages in addition to the high cost include the following:

- An additional 240 ft² of plant area would be required for each of the large containers plus another 500 ft² for truck maneuvering space.
- Manual loading would have to be from the top and would be much more labor intensive.
- Due to the factors noted above, LLW would probably have to be transported farther before it could be loaded into the large containers.
- Due to the development of the automated LLW handling and monitoring system for TA-55, the large container concept would probably represent an interim solution only. They are much too large to adapt to the space allocated for the automated system interface.

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TABLE IV

Large Container Cost Estimate

Equipment Type	Unit Cost F.O.B Shop (\$)	Additional Cost for Weatherproofing (\$)	Total Unit Cost (\$)	Unit Cost x 21 (\$)
1. Rectangular Storage Container 40 Cubic Yds	8,100	3,455	12,400	242,655
2. Full Ejection Container 45 Cubic Yds	11,200	3,455	14,655	307,755
3. Truck & Roll-off Hoist One Required	80,300	-----	-----	80,300

By selecting the most expensive option and including the new truck required, total equipment cost is

\$307,755
80,300

\$388,055

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Although the drastic reduction of highway transportation and daily work load at TA-54 is a very attractive incentive, the large container concept was listed under "Alternate Technology" instead of "Recommendations" for the reasons stated above.

8. VENDOR LIAISON

A Request for Information (RFI) was transmitted to manufacturers of waste handling equipment asking for assistance with the Dumpster leakage problem (sample letter and manufacturer's list are included in the Appendix). Of the 21 firms contacted, Dempster responded with a telephone call and budgetary pricing for new ten cubic yard Dumpsters, and the following sent letters:

- Accurate Industries - Williamstown, NJ
- Custom Metal Industries - Oklahoma City, OK
- SP Industries - Hopkins, MI

These four should be included on the bid list in the event that it is decided to purchase new Dumpsters with or without weatherproof modification.

Budgetary pricing for lightweight Marine type doors was obtained as the result of RFIs sent to six door manufacturing firms. Juniper Industries of Middle Village, NY, and Standard Equipment Company of Mobile, AL, submitted price and delivery quotations and Door Equipment Company of Kasota, MN, sent a letter declining to quote as LANL requirements did not match their product line.

SMR Technologies of Uniontown, OH, submitted technical information and budgetary pricing for the inflatable seal. Cryenco of Denver submitted budgetary pricing for the waste reduction line glove boxes.

Torres Manufacturing Company of Espanola, NM, was consulted on current costs of sheet metal and structural steel fabrication as required for Dumpster modification and JONA Machining Company of Los Alamos assisted with estimating costs of machine work required for mounting the solid and/or inflatable ramp seals. Torres also assisted with construction costs for the Dumpster platform installation.

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Catalog information as well as 1987 pricing information for the BONAR Industries fabric container was obtained from Bill Radzinski of ENG-6.

9. COST ESTIMATES

9.1 Dumpster Support Stand

Item No.	Quantity	Description	Weight (lbs)	Material Cost (\$)
----------	----------	-------------	--------------	--------------------

Structural Steel Components

1	2	Angle: 4" x 4" x 1/4" x 7'-5"	98	48
2	4	Angle: 4" x 4" x 1/4" x 6'-6"	172	81
3	4	Angle: 4" x 4" x 1/4" x 1'-6"	40	20
4	4	Pipe: 2 1/2" x sch 80 x 1'-5"	46	48
5	4	Plate: 3/4" THK x 6" x 6"	30	15
6	4	Plate: 1/2" THK x 3 1/2" x 3 1/2"	7	4
7	4	Plate: 3/16" THK x 12 3/4" x 6'-6"	<u>232</u>	<u>116</u>
Total			625#	\$ 332
Labor Cost @ \$0.25/lb				<u>156</u>
Total Steel Costs				\$ 488

Timber Components

8	19	Beams - 4" x 6" x 6'-6"		
9	2	Beams - 4" x 6" x 7'-5"		
Total Length = 139 Board Feet				
Material Cost @ \$0.51/Board Foot =				\$ 71
Labor Cost @ \$0.45/Board Foot				<u>63</u>
				\$ 134

Field Bolts:

			Cost (\$)
10	38	Carriage Bolts - 1/2" dia. x 7" long	
		Galvanized Steel	\$ 19
11	16	Carriage Bolts - 1/2" dia. x 4 1/2" long	
		Galvanized Steel	6
12	54	Square Nuts - 1/2" Galvanized Steel	8
13	16	Anchor Bolts - 3/4" dia. x 12" long	
		W/Hex Nut	<u>16</u>
Total			\$ 49

		Material Cost	Labor	Total
14	Foundation 4 piers	\$80	\$120	\$ 200
15	Site Preparation (Labor) =			\$ 100
16	Painting (Material and Labor) =			\$ 50

Total Cost = \$1,021

With contingency & contractor profit,
 Total installed cost = \$1,021 x 1.2 = \$1,225 ea.
 For 40 units, total extended costs = \$49,008

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9.2 Minimum Dumpster Modifications.

Minimum recommended modifications include the following:

- Replacement/Repair of worn or damaged components.
- Replacement of existing sheet metal doors with lightweight marine hatches.
- Addition of horizontal carton guides to the discharge ramp.
- Addition of a drain sump with perforated metal particle screen and protected drain valve.
- Addition of cover plates to ramp stiffener channels.
- Seal-weld all external stiffeners.
- Surface re-finish and re-painting: exterior and interior.

9.2.1. Estimated Costs for Minimum Modification of the Ten Yard Dumpsters.

Item	Quantity	Description	Weight (lbs)	Material Cost (\$)	Service
1	12	Angle: 2" x 2" x 1/8"-72"	119	52	Horizontal Guide (long)
2	2	Angle: 2" x 2" x 1/8"-48"	12	5	Horizontal Guide (short)
3	10	Flatbar: 1 1/4" x 3/16" x 3 3/4"	8	4	Channel End Plate
4	2	Sheet: 10 gage - 38 x 38"	56	12 ^(1.)	Side Bulk Head
5	1	Door: Lightweight Marine Type - 30" x 30"	TBD	732 ^(2.)	Leak Tight Closure
6	1	Perforated Plate	10	80	Drain Sump Cover
7	1 Set	Sump Drain Valve Covered Access Port W/lock	TBD	100	Vacuum Drain of Sump
8	A.R.	Replacement of Damaged Components (from salvaged Dumpsters)	A.R.	50 ^(3.)	
9	A.R.	Surface Refinishing and Painting	N.A.	50	
10	3	New Security Locks	N.A.	45	
Total			205	\$1130	
Labor cost @ \$0.35/lb (steel)				72	
Labor Cost: Installation of Doors, Sump valve, Replacement Parts				110	
Labor Cost: Hems 8 & 9				300	
Total				\$1612	

Total Including Contingency and contractor profit = $\$1612 \times 1.20 = \1934

Total Estimated Cost for Minimum Modification of 40 Dumpster = \$77,376^(4.)

- (1.) Cost based on using sheet removed from salvaged Dumpster @ approximately \$0.20/lb cutting cost.
- (2.) Standard Equipment Company quote.
- (3.) Cutting and Component repair costs from salvaged Dumpsters.
- (4.) Does not include engineering and administrative costs (typical for all modifications).

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9.3. Modification of Dumpster for Ramp Seal (As Required by Both Solid and Inflatable Seal Designs.)

Recommended modifications include the following:

Item	Quantity	Description	Weight (lbs)	Material Cost (\$)	Service
1	1	Sheet - 10GA - 84" x 84"	276	60 ^(1.)	End Bulk Head
2	2	Sheet - 10GA - 27" x 68"	144	32 ^(1.)	Side Bulk Head (Lower)
3	16	Sheet - 18GA - 11" x 79"	193	85	Vertical Guide ^(2.)
4	10	Sheet - 18GA - 11" x 33"	50	22	Vertical Guide ^(2.)
5	4	Sheet - 18GA - 13" x 79"	57	25	Vertical Guide ^(2.)
6	2	Angle - 2" x 2" x 1/8-63"	17	7	Side Plate Reinforcement
7	1	HEPA Filter Vent Assy	TBD	250	Hot Weather Vent (Installed)
Total			737	\$481	
Labor Cost @ \$0.35/lb (Average)				<u>258</u>	
Total				\$739	

Cost estimate - solid neoprene ramp seal (installed)

1	1	Seal - 1" x 5" x 22" With Bolt Holes	TBD	300	Closure Seal
2	1	Flat Bar - 4" x 3/8" x 22'-9"	116	51	Seal Mounting Plate
3	4	Flat Bar - 4" x 3/16" x 22'-9"	58	26	Seal Retainer
4	90	Machine Bolt - 3/8" x 1 1/2" Type 316 Stainless Steel W/Flat Washer	<u>TBD</u>	<u>15</u>	Seal Bolts
Total			174	\$392	
Labor Cost @ \$0.35/lb				61	
Labor: Drill & Tap 90 Holes				<u>380</u>	
Total				\$833	

. Total unit cost with contingency & contractor profit

$$= 1.2(\$1572 + \$1612) = \$3821$$

Total cost for modifying 40 Dumpsters = **\$152,840**

(1.) Cost based on using sheet removed from salvaged Dumpster @ approximately \$0.20/lb cutting cost.

(2.) Formed deep channel.

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9.4. Cost Estimate - Inflatable Neoprene Ramp Seal Installed in a Modified Dumpster Used as a Prototype for Test Purposes

Item	Quantity	Description	Weight (lbs)	Cost (\$)	Service
1	2	Flatbar - 4" x 2" x 33" (Installed)		36	Lock Pin Reinforcing Plate
2	2	RD Bar - 3 1/2" dia. Threaded Full Length (Female)	TBD	50	Weld Nut for
3	2	RD Bar - 2" dia. - Machined		80	Lock Pin
4	1 Set	Air Valve & Piping for Inflatable Seal (Installed)		200	Lock Pin Vent and Pressure Inflatable Seal
5	1	Neoprene Inflatable Seal (Installed)		1638	Ramp Closure
6	2	Seal Support Angle - End (Installed)		200	Adapt Seal Retainer to Dumpster Shell
7	2	Seal Support Angle - Side (Installed)		200	Same
8	4	Seal Support Angle - Corner (Installed)		820	Same
9	2	Seal Retainer - Grnd (Installed)		1625	Housing for Seal (Machined)
10	2	Seal Retainer - Side (Installed)		1424	Same
11	4	Seal Retainer - Corner (Installed)		2000	Same
12	1	Access Port for Air Valve (Installed with Lock)		105	Protect Air Valve From Damage & Unauthorized Use
13	A.R.	Stainless Steel Bolting		<u>20</u>	
Total				\$8398	

Total prototype cost = (1.2)(\$1612 + \$739 + \$8398) = \$12,899

9.5. Cost Estimate - Inflatable Neoprene Ramp Seal Installed in Dumpsters
Modified in Lots of 40.

Item	Quantity	Description	Weight (lbs)	Cost (\$)	Service
1	2	Flatbar - 4" x 2" x 33" (Installed)		36	Lock Pin Reinforcing Plate
2	2	RD Bar - 3 1/2" dia. Threaded Full Length (Female)	TBD	50	Weld Nut for Lock Pin
3	2	RD Bar - 2" dia. - Machined		80	Lock Pin
4	1 Set	Air Valve & Piping for Inflatable Seal (Installed)		200	Vent and Pressure Inflatable Seal
5	1	Neoprene Inflatable Seal (Installed)		670	Ramp Closure
6	2	Seal Support Angle - End (Installed)		200	Adapt Seal Retainer to Dumpster Shell
7	2	Seal Support Angle - Side (Installed)		200	Same
8	4	Seal Support Angle - Corner (Installed)		820	Same
9	2	Seal Retainer - Grnd (Installed)		650(1.)	Housing for Seal (Machined)
10	2	Seal Retainer - Side (Installed)		650(1.)	Same
11	4	Seal Retainer - Corner (Installed)		1400(1.)	Same
12	1	Access Port for Air Valve (Installed with Lock)		105	Protect Air Valve From Damage & Unauthorized Use
13	A.R.	Stainless Steel Bolting		<u>20</u>	
Total				\$5081	

Total unit cost = (1.2)(\$1612 + \$739 + \$5081) = \$8918

Cost of modifying 40 Dumpster = \$8918 x 40 = \$356,720

(1.)Parts are machined from castings. Unit cost includes estimated pattern charge amortized over quantity of 40 Dumpsters.

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9.7. Cost Estimate LLW On-site Reduction System.

Item	Quantity	Description	Estimated Unit Cost (\$1000)	Total
1	1	Conveyor/Metal Separator (e.g. Livonia, ChemaPerm) with Pre-shredder/Bag Breaker	15	15
2	1	Shredder - Low Speed Hydraulic (e.g. Komar, Saturn)	50	50
3	1	Hammermill (e.g. Jeffrey's Gruendler)	15	15
4	1	Hammermill - Fine Screen (Mikro Pul or Equivalent)	20	20
5	1	Compaction Press (e.g. Dake, Modern, Mohawk, Nugler) With Side Ejection Ram	75	75
6	2	Screw Feeder	2.5	5
7	1	Pre-compaction Auger(Primary)	10	
8	1	Screw Feeder (Recycled Dust)	1	1
9	1	Dust Collector (Glove Box)	5	5
10	3	Surge Hoppers	2	6
11	2	Air Locks (Large)	20	<u>40</u>
Total Mechanical Process Equipment				232(1.)

Total Mechanical Equipment Modified for Glovebox Installation
 $= 232 \times 1.25 = \$290,000$

Estimated Cost of Three Double Width, High Profile, 96" Long Glove Boxes
 $= 3 \times \$60,000 = \$180,000$ (Cryenco - Denver)

Estimated Construction Costs:

Electrical Controls = \$ 30,000 (10% equipment costs)
 Glovebox Piping = \$ 15,000 (5% equipment costs)
 Demolition & Decontamination (Existing site:
 area = 15' wide x 40' long) = \$ 30,000 (\$50/ft² basement area)
 Mechanical and Structural Installation = \$100,000 (20% glovebox plus
 equipment costs)
 Three Glove box Ventilation Systems, Total = \$ 30,000 (Prior estimates)
 Commissioning, Checkout, and Start-up = \$ 35,000 (5% total costs)
 Total Unit Costs (Less Engineering/Design: \$240,000

$\$290,000 + \$180,000 + \$240,000 = \$710,000$

Estimated Cost of Five Units = $\$710,000 \times 5 = \underline{\$3,550,000}$

(1.) Equipment cost estimates were derived from 1988 budgetary manufacturer estimates obtained during a similar study for Portsmouth Gaseous Diffusion Facility.

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10. PROJECT SCHEDULE

10.1.

In order to effectively implement the Dumpster reduction program as recommended in Section 6.1.1., proper equipment for TA-54 personnel and users will have to be provided.

Primarily, the van discussed in this section will have to be designed and fabricated. It is estimated that Engineering/Design can be completed within 12 to 16 weeks after receipt of authorization. The chassis for the van could probably be ordered within six weeks after receipt of authorization in order to expedite construction. Fabrication of the van and its component handling and ejection mechanisms could probably be completed within 18 to 20 weeks after approval of construction drawings so that overall project time could be an estimated 48 to 52 weeks allowing for project reviews and approvals, vendor selections, and contract preparation.

Auxiliary equipment such as in-house handling devices for LLW cartons packed in fabric containers, the design and purchase of the fabric containers themselves, and metal holding containers for temporary ("Milk-run") storage can be provided within the 12 month schedule for designing and fabricating the van.

10.2. Dumpster Modification.

An estimated schedule for modifying existing Dumpsters is tabulated below:

	<u>Weeks After Receipt of Authorization</u>
<u>10.2.1.</u> Engineering/Design of Prototype Modifications (Minimum, solid Rubber Ramp Seal, Inflatable Ramp Seal)	8th
<u>10.2.2.</u> Approval period	11th
<u>10.2.3.</u> Contract to Fabricator	15th
<u>10.2.4.</u> Selection of Prototype Dumpsters/Approval by HSE-1/Delivery to Fabricator	17th
<u>10.2.5.</u> Fabrication of Type I and Type II Prototypes/Delivery of Units/ Fabricate Test Apparatus	25th
<u>10.2.6.</u> Test Type I and Type II Prototypes	29th
<u>10.2.7.</u> Type I and Type II not Satisfactory, Fabricate Type III Prototype (Inflatable Seal) Deliver to Test Site	37th
<u>10.2.8.</u> Second Test Phase	41st
<u>10.2.9.</u> Review Test Reports/Decision for Making Optimum Modifications	45th
<u>10.2.10.</u> Modify approximately 39 Dumpsters at the Rate of One/Week	84th week.

Project completion time with contingency is approximately 17 to 20 months depending upon test results and selection of optimum Dumpster modifications.

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10.3. Platform Construction.

A standard Dumpster platform as recommended in section 6.2.2. can be designed within six weeks after receipt of authorization. This phase should include exact site selection and review with all interested parties.

Forty platforms could be fabricated within 20 weeks after contract execution date. Delivery could be made at the rate of two per week so that crews could install eight units in the last week of the working month without building up an excess number of platforms in temporary storage.

Allowing for project reviews and approvals, vendor selections, contract preparation, site preparation and field painting; the project should be completed within 30 weeks after start of engineering.

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544
505/872-9444

11. NOTES AND REFERENCES

11.1. Section 1. - INTRODUCTION - No notes.

11.2. Section 2. - PROJECT SCOPE - No notes.

11.3. Section 3. - GENERAL - No notes.

11.4. Section 4. - DEFINITIONS

(1.) 4.1. Reference: On Site Transportation Manual, page 5.3.1.

(2.) 4.2. Reference: On Site Transportation Manual, page 5.3.1.

11.5. Section 5. - FIELD INVESTIGATIONS AND RESULTS

(1.) 5.1. The inventory was provided by Mr. Bill Radzinski, ME-6.

(2.) 5.5. A copy of the delivery log was obtained from Mr. Andrew Catanach, HSE-7.

11.6. Section 6. - RECOMMENDATIONS

(1.) 6.1. Reference: Telephone conversation with Mr. John Gallimore.

(2.) 6.1.2. Reference: Measurement of existing camper vans.

(3.) 6.1.2. Reference: Mr. Radzinski.

(4.) 6.1.2. Reference: BONAR Industries catalog.

(5.) 6.1.2.8. Reference: LANL purchase order to BONAR.

(6.) 6.1.3. Six cartons x 15 lbs gross weight each + approximately four to six lbs per fabric container.

(7.) 6.1.6.3. Reference: telephone conversation with Mr. Gene Barinowski, Sales Manager for Dempster Systems, Inc.

(8.) 6.1.6.3. Reference: Section 9.4. of the cost estimate.

(9.) 6.2.2. Reference: Section 9.1. of the cost estimate.

(10.) 6.5.10. Reference: Appendix, Section 12.3.

(11.) 6.5.10. Approximately six times the cost of the \$8914 estimated for the Condition III Dumpster. The prototype container will probably be fitted with a power opening clam shell loading/discharge door, a structural steel framework adapted to the existing type of handling truck and a power tilt mechanism (probably hydraulic).

(12.) 6.5.10. Reference: Section 9.7. of the cost estimate.

Notes and references for cost estimates (Section 9.) are included in that section and in Section 8., VENDOR LIAISON.

12. APPENDIX

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544

12.1 INSPECTION DATA SHEETS
AND
RATING CODES

TKT Inc.

100 Yosemite Drive, White Rock, New Mexico 87514

Six Month Operational Survey - LLW
 October 18, 1988 to April 19, 1989
 Time Period Between Receipt of Call for Pick-up Service
 and
 Date of Actual Pick-up

(1.) Location	(2.) Number of Calls	(3.) Shortest Time Period (Days)	(4.) Longest Time Period (Days)	(5.) Total Time Period (Days)	(6.) Average Time Period Column #5 / Column #2 (Days)
TA-2	4	1	4	8	2.00
TA-3 SM 16	1	1	1	1	1.00
TA-3 SM 29	31	0*	23	96	3.10
TA-3 SM 66	12	0	7	33	2.75
TA-3 SM 102	7	0	7	18	2.57
TA-15	1	2	2	2	2.00
TA-16	4	1	3	6	1.50
TA-18	3	1	9	11	3.67
TA-21	10	1	6	31	3.10
TA-33	1	6	6	6	6.00
TA-35	1	11	11	11	11.00
TA-43	3	0	5	9	3.00
TA-48	11	0	7	38	3.46
TA-50	7	0	13	24	3.43
TA-53	13	0	4	19	1.46
TA-55	<u>45</u>	0	18	<u>179</u>	3.98
Totals	154 Calls			492 Days	

Six month average, all sites = 492/154 = 3.20 Days

*"0" time delay indicates the pickup was dated same day as call-in

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544

Rating System for Ten Yard LLW Dumpsters.

To facilitate inspection and attempt to define criteria for evaluation and eventual disposition of the LLW Dumpsters a Dumpster rating system was devised and included in the Appendix.

The purpose of this code is to define the parameters for deciding the disposition of existing ten cubic yard Dumpsters that are presently dedicated to on-site handling and storage of low level radioactive wastes.

The criteria established during the LLW Dumpster study primarily were:

- Condition of the individual Dumpsters as determined by actual on-site inspection.
- Recent utilization of the individual Dumpsters. The rating for location activity is based on a six month survey from October 1988 to April 1989 conducted jointly by TA-54, Area G and the Pan-American world services driver responsible for handling over 90% of the LLW pick-ups and deliveries. Where possible, interviews with users were utilized to verify the survey data and extrapolated it over a longer time period.

Both condition and location activity code are noted on the "Inspector Comments" sections of the Inspection Data sheets with additional information where applicable. The Recommendation Code is noted on the "Inspector Recommendations" section of the Data Sheet.

Dumpster Condition Coded Descriptions (Condition Ratings - First Digit of Code)

Condition Rating: (A) - Condition of the Dumpster is adequate for continued LLW usage without addition of watertight doors and positive discharge ramp seal. The interior was inspected through both loading hatches and no daylight was visible through cracks in the closures. Only minor refurbishing and re-painting is required for continued service. (No Dumpsters meeting this criteria were discovered.)

Condition Rating: (B) - Round top and flat top Dumpsters having no top doors: Basic structure is sound and condition of mechanical components (discharge ramp hinges, chain adapters, pick-up bars, side lugs) is adequate to warrant re-use without major repair. Damage to one or both 36 in. x 36 in. loading doors may be evident but the discharge ramp is in relatively good, undamaged condition. Air and weather gaps in the closures are readily visible. A Dumpster in "B" condition is a candidate for modification by adding watertight doors and a positive ramp seal.

Condition Rating: (C) - Dumpsters rated "C" are in borderline condition. Ramps and side plates are badly damaged and can be re-used only after significant rework. C-rated Dumpsters should be temporarily sorted as reserve units before final disposition, including:

- Modification for continued LLW service through the addition of watertight doors and positive ramp seals only if requirements for immediate delivery of Dumpsters outweigh economic considerations.
- De-rating from LLW service to general sanitary service (condition "C" to condition "D").
- Providing a source for parts and material to be used in modifying "B" condition Dumpsters.
- De-rating from condition "C" to condition "X" and scrapping.

Flat top Dumpsters with top doors that are in "B" condition should be temporarily stored as "C" class units only if delivery requirements override the expense involved in seal-welding the top doors closed.

Condition Rating: (D) - Dumpsters should be de-rated from LLW service and restricted to general cold sanitary service on the LANL site after necessary decontamination.

Condition Rating: (N) - Dumpster was not inspected and is recommended for temporary storage on the sole basis of prolonged lack of activity at the LLW generation site. The Dumpster will be inspected and evaluated at the storage site at a later date.

Condition Rating: (X) - Dumpsters in extremely poor condition fit only for immediate scrapping.

Dumpster Location Activity Code
Descriptions
(Location Activity Ratings - Second Digit of Code)

Location Activity Rating: (H) - High pick-up and deliver: Ten or more requests for service from a single generation point (both compactible and non-compactible wastes) within the six months survey period.

Location Activity Rating: (M) - Medium service requirements: Four to ten requests for service.

Location Activity Rating: (F) - Few requests for service: Three or less during the six months survey period.

Dumpster Recommendation Code
Descriptions
(Recommendation Ratings - First Digit of Code)

Recommendation Rating: (S) - Satisfactory for continued usage in LLW service. Refurbish and repaint on a scheduled maintenance basis.

Recommendation Rating: (M) - Modify by installing a positive ramp seal and mounting hardware plus two new watertight loading doors.

Recommendation Rating: (Z) - Zero work to be done on the Dumpster due to poor condition.

Recommendation Rating: (T) - Temporary storage for further inspection and disposition.

Recommendation Rating: (G) - General Service: Condition "D" Dumpsters should have paint and radioactive material stencils removed and be immediately shipped to decontamination and a new sanitary service location (after economic justification and proper approvals).

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87514

Dumpster Recommendation Code

Descriptions

(Recommendation Ratings - Second Digit of Code)

Recommendation Rating: (R) - Relocate to a new LLW generation site. Location activity does not warrant the presence of a dedicated ten cubic yard Dumpster. Pickups will be handled by TA-54 on a "Milk Run" basis.

Recommendation Rating: (L) - Leave a Dumpster at the existing location; either one in condition "A" or a class "B" unit that has been modified.

Recommendation Rating: (XX) - Scrap immediately: Decontamination as required by monitoring should represent only other action.

Examples: For Dumpsters in fairly good condition that warrant modification and are located at a busy generation site, the evaluation code to be noted under "Inspector's Comments" would be "BH." Under "Inspector Recommendations," the action code would be "ML."

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 672-9444

SUMMARY OF RESULTS: LLW DUMPSTER STUDY

Location	Inventory	Quantity			Location Not Verified	Number of D-1 Dumpsters Recommended for location(1.)
		Inspection (By type)				
		FD	FND	RT		
TA-2	2	2	0	0	0	0
TA-3/SM29	5	2	0	1	0	2
TA-3/SM30	1	0	1	0	0	0
TA-3/SM34	1	1	0	0	0	0
TA-3/SM35	0	0	1	1	0	0
TA-3/SM66	9	4	1	0	0	4
TA-3/SM102	0	1	0	1	0	2
TA-3/SM141	1	1	0	0	0	0
TA-3/SM142	0	1	0	0	0	0
TA-9	2	2	0	0	0	0
TA-15(2.)	5	1	0	0	4	0
TA-16(2.)	4	0	0	0	4	0
TA-18	3	3	0	0	0	0
TA-21(2.)	7	3	0	2	2	4
TA-33	1	(-----SNV-----)			0	0
TA-35(2.)	4	2	0	0	1	0
TA-41	1	1	0	0	0	0
TA-43	2	1	1	0	0	0
TA-46	2	1	0	1	0	0
TA-48	5	3	1	0	0	4
TA-50	4	0	0	3	0	0
TA-53	6	1	0	1	0	2
TA-54	4	8	2	4	0	4(Reserve)
TA-55	3	1	0	1	0	2
TOTALS	72	39	7	15	11	24

Code:

FD = Flat Top With Top Doors
FND = Flat Top - No Doors
RT = Round Top
SNV = Site Not Visited

Notes:

(1.) Where "0" is recommended, location should be serviced by van on a "milk run" basis.

(2.) Location was not completely accessible for survey because of site security reasons.

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 2 **BUILDING OR AREA** OMEGA 57
DUMPSTER INFORMATION: MANUFACTURER Dempster
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 2401 - 29
 Other Identification "RADIOACTIVE WASTE ONLY - COMPATIBLE"
 Site Condition High asphalt hard stand near (4'0) from cooling tower IN HOT AREA
DUMPSTER CONDITION: GENERAL Fairly good
PAINT old, faded, yellow grey
EXTERNAL SURFACES 75% ACCESSIBLE - fairly good
INTERNAL SURFACES N.A.
DOOR CONDITIONS: Driver Side N.A.
 Passenger Side Gap visible from 15'
DISCHARGE RAMP CONDITION: Driver Side —
 Passenger Side GAP visible from 15'
 Front NA Back NA
OTHER COMPONENTS: Top Doors looked to be flattened & sealed
 Side Lugs OK from 15'
 Chain Adaptors OK from 15'
 Pick-up Bar looked to be badly bent
 Hinges NOT visible
CONTACT: — Phone —
Organization —
Contact Comments —
Inspector Comments INSPECTION MADE FROM 15' AWAY thru fence
LUGS ICL
Recommendations HOLD for further disposition TR
DO NOT REPAIR
INSPECTOR Jim Faye **DATE** 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 2 BUILDING OR AREA across road from Resistor
DUMPSTER INFORMATION: MANUFACTURER dempster
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
Flat Top (With Doors) X Part Number 468 - 63
Other Identification "Radioactive Waste ONLY - NM-Compatible"
Site Condition Bottom of embankment - heavy run-off will flood ramp
DUMPSTER CONDITION: GENERAL Fairly good
PAINT old, gray faded
EXTERNAL SURFACES Fairly good
INTERNAL SURFACES Not accessible
DOOR CONDITIONS: Driver Side Fairly tight fit - 1/4" gap vs spec
Passenger Side Not latched - 3/4" gap (3 sides) vs spec - good fit (closed)
DISCHARGE RAMP CONDITION: Driver Side 1" out of line @ bottom corner
Passenger Side bent 3/4" out of line, does not mesh with guides
Front OK Back Rusted & uneven
OTHER COMPONENTS: Top Doors 3/8" gap - 50% length Drivers side
Side Lugs OK Reinforced with fish plate
Chain Adaptors good - slightly bent - cast construction - reinforced w/C
Pick-up Bar good - boxed end - full weld
Hinges badly rusted - 50% visible
CONTACT: _____ Phone _____
Organization _____
Contact Comments _____

Inspector Comments lot of work required - new plate for top doors
shell basically sound ICL
LUGS
Recommendations Low Priority for Network ITR
DO NOT REPLACE

INSPECTOR

Jim Lyle

DATE

9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA CENTR SECTION @ GUNNS STATION
CMR-SM29-
DUMPSTER INFORMATION: MANUFACTURER NO ID
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
Flat Top (With Doors) X Part Number —
Other Identification "RADIO ACTIVE WASTE ONLY - C" stenciled on doors
Site Condition BACKED AGAINST DOCK - SOME WEATHER PROTECTION
DUMPSTER CONDITION: GENERAL Good (with exceptions) BAD DOORS
PAINT EXISTS / NEW - ALL CRACK
EXTERNAL SURFACES Good - NO CORROSION DENTS
INTERNAL SURFACES FULL OF LLW CANONS - COULD NOT INSPECT
DOOR CONDITIONS: Driver Side 3/8" GAP @ TOP CLOSED - 1" VS HASP NO RAIN SEAL
Passenger Side 5/8" GAP CLOSED - 1 1/2" OPEN - NO RAIN SEAL OVER DOOR
DISCHARGE RAMP CONDITION: Driver Side GOOD - GOOD FIT - NO VISIBLE CRACKS
Passenger Side GOOD, FITS WELL AGAINST GUIDE - NO VISIBLE CRACKS
Front GOOD SLIGHT DAMAGE ONLY Back NOT ACCESSIBLE
OTHER COMPONENTS: Top Doors WARPED - AND SEALANT - BIG DENTS WITH HINGE
Side Lugs OK - REINFORCED
Chain Adaptors GOOD - CASTINGS WITH CHANNEL REINFORCEMENT
Pick-up Bar GOOD - BOX ENDS
Hinges PROBABLY OK NOT 100% VISIBLE
CONTACT: _____ Phone _____
Organization _____
Contact Comments _____

Inspector Comments GOOD CONDITION EXCEPT FOR DOORS | CH
HVGL

Recommendations RE USE ONLY IF TOP DOORS ARE SEAL WELDED
SHUT & MAKING HATCHES ADDED | TL
REPLACE WITH D-1 DUMPSTON

INSPECTOR [Signature] DATE 9/8/89

(1) UNITS LOCATED DIRECTLY UNDER
(2) TWO SIGNS: "BUILDING AIR INTAKE"
DO NOT LOSE YOUR ENGINES

... is out of ... in the Dumpster

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA GUANO STATION (MIL-SN29) CEMENT SECTION
 DUMPSTER INFORMATION: MANUFACTURER NO I.D.
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number —
 Other Identification "RADIO ACTIVE WASTE ONLY - NON COMPATIBLE" SIGNED
 Site Condition BACKED AGAINST DOCK - SOME WEATHER PROTECTION
 DUMPSTER CONDITION: GENERAL FAIR
 PAINT GOOD / NEW - ALL CRACKS
 EXTERNAL SURFACES GOOD - NO LARGE DENTS
 INTERNAL SURFACES: GOOD - NO LARGE DENTS NOT ACCESSIBLE
 DOOR CONDITIONS: Driver Side 1/4" GAP WHEN CLOSED - 3/4" WHEN OPEN
 Passenger Side GOOD FIT WHEN CLOSED - ONLY 1/8" VS HAT P
 DISCHARGE RAMP CONDITION: Driver Side BADLY SPRUNG @ CHAIN AVAILION
 Passenger Side GOOD FIT UP - NO VISIBLE CRACKS - GUIDES OK
 Front — Back NOT ACCESSIBLE
 OTHER COMPONENTS: Top Doors BADLY SPRUNG - 7/8" GAP - COULD NOT LATCH
 Side Lugs GOOD - REINFORCED WITH RUST PLATES
 Chain Adaptors OK - DRIVER'S SIDE OUT OF ALIGNMENT
 Pick-up Bar GOOD SHAPED BOXED DESIGN
 Hinges PROBABLY OK - NOT 100% ACCESSIBLE
 CONTACT: — Phone —
 Organization —
 Contact Comments —

Inspector Comments COSMETIC MAINTENANCE
HVGS

Recommendations HOLD FOR CANNIBALIZING ON SCRAP - DOORS ON
TOP IN BAD SHAPE TL
REPLACE WITH D-1

INSPECTOR Tom Fye DATE 9/8/89

1. (2) units located directly under two signs:

"BUILDING AIR INTAKE - DO NOT LEAVE YOUR ENGINE RUNNING"

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA WING 5 CMR SU 29 → SM 154 Door 209

DUMPSTER INFORMATION: MANUFACTURER No ID

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) —

Flat Top (With Doors) — Part Number —

Other Identification RADIOACTIVE WASTE ONLY - N COMPACTIBLE - 7'

Site Condition Rocky soil in path of Building Run-off

DUMPSTER CONDITION: GENERAL Fairly Good

PAINT EMR - MINIMAL STREAKING - ~~grey~~ Yellow / Grey

EXTERNAL SURFACES OK - NO LARGE DENTS

INTERNAL SURFACES RUSTED - EMPTY - DAYLIGHT THRU CRACK OVER OPPOSITE DOORS

DOOR CONDITIONS: Driver Side 3/8" opening ABOVE DOOR NO LOCK!

Passenger Side 3/8" to 1/4" opening ABOVE DOOR NO LOCK - TIGHT FIT BOTH DOORS!

DISCHARGE RAMP CONDITION: Driver Side GOOD - NO CRACKS - GUIDES OK

Passenger Side GOOD - NO CRACKS - GUIDES OK

Front LONG SHALLOW DENTS ON BOTTOM Back OK ONLY PARTIALLY VISIBLE

OTHER COMPONENTS: Top Doors NA

Side Lugs OK NO REINFORCEMENT

Chain Adaptors Good SHAPE - STEEL CASTINGS WELDED TO SIDE PLATES

Pick-up Bar BADLY BENT - FLATTENED - PROBABLY BY IMPACT

Hinges PROBABLY OK - ONLY PARTIALLY VISIBLE

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments NO LOCKS ON ANY OPENING - WEEDS GROWN UP

PROBABLY NOT USED IN ~~THE~~ SOME TIME - LOCK FOUND IN GUTTER

BY SM 1280 SWITCHGEAR/TRANSFORMER UNIT BF

Recommendations SALVAGE FOR MODIFICATION TO D-1 MR

DO NOT REPLACE

INSPECTOR Jim Tyer

DATE 9/8/89

1. DOOR WIRED CLOSED

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 30
 DUMPSTER INFORMATION: MANUFACTURER DEMPSTER
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top - Flat Top (No Doors) X
 Flat Top (With Doors) - Part Number 47816
 Other Identification "RADIOACTIVE WASTE ONLY" "NC"
 Site Condition ASPHALT HARD STAND - NO OBVIOUS DRAINAGE PROBLEMS
 DUMPSTER CONDITION: GENERAL FAIRLY GOOD
 PAINT OLD, FADED, GRAY/YELLOW
 EXTERNAL SURFACES RUSTED; LARGE DENT: PASSENGER SIDE SHELL NEAR DOOR
 INTERNAL SURFACES NOT ACCESSIBLE
 DOOR CONDITIONS: Driver Side DOOR UNLATCHED - DIFFICULT TO OPERATE (1)
 Passenger Side 1/2" Gap closed - Tight Hasp
 DISCHARGE RAMP CONDITION: Driver Side Fairly good fit up
 Passenger Side OK @ top, 1/2" gap @ bottom
 Front OK GAP < 1/4" Back 1/2" GAP @ PASSENGER SIDE CORNER
 OTHER COMPONENTS: Top Doors -
 Side Lugs OK Reinforced w/ FISH PLATES
 Chain Adapters GOOD - CAST CONSTRUCTION - CHANNEL REINFORCEMENT
 Pick-up Bar GOOD - BOX END - FULL SEAL WELD
 Hinges 100% VISIBLE - LOOK OK
 CONTACT: BILL RADZINSKI Phone -
 Organisation -
 Contact Comments -

Inspector Comments BASICALLY SOUND HARD TOP BL
LVGS

Recommendations MODIFY TO D-1 MR
DO NOT REPLACE @ SM 30

INSPECTOR Jim Fye DATE 9/29/89

(h) 1/2" gap vs. Hasp - Tight when closed

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 34

DUMPSTER INFORMATION: MANUFACTURER —

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number 42

Other Identification "RADIO ACTIVE WASTE ONLY - NC" (1)

Site Condition HIGH-NO OBVIOUS DRAINAGE PROBLEMS-Soil grown up with weeds

DUMPSTER CONDITION: GENERAL FAIRLY GOOD

PAINT OLD, Faded GRAY/YELLOW

EXTERNAL SURFACES NO Major Damage

INTERNAL SURFACES NOT ACCESSIBLE: FULL OF CONTAMINATED, UNPACKAGED HOSE, ETC.

DOOR CONDITIONS: Driver Side Standing open vs hasp-1" gap, 1/4" gap (closed)

Passenger Side Fairly tight - 1/4" gap (closed) 1 1/2" vs hasp

DISCHARGE RAMP CONDITION: Driver Side 3/8" gap turned up @ top

Passenger Side Fairly good fit up

Front Small gaps (50% visible) Back Not accessible for weeds

OTHER COMPONENTS: Top Doors Fairly good, flattened, sealed, could be seal welded.

Side Lugs Good, reinforced w/ fish plates

Chain Adaptors Good, Cast Construction-reinforced w/ channel

Pick-up Bar OK - BOX END DESIGN

Hinges 50% visible - look OK

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments NOT TOO BAD FOR TOP LOADER

LVGS

Recommendations MODIFY AS LAST RESORT ONLY

DO NOT REPLACE

INSPECTOR [Signature] DATE 9/28/89

- (1) NOTE: A 4YD³ DUMPSTER IS USED FOR COMPACTIBLE WASTES
- (2) Unpackaged, probably contaminated, bulky objects - hoses, metal etc. in Dumpster open to the elements in a non-secure location near parking lots.

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 35

DUMPSTER INFORMATION: MANUFACTURER DUMPSTER

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) X

Flat Top (With Doors) — Part Number —

Other Identification "C" for "COMPACTIBLE"

Site Condition GRAVEL PARKING LOT - FURTHER FROM DRAINAGE THAN "NC"

DUMPSTER CONDITION: GENERAL RELATIVELY GOOD

PAINT FADED - GRAY & YELLOW - SCRAPPED

EXTERNAL SURFACES FAIRLY GOOD

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side GOOD - 1/4" GAP VS. HASP

Passenger Side DOOR GOOD - NO GAP - SPRUNG HANDLE WOULD NOT ENGAGE LATCH

DISCHARGE RAMP CONDITION: Driver Side 3/8" GAP

Passenger Side GOOD FIT < 1/8" FIT

Front OK Back OK

OTHER COMPONENTS: Top Doors N/A.

Side Lugs OK

Chain Adaptors OK

Pick-up Bar OK

Hinges OK (NOT ENTIRELY VISIBLE)

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments GOOD, HARD TOP

BM

L V G S

Recommendations SALVAGE FOR MODIFICATION TO D-1

MR

DO NOT REPLACE @ SM 35

INSPECTOR Jim Fyfe

DATE 5/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 35
DUMPSTER INFORMATION: MANUFACTURER NOT MARKED
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: Round Top X Flat Top (No Doors) —
 Flat Top (With Doors) — Part Number 636
Other Identification "N.C." ON TAPE ONLY
Site Condition GRAVEL PARKING LOT, UNIT LOCATED ON LOW GROUND. DRAINAGE PATTERN EXTENDS UNDER CORNER OF UNIT. 2" DEPTH COULD FLOOD BOTTOM CANYONS
DUMPSTER CONDITION: GENERAL RELATIVELY GOOD
PAINT FADED- GRAYE YELLOW- SCRAPED OFF RUST STREAKS FROM STIFFENERS FLOWNT BY NORMAL SERVICE
EXTERNAL SURFACES FAIRLY GOOD-NO MASSIVE DENTS OR RUPTURES
INTERNAL SURFACES DOORS LOCKED - NOT AVAILABLE FOR INSPECTION
DOOR CONDITIONS: Driver Side FAIRLY TIGHT - 1/4" GAP WHEN OPENED VS HASP
 Passenger Side 1/2" X 2" TOLL SLOT OPEN TO ATMOSPHERE (BOTH DOORS) 1 1/2" GAP VS. HASP!
DISCHARGE RAMP CONDITION: Driver Side GOOD: GUIDES UNDAMAGED
 Passenger Side SAME: FIT UP WITH GUIDES O.K. - BOTH SIDES
Front SLIGHT BUT LONG BENT ON BOTTOM **Back** GOOD
OTHER COMPONENTS: Top Doors NONE
 Side Lugs GOOD, SLIGHTLY DENTED
 Chain Adaptors GOOD
 Pick-up Bar GOOD, LARGELY UNDENTED, ORIGINAL WELD HAS LARGE GAS HOLE SHOULD HAVE BEEN REJECTED
 Hinges O.K. (NOT ENTIRELY VISIBLE)
CONTACT: _____ **Phone** _____
Organization _____
Contact Comments _____

Inspector Comments HAND TOP - DISCHARGE RAMP IS OK BM
LVGS

Recommendations SALVAGE FOR MODIFICATION TO D-1-Relocate MR
DO NOT Replace @ SM 35

INSPECTOR Fontyne **DATE** 5/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 66-DOCK #1-FOUNDRY

DUMPSTER INFORMATION: MANUFACTURER DEMATEL

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification "C" STENCILED ON EACH DOOR, #3275 ON CHAIN ADAPTOR

Site Condition GRAVEL, SET AGAINST DOCK, AREA CONGESTED W/DRUMS, POSSIBLE WATER BACK-UP

DUMPSTER CONDITION: GENERAL FAMILY GOOD

PAINT POOR- FADGED & SCRAPPED

EXTERNAL SURFACES RUSTED BADLY IN FRONT

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side GOOD - 3/8" GAP VS. HALF

Passenger Side SAME

DISCHARGE RAMP CONDITION: Driver Side GOOD FIT-UNDAMAGED GUIDES

Passenger Side SAME

Front LONG DENT BETWEEN HINGES Back NOT VISIBLE BECAUSE OF LOADING DOCK

OTHER COMPONENTS: Top Doors GOOD- SEALED SHUT WITH SOME TYPE OF ELASTOMER

Side Lugs GOOD- REINFORCED WITH FISH PLATES

Chain Adaptors GOOD

Pick-up Bar GOOD- "CLOSED END" DESIGN- BETTER RIGIDITY

Hinges NOT ENTIRELY VISIBLE- APPEARED TO BE O.K.

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments FLAT TOP WITH DOORS- FAMILY GOOD CONDITION

CH

Recommendations SALVAGE TO BE CANNIBALIZED OR MODIFIED WITH DOORS WELDED SHUT (CONTINGENCY BASIS)

TL

Replace w/ D-1

INSPECTOR Sam Lye

DATE 5/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 66-DOCKS 3 & 4
DUMPSTER INFORMATION: MANUFACTURER DUMPS TER
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) X
Flat Top (With Doors) — Part Number —
Other Identification "COMPACTIBLE 17" STENCILED ON BOTH DOORS
Site Condition LOW GROUND NEAR DRAINAGE PATTERN ~ 50' FROM SM 66
DUMPSTER CONDITION: GENERAL GOOD
PAINT FADED
EXTERNAL SURFACES FAIR - NO MAJOR DAMAGE
INTERNAL SURFACES DUMPS TER FULL - NOT ACCESSIBLE
DOOR CONDITIONS: Driver Side 3/8" GAP VS. HASP
Passenger Side GAP @ BOTTOM FULL LENGTH, TIGHT VS. HASP
DISCHARGE RAMP CONDITION: Driver Side GOOD - TIGHT FIT
Passenger Side SAME
Front SAME Back SAME
OTHER COMPONENTS: Top Doors ~
Side Lugs OK
Chain Adapters OK
Pick-up Bar OK
Hinges NOT ENTIRELY VISIBLE
CONTACT: _____ Phone _____
Organisation _____
Contact Comments _____

Inspector Comments RELATIVELY GOOD BH
HVGL

Recommendations SALVAGE FOR MODIFICATION TO 12-1 ML
Return to location

INSPECTOR [Signature] DATE 5/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA 5M 66 - DOCK 3
 DUMPSTER INFORMATION: MANUFACTURER NOT MARKED
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number —
 Other Identification NONE
 Site Condition GRAVEL, SET AGAINST DOCK
 DUMPSTER CONDITION: GENERAL POOR - LARGE DENTS IN FRONT
 PAINT POOR - GRAY & YELLOW - BADLY RUSTED - RUST STREAKS FROM STIFFENERS
 EXTERNAL SURFACES POOR - DENTED
 INTERNAL SURFACES RUSTED, UNIT WAS EMPTY $\frac{3}{8}$ " DAYLIGHT GAPS THRU CLOSURE SEAMS
 DOOR CONDITIONS: Driver Side $\frac{3}{4}$ " X $3\frac{1}{2}$ " SLOT TORCHED @ BOTTOM POOR FIT SPRUNG OPEN
 Passenger Side SAME $\frac{3}{4}$ " X $3\frac{1}{2}$ " SLOT - SLIGHTLY BETTER CONDITION ($\frac{3}{4}$ " GAP WHEN CLOSED)
 DISCHARGE RAMP CONDITION: Driver Side FAIRLY GOOD FLT, UNDAMAGED
 Passenger Side SAME
 Front SAME Back SAME
 OTHER COMPONENTS: Top Doors FAIRLY GOOD FLT, FLANGES NOT WARPED, NO SEALANT
 Side Lugs OK
 Chain Adaptors OK
 Pick-up Bar OK
 Hinges OK (NOT ENTIRELY VISIBLE)
 CONTACT: _____ Phone _____
 Organization _____
 Contact Comments _____

Inspector Comments CM
HVGL

Recommendations TOP ENTRY WITH DAMAGED SIDE DOORS - CANNABALIZE
DO NOT MODIFY - Replace with modified (D-1) unit

INSPECTOR [Signature] DATE 5/30/89

FRONT OF
DUMPSTER

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA 5M 66 - DOCKS 4 & 5
DUMPSTER INFORMATION: MANUFACTURER _____
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
Flat Top (With Doors) X Part Number —
Other Identification "57" STENCILED ON DOOR WITH "N COMPACTIBLE"
Site Condition DIRT & GRAVEL, LOW GROUND
DUMPSTER CONDITION: GENERAL FAIRLY GOOD
PAINT FADED, YELLOW & GRAY
EXTERNAL SURFACES NO MAJOR DAMAGE
INTERNAL SURFACES PARTIALLY FULL - DAY LIGHT THRU SIDE DOOR CLOSURES
DOOR CONDITIONS: Driver Side FAIRLY GOOD FIT, OPENS 1/4" VS HASP
Passenger Side 3/4" OPEN VS HASP, 3/4" X 2 3/8" SLOT CUT IN BOTH DOORS
DISCHARGE RAMP CONDITION: Driver Side FAIRLY GOOD
Passenger Side SAME
Front SAME Back SAME
OTHER COMPONENTS: Top Doors WARPED BADLY, NO SEALANT
Side Lugs OK
Chain Adaptors OK
Pick-up Bar OK
Hinges OK - NOT ENTIRELY VISIBLE
CONTACT: _____ Phone _____
Organization _____
Contact Comments _____
Inspector Comments TOP LOADING DOORS - FAIR CONDITION
HVGL CH
Recommendations SALVAGE FOR CANNIBALIZATION
DO NOT MODIFY - REPLACE W/ D-1 TL
INSPECTOR Limbrya DATE 5/30/89

DATA SHEET

ILW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA 5M66 (DOCKS 4&5)

DUMPSTER INFORMATION: MANUFACTURER DUMPS

SIZE 10 YARDS TYPE BOTTOM DISCHARGE, SIDE LOADING

CONFIGURATION: Round Top (No Doors) — Flat Top (With Doors) X

Part Number —

other identification "Non-Compactable" on tape only

site condition 50' from 5M 66 - low ground obvious run-off

DUMPSTER CONDITION: GENERAL Poor, DRIVERS SIDE COVERED IN

PAINT OLD, FADED, GRAY/YELLOW - STREAKED WITH RUST

EXTERNAL SURFACES Dented, Rusty

INTERNAL SURFACES Rusted - DUMPSTER EMPTY - DAYLIGHT thru CRACKS

DOOR CONDITIONS: DRIVER SIDE OF DOOR - SPONGE 1" on top - BAD !! * MASSIVE DENTS - 2" X 12" DEPRESSION IN BOTTOM

PASSENGER SIDE 3/4" GAP WHEN DOOR OPENED AGAINST HARP

DISCHARGE RAMP CONDITION: DRIVER SIDE Bent

PASSENGER SIDE Bent

Front 9/10s Back Fair

OTHER COMPONENTS: Top Doors WAKED, NO SEAL

Side Lugs O.K.

Chain Adaptors O.K.

Pick-up Bar O.K.

Hinges HIDDEN FROM VIEW

CONTACT: LEON MARTINEZ Phone

organization

contact comments Leon Martinez: Construction debris must be kept

Separate from normal production material. Number of Dumpsters is

adequate

Inspector comments 4 DUMPSTERS WITHIN 150 FEET OF EACH OTHER

located

Reduce Number

Recommendations SCRAP - DO NOT REPAIR

XX

INSPECTOR

DATE 5/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 102
DUMPSTER INFORMATION: MANUFACTURER Dumpster
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
Flat Top (With Doors) X Part Number —
Other Identification "RADIO ACTIVE WASTE ONLY - COMPACTIBLE"
Site Condition Good. ASPHALT / GRAVEL - HIGH NO OBVIOUS DRAINAGE PROBLEM
DUMPSTER CONDITION: GENERAL Good for TOP LOADER
PAINT NRW, CRAM
EXTERNAL SURFACES GOOD - NO MAJOR DAMAGE
INTERNAL SURFACES NOT ACCESSIBLE - DRYLIGHT AROUND CLOSURES
DOOR CONDITIONS: Driver Side Good KIT - 1" GAP VS HASP
Passenger Side 3/8" GAP WHEN CLOSED - 7/8" VS HASP - OUT OF LINE @ BOTTOM
DISCHARGE RAMP CONDITION: Driver Side 1/4" GAP TURNED UP
Passenger Side BENT OUT OF LINE - 3/8" GAP TURNED UP
Front OK Back 1/4" GAP
OTHER COMPONENTS: Top Doors NOT TOO BAD
Side Lugs GOOD. REINFORCED W/ RUST PLATES
Chain Adaptors GOOD - CASE WITH CHANNEL REINFORCEMENTS
Pick-up Bar Good
Hinges VISIBLE - GOOD
CONTACT: — Phone —
Organization —
Contact Comments —

Inspector Comments GOOD SHAPE FOR TOP LOADER
H L G S

Recommendations MODIFY IF NECESSARY - WELD UP TOP DOORS
OR REPLACE BEFORE BUYING NEW DUMPSTER - GANNING
ESCAPE IF NOT NEEDED - REPLACE W/ D-1
INSPECTOR Jim Hys DATE 9/27/89

DATA SHEET

LLN DUMPSTER INSPECTION

LOCATION: TA 3 BUILDING OR AREA SM 102
 (1) DUMPSTER INFORMATION: MANUFACTURER (1)
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top X Flat Top (No Doors) -
 Flat Top (With Doors) - Part Number -
 Other Identification "RADIOACTIVE WASTE-ONLY-NC"
 Site Condition GOOD - HIGH - ASPHALT/GRANUL HARD STAND
 DUMPSTER CONDITION: GENERAL FAIRLY GOOD
 PAINT NEW, CREAM GOOD
 EXTERNAL SURFACES GOOD - NO
 INTERNAL SURFACES COULD NOT UNLATCH HANGLERS - BOTH DOORS
 DOOR CONDITIONS: Driver Side TIGHT FIT, WEATHER STRIP (DAMAGED)
 Passenger Side SAME AS DRIVER SIDE
 DISCHARGE RAMP CONDITION: Driver Side 3/8" GAP TURNED UP
 Passenger Side 3/8" GAP
 Front OK Back 1/2" GAP @ BOTTOM
 OTHER COMPONENTS: Top Doors -
 Side Lugs OK Reinforced with Fish plate
 Chain Adapters OK - CAST DESIGN - NO REINFORCEMENT
 Pick-up Bar OK - Flattened slightly @ ends
 Hinges 75% VISIBLE look to be OK
 CONTACT: _____ Phone _____
 Organisation _____
 Contact Comments _____

Inspector Comments ALL OBVIOUS GAPS WILL BE CORRECTED BY
MODIFICATION
HVGS
 Recommendations MODIFY TO D-1 CONDITION

INSPECTOR [Signature] DATE 9/27/09

(1) SLIGHTLY DIFFERENT DESIGN THAN OTHERS, SMALLER;
 (69" LONG VS 75" - 77" HIGH VS 81" - SAME WIDTH)

(2) 1/16" 2/24" INSPECTION

LLN DUMPSTER INSPECTION

INSPECTOR

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 3 **BUILDING OR AREA** SM 142
DUMPSTER INFORMATION: MANUFACTURER —
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 2406
 Other Identification "N" COMPACTIBLE STENCILED ON DOORS ⁽¹⁾ "
 Site Condition LOADING DOORS LOCATED DIRECTLY UNDER EAVES - FULL
SACKED UP AGAINST ROCK, ASPHALT DRIVE, DRAINAGE IMPACT
DUMPSTER CONDITION: GENERAL GOOD - APPARENTLY NOT USED MUCH
PAINT FAIR - FADED
EXTERNAL SURFACES NO MAJOR DAMAGE
INTERNAL SURFACES - RUSTED - PARTIALLY FULL
DOOR CONDITIONS: Driver Side WELDED SHUT
 Passenger Side WELDED SHUT
DISCHARGE RAMP CONDITION: Driver Side GOOD - MINOR GAP
 Passenger Side SAME
 Front SAME Back SAME
OTHER COMPONENTS: Top Doors LOCKED WITH: LARGE BOLT BAR ⁽²⁾
 Side Lugs OK
 Chain Adaptors OK
 Pick-up Bar OK
 Hinges NOT ENTIRELY VISIBLE
CONTACT: PETE MAESTAS Phone —
Organization —
Contact Comments ESTIMATE USAGE: 4 LOADS/YEAR - LAB CLOTHES
WITH HIGH READINGS⁽¹⁾ - 75 BOXES PER LOAD AVERAGE
Inspector Comments TOP LOADING LVGS CF
Recommendations SALVAGE FOR CANNIBALIZING DISCHARGE RAMP
AND OTHER PARTS - DO NOT REPLACE TR
INSPECTOR [Signature] **DATE** 5/30/89

(1) NON-COMPACTIBLE?

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 9 BUILDING OR AREA 21

DUMPSTER INFORMATION: MANUFACTURER DGMPSTEN

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

(1.) Flat Top (With Doors) X (1) Part Number 2401 - #18

Other Identification R4010 RACING CARTS ONLY : "Non-compactable" (2.)

Site Condition Good - Asphalt Hard Stand

DUMPSTER CONDITION: GENERAL Fair

PAINT old, Faded Gray & yellow

EXTERNAL SURFACES Both rusted & dented -

INTERNAL SURFACES Not fully accessible - DAYLIGHT THROUGH CLOSURES

DOOR CONDITIONS: Driver Side 3/8" Gap (closed) 3/4" vs HASP - 1/2" open all across top

Passenger Side door ASH - 1" GAP vs HASP - would NOT LATCH due to DAMAGE

DISCHARGE RAMP CONDITION: Driver Side 1/2" Gap TURNED UP

Passenger Side Fairly good fit up

Front — Back slightly out of line

(1.) OTHER COMPONENTS: Top Doors (1) doors permanently closed & sealed

Side Lugs OK - Reinforced with fish plate

Chain Adaptors Good - Cast construction - Reinforced w/ channel

Pick-up Bar Good - Boxed end design

Hinges Visible - OK

CONTACT: — Phone —

Organization —

Contact Comments —

Inspector Comments LOT OF work required including welding up top doors

LVGS

Recommendations Hold in storage - moving to D-T condition only to keep from buying new unit

DO NOT REPLACE

INSPECTOR Jim Hye DATE 9/28/89

(2) "Radioactive" BARRI VISIBLE - NO DOGS Logo
 1925-9 on Chain adaptor

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 9 BUILDING OR AREA 21
 DUMPSTER INFORMATION: MANUFACTURER DGMPTON
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 2128
 Other Identification RADIOACTIVE WASTE ONLY - NC
 Site Condition Good - ASPHALT HAND STAND
 DUMPSTER CONDITION: GENERAL RELATIVELY GOOD
 PAINT OLD, ERROD, Yellow & GRAY
 EXTERNAL SURFACES RUSTED - NO MAJOR DAMAGE
 INTERNAL SURFACES NOT ACCESSIBLE
 DOOR CONDITIONS: Driver Side TIGHT FIT (CLOSED) - 1/2" VS HASP - DOOR JAMB BENT
 Passenger Side TIGHT FIT (CLOSED) - 3/8" GAP VS HASP
 DISCHARGE RAMP CONDITION: Driver Side BENT IN 1/2" OUT OF LINE
 Passenger Side BENT IN 3/8" OUT OF LINE
 Front 1/2" GAP DUE TO DAMAGE Back 1/4" GAP @ DRIVER SIDE CORNER
 OTHER COMPONENTS: Top Doors FLATTENED & SOILED (COULD BE WELDED SHUT)
 Side Lugs OK - REINFORCED w/ RIVET PLATE
 Chain Adaptors OK - CAST CONSTRUCTION - NO STIFFENERS
 Pick-up Bar OK - BOX END DESIGN - FULL WELD
 Hinges 50% VISIBLE: OK
 CONTACT: _____ Phone _____
 Organization _____
 Contact Comments _____

Inspector Comments FINALLY GOOD RIDGE FOR TOP LADDER CL
LVGS

Recommendations 1st priority to modify to D-1 TR

BEFORE ALL HAND TOPS ARE USED

DO NOT REPLACE

INSPECTOR [Signature] DATE 9/28/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 15 BUILDING OR AREA 183 *

DUMPSTER INFORMATION: MANUFACTURER DEMPSON

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification RADIO ACTIVE WASTE ONLY * (NO "C" OR "N")

Site Condition GRAVEL OFF HAND STAND - FAIRLY GOOD - NO OBVIOUS DRAINAGE

DUMPSTER CONDITION: GENERAL FAIR

PAINT GOOD - FRAGILY PAINTED - CRACK

EXTERNAL SURFACES DENTED - BROKEN SHELL - TOP FRONT PASSENGER SIDE

INTERNAL SURFACES PARTIALLY VISIBLE - EMPTY - DAY LIGHT THRU CLOSURES

DOOR CONDITIONS: Driver Side 1/8" GAP ALONG TOP (CLOSED & BOTTOM) - 1" GAP VS HASS

Passenger Side 1/2" GAP (CLOSED) ALONG TOP - 1" 4" VS HASS

DISCHARGE RAMP CONDITION: Driver Side 1/2" GAP TURNED UP

Passenger Side 1/4" TOP OF LINE GAP TURNED UP

Front 1/8" GAP @ CORNERS Back OK

OTHER COMPONENTS: Top Doors PERMANENTLY CLOSED, FLATTENED SEALED

Side Lugs GOOD - REINFORCED W/ PLATE

Chain Adaptors GOOD - CAST CONSTRUCTION W/ CHANNEL REINFORCEMENT (WIRE?)

Pick-up Bar GOOD - BOXED END DESIGN

Hinges VISIBLE - GOOD

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments COULD BE MODIFIED TO D-1 CONDITION CL

WITH MUCH WORK

Recommendations Hold in STORAGE TR

LOW VOLUME GENERATION SITE. SERVICE WITH VAN ON

MILK RUN BASIS - DO NOT REPLACE

INSPECTOR Tom Fy DATE 9/28/89

4 YD³ USED FOR NON COMPACTIBLE

* BARRIERS CLOSED
ON ROADS TO OTHER
2 LOCATIONS

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 16 BUILDING OR AREA 400

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top _____ Flat Top (No Doors) _____

Flat Top (With Doors) _____ Part Number _____

Other Identification _____

Site Condition _____

DUMPSTER CONDITION: GENERAL _____

PAINT _____

EXTERNAL SURFACES _____

INTERNAL SURFACES _____

DOOR CONDITIONS: Driver Side _____

Passenger Side _____

DISCHARGE RAMP CONDITION: Driver Side _____

Passenger Side _____

Front _____ Back _____

OTHER COMPONENTS: Top Doors _____

Side Lugs _____

Chain Adaptors _____

Pick-up Bar _____

Hinges _____

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments INVENTORY LISTS 4 DUMPSTERS @ TA 16
NONE @ BLDG 400 - Security gates closed to other locations.
LVS

Recommendations Bring in any remaining Dumpsters for
INSPECTION & disposition to TA 54 - DO NOT REPLACE

INSPECTOR Jim Frye DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 18 BUILDING OR AREA PL-23
 DUMPSTER INFORMATION: MANUFACTURER DUMPSTER
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top - Flat Top (No Doors) -
 Flat Top (With Doors) X Part Number 3275 Chain 24x
 Other Identification "NON COMPACTIBLE WASTE"
 Site Condition Soil/Asphalt - (Half on/ Half off)
 DUMPSTER CONDITION: GENERAL Poor
 PAINT Good - Fairly new - cream & gold
 EXTERNAL SURFACES Shell OK - "Tubing" design - open @ Front
 INTERNAL SURFACES Daylight thru large gaps
 (1.) DOOR CONDITIONS: Driver Side Badly Battened (1)
 Passenger Side BADLY DAMAGED - 1" GAP ACROSS BOTTOM - 3/4" @ TOP
 DISCHARGE RAMP CONDITION: Driver Side Fairly good fit
 Passenger Side 1/4" gap @ top looking up
 Front OK Back OK
 (1.) OTHER COMPONENTS: Top Doors 1" to 1 1/2" GAP ALL AROUND - BAD
 Side Lugs OK - Reinforced w/ Fish plate - have been lowered in field
 Chain Adaptors Good - cast construction Reinforced w/ channel
 Pick-up Bar OK
 Hinges OK - 75% visible
 CONTACT: _____ Phone _____
 Organization _____
 Contact Comments _____

Inspector Comments _____

LVGS

[CL]

Recommendations SCRAP - SALVAGE PARTS IF

[XZ]

COST EFFECTIVE - DO NOT REPLACE @ SITE

INSPECTOR Jim Fye

DATE 9/25/89

(1.)

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 18 BUILDING OR AREA PL-32

DUMPSTER INFORMATION: MANUFACTURER Dempster

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification RADIO ACTIVE WASTE ONLY - COMPACTIBLE " 3261 on
Site Condition Concrete slab - fairly high - good location Churn depth

DUMPSTER CONDITION: GENERAL Fairly good

PAINT good - new cream

EXTERNAL SURFACES Good

INTERNAL SURFACES Daylight thru large gaps

DOOR CONDITIONS: Driver Side 1/2" gap (closed) 1 1/2" open vs hasp

Passenger Side Good fit closed, 1 1/2" gap vs hasp

DISCHARGE RAMP CONDITION: Driver Side good fit up

Passenger Side good fit up

Front OK Back OK

OTHER COMPONENTS: Top Doors warped @ closure (li)

Side Lugs Good - fish plate reinforcement

Chain Adaptors Good - cast type with channel reinforcement

Pick-up Bar OK

Hinges OK

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments Dumpster has not been moved since

asphalt drive laid down - asphalt splashed on front

LVGS

CE

Recommendations cancel size & scrap

TR

DO NOT REPLACE

INSPECTOR [Signature] DATE 9/25/89

(li) [Signature]

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 18 BUILDING OR AREA PL 121

DUMPSTER INFORMATION: MANUFACTURER DGMOSTEN

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification RADIO ACTIVE WASTES ONLY - NOT MARKED

Site Condition Asphalt - at base of embankment - Fairly good

DUMPSTER CONDITION: GENERAL Poor

PAINT Fairly good

EXTERNAL SURFACES Shell in fairly good shape

INTERNAL SURFACES Fairly good thru large gaps around both doors

DOOR CONDITIONS: Driver Side Fairly good - 1/4" gap vs hasp

Passenger Side Badly damaged

DISCHARGE RAMP CONDITION: Driver Side 1/4" gap @ top

Passenger Side Fairly good fit up

Front OK Back OK

OTHER COMPONENTS: Top Doors terrible: 1/4" to 1/2" gap both sides

Side Lugs good - fish plate reinforcement

Chain Adaptors Good - cast type with channel reinforcement

Pick-up Bar OK

Hinges OK

CONTACT: — Phone —

Organization —

Contact Comments —

Inspector Comments — X X

Recommendations Top door unit in poor shape: scrap.

Save parts if practical X 2

INSPECTOR [Signature] DATE 9/25/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 21 BUILDING OR AREA 3/4 - Across

DUMPSTER INFORMATION: MANUFACTURER —

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) —

Flat Top (With Doors) — Part Number 2528

Other Identification "RADIO ACTIVE WASTE ONLY COMPACTIBLE"

Site Condition ASPHALTE GRAVEL OFF CURB

DUMPSTER CONDITION: GENERAL POOR

PAINT GRAY/GOLD-OLD-

EXTERNAL SURFACES RUSTED-ROLLED PLATES (on top) Broken loose -

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side 3/8" Gap on Top - WEATHER STRIP IN PLACE - 1/4" Gaps WAST

Passenger Side —

DISCHARGE RAMP CONDITION: Driver Side 3/8" Gap - SPRING OPEN - VERY RISKY @ BOTTOM

Passenger Side GUIDE HAS BEEN REPLACED - SIDE PLATE BATH WOOD RISKY

Front FAIR Back FAIR

OTHER COMPONENTS: Top Doors —

Side Lugs SLIGHTLY BENT - NO REINFORCEMENT

Chain Adaptors GENERALLY GOOD - SLIGHTLY BENT - CAST TYPE

Pick-up Bar OK - FLATTENED SECTIONS - 7" to 8" Long

Hinges PIN MISSING FROM CENTER HINGE

CONTACT: — Phone —

Organization —

Contact Comments —

Inspector Comments H 1 B14

HVGS

Recommendations — ML

Modify and Return to service

INSPECTOR [Signature] DATE 9/22/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 21 BUILDING OR AREA 3/4 - Across

DUMPSTER INFORMATION: MANUFACTURER Dumpster

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top - Flat Top (No Doors) -

Flat Top (With Doors) X Part Number -

Other Identification "RADIO ACTIVE WASTE ONLY - NON COMPACTIBLE"

Site Condition ASPHALTE GRAVEL - OFF CURB - DIRECTLY UNDER - OVERHEAD PIPE WAY^(h)

DUMPSTER CONDITION: GENERAL GOOD

PAINT VERY GOOD - FRESHLY PAINTED - CREAM

EXTERNAL SURFACES GOOD

INTERNAL SURFACES (PARTIALLY OPEN DOOR) COULD SEE DAY LIGHT THRU {DRIVER SIDE DOOR}

DOOR CONDITIONS: Driver Side 1/2" GAP @ TOP WHEN CLOSED - 1/4" VS HASP - WARPED @ BOTTOM

Passenger Side 3/8" GAP @ TOP WHEN CLOSED - 1/8" VS HASP -

DISCHARGE RAMP CONDITION: Driver Side GOOD - TIGHT FIT - FULL GUIDE CONTACT

Passenger Side GOOD TIGHT FIT - FULL GUIDE CONTACT

Front GOOD Back GOOD

OTHER COMPONENTS: Top Doors Standing ~ 7/8" OPEN WHEN LATCHED^(1.)

Side Lugs GOOD - REINFORCED WITH FISH PLATES

Chain Adaptors GOOD - CAST TYPE WITH CHANNEL REINFORCEMENT

Pick-up Bar GOOD - BOXED END DESIGN

Hinges VISIBLE - GOOD

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments GOOD MAINTENANCE | CH |

2nd Priority for MODIFICATION

Recommendations Replace WITH D-1 | TL |

INSPECTOR [Signature] DATE 9/22/89

1. OPPORTUNITY FOR MASSIVE
DRIP ONTO TOP DOORS - New top plates would be required for modification.

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 21 BUILDING OR AREA 314 INSIDE GATE 30

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top - Flat Top (No Doors) -

(1.) Flat Top (With Doors) X (1) Part Number 2468

Other Identification "COMPACTOR WASTE ONLY"

(1.) Site Condition ASPHALT - DIRECTLY UNDER EXTERNAL DUCT (1)

DUMPSTER CONDITION: GENERAL _____

PAINT OLD, RAGGED GRAY/YELLOW

EXTERNAL SURFACES BADLY RUSTED

INTERNAL SURFACES N.A. (2)

DOOR CONDITIONS: Driver Side (N.A.) (2)

Passenger Side (N.A.) (2)

DISCHARGE RAMP CONDITION: Driver Side (N.A.) (2)

Passenger Side _____

Front _____ Back _____

OTHER COMPONENTS: Top Doors _____

Side Lugs _____

Chain Adaptors _____

Pick-up Bar _____

Hinges _____

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments COULD NOT GAIN ACCESS PAST GATE 30 - CURSORY (2)

VIEW FROM ~40 TO 50' AWAY

HVGS

Recommendations Replace with D-1

INSPECTOR _____

DATE 2/22/89

(1) OPPORTUNITY FOR MIXING DUMP ONTO TOP DOORS

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 33 **BUILDING OR AREA** 1
DUMPSTER INFORMATION: **MANUFACTURER** _____
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: **Round Top** _____ **Flat Top (No Doors)** _____
Flat Top (With Doors) _____ **Part Number** _____
Other Identification _____
Site Condition _____
DUMPSTER CONDITION: **GENERAL** _____
PAINT _____
EXTERNAL SURFACES _____
INTERNAL SURFACES _____
DOOR CONDITIONS: **Driver Side** _____
Passenger Side _____
DISCHARGE RAMP CONDITION: **Driver Side** _____
Passenger Side _____
Front _____ **Back** _____
OTHER COMPONENTS: **Top Doors** _____
Side Lugs _____
Chain Adaptors _____
Pick-up Bar _____
Hinges _____
CONTACT: _____ **Phone** _____
Organisation _____
Contact Comments _____

Inspector Comments DID NOT VISIT LOCATION
LVGS

Recommendations BRING Dumpster IN TO TASH FOR
Inspection & Evaluation - DO NOT REPLACE

INSPECTOR [Signature] **DATE** 9/30/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 35 BUILDING OR AREA TSL-2 A-WING DOCK
DUMPSTER INFORMATION: MANUFACTURER DGMPS-10A
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
Flat Top (With Doors) X Part Number 2334
Other Identification "COMPACTIBLE" STENCILED
Site Condition Asphalt drive, low drainage area, SET AGAINST DOCK
DUMPSTER CONDITION: GENERAL Poor
PAINT FADED - GRAY & YELLOW
EXTERNAL SURFACES RUSTED
INTERNAL SURFACES COULD SEE DAYLIGHT THRU CRACKS
DOOR CONDITIONS: Driver Side 1/2" GAP VS HASP, bent @ bottom
Passenger Side Same as Driver side
DISCHARGE RAMP CONDITION: Driver Side Badly sprung - 1 3/8" away from shell
Passenger Side 3/4" GAP VS HASP - NOT DAMAGED
Front Badly sprung - gap for lbs collection Back OK
OTHER COMPONENTS: Top Doors OK - NO SEALANT
Side Lugs OK
Chain Adaptors DRIVER SIDE BADLY SPRUNG
Pick-up Bar OK
Hinges NOT VISIBLE
CONTACT: HUGH STALEY Phone
Organization
Contact Comments

Inspector Comments FLAT TOP WITH DOORS - POOR CONDITION

XZ

Recommendations SCRAP - ... DO NOT REPLACE -
SERVICE TA 35 WITH VAN.

(XN)

INSPECTOR

DATE 6/15/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 35 BUILDING OR AREA TSL-2-A-WING DOCK
 DUMPSTER INFORMATION: MANUFACTURER DUMPSTEN
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 46862 WHITE PAUL
 Other Identification "NON COMPACTIBLE" STENCILED
 Site Condition ASPHALT DRIVE, LOW DRAINAGE AREA, SET AGAINST DOCK
 DUMPSTER CONDITION: GENERAL FAIR
 PAINT FADED-GRAY & YELLOW-BETTER THAN MOST
 EXTERNAL SURFACES ROUGH WELD ON DRIVER SIDE CORNER @ TRANSITION WHERE HINGE WAS ONCE ATTACHED
 INTERNAL SURFACES NOT ACCESSIBLE
 DOOR CONDITIONS: Driver Side JAMMED COULD NOT OPEN TIGHT FIT
 Passenger Side SPRING-COULD BARELY CLOSE-1/4" GAP VS. HASP
 DISCHARGE RAMP CONDITION: Driver Side 3/8" GAP MOST OF PERIMETER
 Passenger Side SAME
 Front SAME Back BADLY SPRUNG-1" GAP IN CLOSURE
 OTHER COMPONENTS: Top Doors WARPED, NO SEALANT
 Side Lugs OK REINFORCED WITH FLISH PLATES
 Chain Adapters OK
 Pick-up Bar OK
 Hinges NOT VISIBLE
 CONTACT: HUGH STALOY Phone
 Organisation
 Contact Comments

Inspector Comments FLAT TOP NO DOORS-FAIR CONDITION
LVGS CL

Recommendations SALVAGE FOR CANNIBALIZING POSSIBLE
MODIFICATION-DO NOT REPLACE TR

INSPECTOR Jim Fye DATE 6/15/89

DATA SHEET

LLM DUMPSTER INSPECTION

LOCATION: TA 41 BUILDING OR AREA W-3
 DUMPSTER INFORMATION: MANUFACTURER DENVER
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top X Flat Top (No Doors) -
 Flat Top (With Doors) - Part Number 62
 Other Identification Radio Active Waste Only - Compactible
 Site Condition HIGH, Looked OK
 DUMPSTER CONDITION: GENERAL Restricted Area - could not get within 75 Ft
 PAINT Brown & Yellow - OLD
 EXTERNAL SURFACES _____
 INTERNAL SURFACES _____
 DOOR CONDITIONS: Driver Side _____
 Passenger Side _____
 DISCHARGE RAMP CONDITION: Driver Side _____
 Passenger Side _____
 Front _____ Back _____
 OTHER COMPONENTS: Top Doors _____
 Side Lugs _____
 Chain Adaptors _____
 Pick-up Bar _____
 Hinges _____
 CONTACT: _____ Phone _____
 Organization _____
 Contact Comments _____

Inspector Comments TOP LOADING
LVGS ICL

Recommendations TOP LOADING - HOLD FOR CLOSURE INSPECTION
SERVICE AREA WITH VAN TR
DO NOT REPLACE

INSPECTOR Jim Tye DATE 9/27/89

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

2 of 3

DATA SHEET

LLW DUMPSTER INSPECTION

TA-43-(1)

LOCATION: TA 43 **BUILDING OR AREA** HRL-20 (ACROSS)

DUMPSTER INFORMATION: **MANUFACTURER** DUMESTER

SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading

CONFIGURATION: **Round Top** — **Flat Top (No Doors)** X

Flat Top (With Doors) — **Part Number** —

Other Identification "COMPACTIBLE" & "TA-43-1" STENCILED

Site Condition <500 FEET FROM HOSPITAL
NON-SECURE, ON GRASS NEAR CURB, LOW DRAINAGE ELEVATION

DUMPSTER CONDITION: **GENERAL** RELATIVELY GOOD

PAINT GOOD: CREAM & GOLD

EXTERNAL SURFACES FEW MINOR DENTS

INTERNAL SURFACES DAYLIGHT THRU CRACKS @ Bottom RAMP & Side DOORS

DOOR CONDITIONS: **Driver Side** TOP & BOTTOM CORNERS BENT BOTTOM SCALLOPED (1)
LOCKED BUT OPEN, HANDLE DAMAGED - COULD NOT CLOSE - 1 3/4" GAP

Passenger Side @ Bottom of door - Could reach in one finger & touch cartons.

DISCHARGE RAMP CONDITION: **Driver Side** GOOD FIT

Passenger Side GOOD FIT

Front Fairly Good, slightly warped **Back** OK

OTHER COMPONENTS: **Top Doors** N.A.

Side Lugs OK Reinforced with fish plate

Chain Adaptors OK

Pick-up Bar OK

Hinges were fully visible - looked OK

CONTACT: — **Phone** —

Organization —

Contact Comments —

Inspector Comments FLAT TOP RELATIVELY GOOD NO TOP DOORS
LVGS BE

Recommendations SALVAGE FOR MODIFICATION TO D-1
DO NOT REPLACE MR

INSPECTOR Smith **DATE** 7/12/89

DATA SHEET

LLW DUMPSTER INSPECTION

TA-43(2)

LOCATION: TA 43 BUILDING OR AREA HRL-20 (ACROSS)

DUMPSTER INFORMATION: MANUFACTURER Dumpster

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification "NON COMPACTIBLE" & "TA-43-1" stenciled

Site Condition Same as TA-43(1)

DUMPSTER CONDITION: GENERAL Good EXCEPT AS NOTED

PAINT Good, Fairly Recent, Cream & Gold

EXTERNAL SURFACES Relatively Good, Few Minor Pests

INTERNAL SURFACES Not Accessible

DOOR CONDITIONS: Driver Side Spring open ~ 1/2"

Passenger Side NOT BAD " GAP < 1/4"

DISCHARGE RAMP CONDITION: Driver Side BAD - Spring open 7/8" - Completely misses metal guide/seal

Passenger Side OK

Front ~ 1/2" GAP Back 1" GAP on Rear of DRIVERS SIDE

OTHER COMPONENTS: Top Doors Fairly Good Fit

Side Lugs OK Reinforced with Fish plate

Chain Adaptors OK

Pick-up Bar OK

Hinges Partially visible - looked OK

CONTACT: — Phone —

Organization —

Contact Comments —

Inspector Comments FLAT TOP NO DOORS - DISCHARGE RAMP IS SUSPECT CF

Recommendations CANNIBALIZE USABLE PARTS THEN SCRAP - DO NOT REPLACE TER

INSPECTOR Jim Faye

DATE 7/12/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 46 BUILDING OR AREA 276
 DUMPSTER INFORMATION: MANUFACTURER I.D.
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top X Flat Top (No Doors) —
 Flat Top (With Doors) — Part Number —
 Other Identification "Radio Active Waste Only - NON COMPATIBLE"
 Site Condition gravel - off asphalt drive - Fairly high
 DUMPSTER CONDITION: GENERAL Good
 PAINT New, Cream
 EXTERNAL SURFACES Good
 (1.) INTERNAL SURFACES Not Accessible - DAY LIGHT TUNE CLOUSE (1.)
 (1.) DOOR CONDITIONS: Driver Side 3/8" Gap @ Hinge side upper corner - Good Fit us hasp
 (1.) Passenger Side Good Fit closed - 1 1/2" V S hasp (1.) W GASKET STRIP IS INTACT
 DISCHARGE RAMP CONDITION: Driver Side Good Fit
 Passenger Side Good Fit
 Front OK Back OK
 OTHER COMPONENTS: Top Doors —
 Side Lugs OK - NO Reinforcement
 Chain Adaptors Good - CAST - NO Reinforcement
 Pick-up Bar Good slightly flattened @ ends
 Hinges 75% visible look Good
 CONTACT: — Phone —
 Organization —
 Contact Comments —

Inspector Comments Round Top. Good Condition - Good CANDIDATE
LVGS FOR MODIFICATION

Recommendations MODIFY & Relocate as D-1
Service TA46 with VAN DO NOT REPLACE

INSPECTOR Jan Ma DATE 9/27/89

(1.) 1/2" x 2" INSPECTION SLIT TOWEL CUT @ BOTTOM OF DOORS

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 48 BUILDING OR AREA 48-26
DUMPSTER INFORMATION: MANUFACTURER DUMPSTER
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 2402
Other Identification RADIO ACTIVE WASTE ONLY COMPACTIBLE 27"
Site Condition SPREAD DRIVE - FAIRLY HIGH - NOT IN SWALE
DUMPSTER CONDITION: GENERAL FAIRLY GOOD
PAINT OLD, FADED GRAY/YELLOW
EXTERNAL SURFACES FAIR
INTERNAL SURFACES NOT FULLY VISIBLE - DIM LIGHT AROUND DOORS
DOOR CONDITIONS: Driver Side 1/4" GAP @ TOP (CLOSED) 3/4" GAP VS HASP - FAIRLY GOOD
 Passenger Side 1/2" GAP WHEN CLOSED - 1" VS HASP - DOOR BENT IN @ TOP
DISCHARGE RAMP CONDITION: Driver Side OK - FAIRLY UNDEMANAGED
 Passenger Side OK SAME AS DRIVER'S SIDE
 Front OK Back OK - NO LOCK
OTHER COMPONENTS: Top Doors 1/2" GAP WHEN CLOSED, ~2" VS HASP BOTH SIDES
 Side Lugs GOOD - REINFORCED WITH EIGHT PLATES
 Chain Adaptors GOOD - CAST DESIGN - CHANNEL REINFORCEMENT - 3/16" WIRE TWINED AROUND
 Pick-up Bar GOOD - BOXED END DESIGN - COULD HAVE USED HEAVIER FILET WELD BOTH HUBS
 Hinges VISIBLE - LOCKED OK
CONTACT: _____ **Phone** _____
Organization _____
Contact Comments _____

Inspector Comments 14VGS | CH |

Recommendations CANNIBALIZED FOR PARTS | XZ |
Replace with D-1 Dumpster

INSPECTOR [Signature] **DATE** 9/22/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 48 BUILDING OR AREA 01 - Across From KC30/R339

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) X

Flat Top (With Doors) — Part Number _____

Other Identification "RADIO ACTIVE WASTE ONLY NC"

Site Condition ON SOIL, DOWN FROM SEVERE SLOPE - AT EDGE OF DRAINAGE DITCH (1)

DUMPSTER CONDITION: GENERAL GOOD - GOOD MAINTENANCE

PAINT NEW FRESH CRAM. LOOKS GOOD

EXTERNAL SURFACES GOOD

INTERNAL SURFACES PARTIALLY FULL - DAYLIGHT VISIBLE AROUND TOPS OF DOORS

DOOR CONDITIONS: Driver Side 1/2" GAP @ TOP WHEN CLOSED - NO WEATHER STRIP - 2" GAP

Passenger Side 1/8" GAP CLOSED @ TOP 1" GAP VS. HASP - TORQUED OUT NOTCH @ BOTTOM (2.) VS HASP

DISCHARGE RAMP CONDITION: Driver Side GOOD FIT. GAPS OK - NOTICIOUS GAP

Passenger Side GOOD FIT. GUIDES OK - NO SERIOUS GAP

Front OK Back OK

OTHER COMPONENTS: Top Doors X

Side Lugs GOOD - REINFORCED W/ FISH PLATES

Chain Adaptors GOOD - CAST DESIGN - CHAINING REINFORCEMENT

Pick-up Bar VERY GOOD - BOXED END DESIGN

Hinges VERY GOOD

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments Flat Top no doors -

B1+

Primarily Good Condition -

HVGS

Recommendations _____

ML

MODIFY TO D+1 & RETURN

INSPECTOR [Signature]

DATE

9/22/89

(1) UNDER TRUCK - OPPORTUNITY FOR MASSIVE FLOODING IN HEAVY STORM (2) door closed!

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 48 BUILDING OR AREA BUILDING 1 - Across F/48-101

DUMPSTER INFORMATION: MANUFACTURER DUMPSTER

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top - Flat Top (No Doors) -

Flat Top (With Doors) X Part Number 2408

Other Identification COMPACTIBLE RADIOACTUVE WASTE ONLY - #28, RETURN TO BLOC TAY8

Site Condition ASPHALT DRIVE DOWN YARD SLOPE FROM TAY8-01 RUN-OFF

DUMPSTER CONDITION: GENERAL FAIR

PAINT OLD, FADED GRAY/YELLOW

EXTERNAL SURFACES RUSTY, BROWN STREAKS FROM STIFFEN

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side GOOD FIT CLOSED, 1/2" VS HASP

Passenger Side CLOSE FIT - COULD NOT OPEN - HANDLE BENT - SPRING LOOSE - APPARENTLY UNUSED

DISCHARGE RAMP CONDITION: Driver Side GOOD FIT, UNDAMAGED

Passenger Side GOOD

Front GOOD Back GOOD

OTHER COMPONENTS: Top Doors 3/8" GAP @ CLOSURE, COULD BE OPENED ~ 2 1/2"

Side Lugs GOOD - REINFORCED WITH FISH PLATES

Chain Adaptors GOOD - CAST WITH CHANNEL REINFORCEMENT

Pick-up Bar GOOD - MIXED GND DESIGN

Hinges GOOD (VISIBLE)

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments TOP DOORS ID RAD | CH |

HVGS SHAPS

Recommendations CANNONIZED PANELS & SCRAP | X2 |

Replace with D-1 Dumpster

INSPECTOR [Signature] DATE 9/22/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 48 BUILDING OR AREA (-01) across from TA 48 12 5 meter RC-12 GAS METER

DUMPSTER INFORMATION: MANUFACTURER Dumpston

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification RADIO ACTIVE WASTE ONLY - COMPACTABLE

Site Condition BOTTOM OF 42" EMBANKMENT, ACROSS DRAINAGE DITCH (11)

DUMPSTER CONDITION: GENERAL FAIRLY GOOD

PAINT GOOD, NEW, CREAM COLORED

EXTERNAL SURFACES FAIRLY GOOD

INTERNAL SURFACES NOT VISIBLE - FULL OF LLW CONTAINERS

DOOR CONDITIONS: Driver Side BENT OVER BOTTOM - FAIRLY TIGHT (CLOSED) 3/4" GAP VS HASP

Passenger Side 3/8" GAP (CLOSED) - 1 1/4" OPEN VS HASP

DISCHARGE RAMP CONDITION: Driver Side BADLY DAMAGED SPRUNG @ BOTTOM - 1 1/2" GAP @ TOP

Passenger Side FAIRLY GOOD - 1/8" GAP

Front PARTIALLY SUBMERGED IN MUD Back NOT VISIBLE FOR MUD SLIDE

OTHER COMPONENTS: Top Doors FLATTENED & SEALED WITH RUBBER - GOOD

Side Lugs GOOD REINFORCED W/ PLATE

Chain Adaptors ~~DRIVEN~~ ^{DRIVEN} SIDE BENT OUT OF ALIGNMENT, PASSENGER SIDE OK

Pick-up Bar OK - BOXED END DESIGN

Hinges BURIED IN MUD

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments TOP DOORS IN BAD SHAPE (11)

HVGS

Recommendations CANNIBALIZE PARTS & SCRAP (X2)

Replace with D-1 Dumpster

INSPECTOR _____ DATE 9/22/89

(11) GAP UNDER DUMPSTER STILL MUDDY - 3" DEEP RUN-OFF WILL FLOOD DISCHARGE RAMP
(on
HASP)

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 50 BUILDING OR AREA WM 2

DUMPSTER INFORMATION: MANUFACTURER DEMPSEY

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) X

Flat Top (With Doors) — Part Number 2339

Other Identification COMPROMISED WATER ONLY

Site Condition GRAVEL NEAR RAMP, Fairly sheltered by BLDG, high location

DUMPSTER CONDITION: GENERAL Fairly Good but Field Modified *

PAINT Good, Fairly Recent Cream & Gold

EXTERNAL SURFACES Good

INTERNAL SURFACES Not Accessible

DOOR CONDITIONS: Driver Side Could not open by Hand - probably not used

Passenger Side Could not open by Hand - probably not used

DISCHARGE RAMP CONDITION: Driver Side Good

Passenger Side Good

Front Good Back Good

OTHER COMPONENTS: Top Doors N.A.

Side Lugs Good. Reinforced with Fish plate

Chain Adaptors OK

Pick-up Bar OK

Hinges center hinge dented - others OK

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

* Inspector Comments (2) BACK DOORS for full height loading: 36" X 36" for full entry were installed. Bottom Door spring open 1" to bottom LVGS

Recommendations SALVAGE FOR FEW USABLE PARTS
DO NOT MODIFY - DO NOT REPLACE

INSPECTOR

Jim Lyle

DATE 5/23/89

CF
XZ

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 50 BUILDING OR AREA WM 37

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) -

Flat Top (With Doors) - Part Number 3899 WHITE PAINT

Other Identification "COMPACTIBLE 35" STENCILED ON BOTH DOORS"

Site Condition Asphalt Drive Located Near Drainage From WM 37, E UNDER TRUCK
FLOODING POSSIBLE

DUMPSTER CONDITION: GENERAL Good

PAINT Faded, Peeled, Scuffed, Rusted @ Pick-up Point Shows from Stiffeners

EXTERNAL SURFACES Relatively Good

INTERNAL SURFACES _____

DOOR CONDITIONS: Driver Side 2" GAP vs. HASP - 1/2" GAP WHEN CLOSED

Passenger Side _____

DISCHARGE RAMP CONDITION: Driver Side 3/8" GAP, COULD SEE CARTONS

Passenger Side SAME - 3/8" GAP

Front OK - NO VISIBLE GAP Back OK

OTHER COMPONENTS: Top Doors ~

Side Lugs OK

Chain Adaptors OK

Pick-up Bar OK

Hinges OK - NOT ENTIRELY VISIBLE

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments BOTTOM STIFFENERS ARE 4" OPEN END CHANNELS
WELDED TO DISCHARGE RAMP. CHANNELS COULD FILL WITH WATER - FREEZE
THEN DUMP 9 GALLONS H₂O ONTO HIGHWAY - in BF

Recommendations ROUND TOP FAIRLY GOOD CONDITION - SALVAGE FOR
MODIFICATION - DO NOT REPLACE MR

INSPECTOR Jim Fye DATE 5/23/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 50 BUILDING OR AREA WM 37

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) _____

Flat Top (With Doors) _____ Part Number 3898 (WHITE PAINT)

Other Identification "N COMPASTIBLE-39" STENCILED ON BOTH DOORS

Site Condition FLOODING POSSIBLE: ASPHALT DRIVE, NEAR WM 37 DRAINAGE, UNDER A TREE

DUMPSTER CONDITION: GENERAL GOOD

PAINT FADED, SCRAPPED GRAY EYELLOW. RUST STAINING FROM EXTERNAL STIFFENERS

EXTERNAL SURFACES RELATIVELY GOOD- NO LARGE DENTS OR PUNCTURES

INTERNAL SURFACES NOT ACCESSIBLE- DUMPSTER FULL OF CARTONS

DOOR CONDITIONS: Driver Side 3/8" GAP VS HASP- SPRUNG @ TOP

Passenger Side 7/8" GAP VS HASP. SPRUNG @ RIGHT UPPER CORNER

DISCHARGE RAMP CONDITION: Driver Side 3/4" VERTICAL GAP- GOOD FIT

Passenger Side 3/8" VERTICAL GAP - GUIDES IN GOOD CONDITION

Front GOOD Back GOOD

OTHER COMPONENTS: Top Doors _____

Side Lugs OK- NO REINFORCEMENT

Chain Adaptors OK

Pick-up Bar BADLY RUSTED, FIELD REPAIR BY WELDING ONE SIDE- SUSPECT

Hinges _____

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments ROUND TOP FAIRLY GOOD CONDITION

LVGS

Recommendations SALVAGE FOR MODIFICATION

DO NOT REPLACE

INSPECTOR Jim Fry

DATE 5/23/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 53 BUILDING OR AREA E/F
 DUMPSTER INFORMATION: MANUFACTURER —
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) X
 Flat Top (With Doors) — Part Number —
 Other Identification "RADIO ACTIVE WASTE ONLY" (No "C" or "NC")
 Site Condition Good. on Asphalt - Fairly High
 DUMPSTER CONDITION: GENERAL POOR - SHELL PARTIALLY MADE OF THIN PLATE
 PAINT Good. New CRUM
 EXTERNAL SURFACES RADLY DAMAGED, CAUSED IN 2 PENETRATIONS @ BOTTOM (1)
 INTERNAL SURFACES NOT ACCESSIBLE. WAREHOUSE LATCHES ARE OPERABLE BY HAND
 DOOR CONDITIONS: Driver Side 1 1/4" GAP (CLOSED) @ BOTTOM HINGE NOG
 Passenger Side TIGHT FIT, SYMONE OPEN @ BOTTOM CORNER
 DISCHARGE RAMP CONDITION: Driver Side 3/8" GAP TURNED UP
 Passenger Side GOOD FIT
 Front (1) (Int External surfaces) Back OK
 OTHER COMPONENTS: Top Doors —
 Side Lugs PROBABLY OK FOR STRENGTH, GUSSET REINFORCEMENT, LOOK LIKE REPLACEMENTS
 Chain Adaptors BENT - CAST TYPE - BOTH SET @ ODD ANGLES
 Pick-up Bar OK - "Loop" TYPE - UNIDY WELD - LOT OF SPATTER
 Hinges 75% VISIBLE - LOOK OK DESPITE DAMAGE TO SHELL
 CONTACT: — Phone —
 Organization —
 Contact Comments —

Inspector Comments POOR CONDITION FOR HAND TOP
LOT OF REWORK REQUIRED

HUGS

Recommendations HOLD FOR MODIFICATION - SCRAP
IF NOT REQUIRED - REPLACE WITH D-1

INSPECTOR Jan [Signature]

DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 53 BUILDING OR AREA E/F

DUMPSTER INFORMATION: MANUFACTURER —

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) —

Flat Top (With Doors) — Part Number —

Other Identification "RADIO ACTIVE WASTE ONLY. NON COMPACTABLE"

Site Condition GOOD - ASPHALT HAND STAND. 14 ft

DUMPSTER CONDITION: GENERAL GOOD

PAINT GOOD - NEW CAMM

EXTERNAL SURFACES GOOD

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side GOOD FIT - 1/4" GAP CLOSED ON HINGE SIDE TOP (1)

Passenger Side SAME AS DRIVER'S SIDE

DISCHARGE RAMP CONDITION: Driver Side RAMP GOOD FIT UP

Passenger Side SAME AS DRIVER'S SIDE

Front OK Back NO LOCK GOOD CONDITION

OTHER COMPONENTS: Top Doors —

Side Lugs OK - NOT REINFORCED

Chain Adaptors OK - CAST - NOT REINFORCED

Pick-up Bar OK - LOOP TYPE - SLIGHTLY FLATTENED @ ENDS

Hinges 75% VISIBLE - LOOK OK

CONTACT: — Phone —

Organization —

Contact Comments —

Inspector Comments GOOD CONDITION HAND TOP | B/H

GOOD UNIT TO MODIFY TO D-1 CONDITION

Recommendations MODIFY TO D-1 CONDITION & RETURN | ML

INSPECTOR — DATE 9/27/89

(b) 1/2" X 2" TONGUE CUT INSPECTION SLOT BOTH DOORS
WEAR STRIP OVER BOTH DOORS - INTACT

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 54 BUILDING OR AREA G
DUMPSTER INFORMATION: MANUFACTURER DEMPSTER
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top _____ Flat Top (No Doors) _____
Flat Top (With Doors) X Part Number _____
Other Identification "RADIOACTIVE WASTE ONLY"
Site Condition _____
DUMPSTER CONDITION: GENERAL COMPLETELY WRECKED
PAINT NEWLY PAINTED - CREAM
EXTERNAL SURFACES _____
INTERNAL SURFACES _____
DOOR CONDITIONS: Driver Side CAVED IN
Passenger Side _____
DISCHARGE RAMP CONDITION: Driver Side RAMP SEPARATED FROM SHELL
Passenger Side CAVED IN
Front _____ Back _____
OTHER COMPONENTS: Top Doors DAMAGED
Side Lugs _____
Chain Adapters _____
Pick-up Bar _____
Hinges _____
CONTACT: JOHN HARPER Phone _____
Organisation _____
Contact Comments _____

Inspector Comments _____

Recommendations REMOVE USABLE PARTS & SCRAP XZ

INSPECTOR *Jim Fyfe*

DATE 9/29/89

(b) Could NOT DETERMINE IF THE RAMP HAD BEEN REMOVED FOR MAINTENANCE
OR ACCIDENTALLY KNOCKED LOOSE

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 5.5 BUILDING OR AREA Dock N2
 DUMPSTER INFORMATION: MANUFACTURER _____
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top X Flat Top (No Doors) —
 Flat Top (With Doors) — Part Number —
 Other Identification RADIOACTIVE WASTE ONLY - NON COMPACTIBLE
 Site Condition GOOD FLAT ASPHALT - NO APPARENT DRAINAGE
 DUMPSTER CONDITION: GENERAL GOOD
 PAINT NEW, CRAM
 EXTERNAL SURFACES GOOD
 INTERNAL SURFACES NOT ACCESSIBLE - FULL OF LLW
 DOOR CONDITIONS: Driver Side 1/2" X 1/2" WEATHER BAR OVER TOP CUT OUT bottom center - GOOD - ONLY 1/4" GAP VS HA
 Passenger Side SAME AS DRIVER - ONLY 1" GAP VS HASP - SMOOTH CATCH BOTH SIDES
 DISCHARGE RAMP CONDITION: Driver Side GOOD - GUIDES IN GOOD SHAPE
 Passenger Side SAME
 Front GOOD - UNDAIMAGED Back GOOD - UNDAIMAGED
 OTHER COMPONENTS: Top Doors N.A.
 Side Lugs GOOD - NO RUN FORGEMENT
 Chain Adapters GOOD - HEAVY CHAIN
 Pick-up Bar GOOD - LARGE GAS HOLES / SAND PITS DRIVER SIDE WELD
 Hinges APPARENTLY OK - NOT ACCESSIBLE
 CONTACT: _____ Phone _____
 Organisation _____
 Contact Comments _____

Inspector Comments good shape, hard top | BH
HVGS

Recommendations Modify to D-1 Condition | ML
1 Return to service

INSPECTOR Jim Lye DATE 8/3/88

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 55 BUILDING OR AREA DOCK N2

DUMPSTER INFORMATION: MANUFACTURER DUMPSER

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number —

Other Identification RADIO ACTIVE WASTE ONLY - COMPACTIBLE

Site Condition ASPHALT, FLAT, TOO CLOSE TO CUTTER DOWN SPOT

DUMPSTER CONDITION: GENERAL VERY GOOD - BEST YET

PAINT FRESH, CROWN ALL OVER

EXTERNAL SURFACES VERY GOOD - MINOR DENTS & DINGS

INTERNAL SURFACES NOT ACCESSIBLE

DOOR CONDITIONS: Driver Side GOOD - NOT WARPED - TOP HINGE - 1" GAP VS HASP

Passenger Side GOOD - SMOOTH OPERATION - NOT WARPED - 3/4" GAP VS HASP

DISCHARGE RAMP CONDITION: Driver Side GOOD - SLIGHT MISALIGNMENT @ BACK

Passenger Side GOOD - UNDAMAGED GUIDES - GOOD KIT 50% BROKEN

Front OK SLIGHT WARPING Back 1/2" GAP @ PASSENGER SIDE CORNER

OTHER COMPONENTS: Top Doors SLIGHTLY WARPED - BACK / DRIVER SIDE

Side Lugs GOOD - NO REINFORCEMENT

Chain Adaptors GOOD - HEAVY CASTING INSIDE CHANNEL - CHANNEL OPEN @ TOP - CLOSED BOTTOM

Pick-up Bar GOOD

Hinges APPARENTLY OK - NOT VISIBLY ACCESSIBLE

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments 90 BOAES 4747 KG GROSS, 4.2 M³ - ENVELOPE WITH PAPER WORK ON OUTSIDE

Recommendations Replace with D-1 -

CANNON LUG PARTS

INSPECTOR [Signature] DATE 8/3/88

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 54 BUILDING OR AREA G
DUMPSTER INFORMATION: MANUFACTURER _____
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top - Flat Top (No Doors) -
Flat Top (With Doors) X Part Number H7TDF
Other Identification "RADIO ACTIVE WASTE ONLY"
Site Condition TEMPORARY STORAGE PRIOR TO MAINTENANCE
DUMPSTER CONDITION: GENERAL FAIR
PAINT OLD, FADED, GRAY & YELLOW (BROUGHT IN FOR RE-PAINTING)
EXTERNAL SURFACES NO MAJOR DAMAGE
INTERNAL SURFACES DAYLIGHT THRU CLOSURES
DOOR CONDITIONS: Driver Side 1/2" (CLOSED), 1 1/2" GAP VS. HASP
Passenger Side HANDLE BENT DOWN - COULD NOT CATCH - 1/4" GAP ACROSS TOP
DISCHARGE RAMP CONDITION: Driver Side GOOD FIT UP
Passenger Side GOOD FIT UP
Front 3/8" ACROSS FRONT Back NO LOCK OK
OTHER COMPONENTS: Top Doors 1/2" GAP ALL AROUND
Side Lugs GOOD Reinforced with Fish Plates
Chain Adaptors GOOD - CASE CONSTRUCTION - REINFORCED WITH C
Pick-up Bar GOOD - BOXED ENDS - 50% WELD
Hinges OK 50% VISIBLE
CONTACT: JOHN HARDER Phone _____
Organization _____
Contact Comments _____

Inspector Comments Fairly good shape

Recommendations 2nd priority for modification

INSPECTOR

Jim Fyfe

DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 54 BUILDING OR AREA G
DUMPSTER INFORMATION: MANUFACTURER DUMPSTER
SIZE 10 Yards TYPE Bottom Discharge, Side Loading
CONFIGURATION: Round Top - Flat Top (No Doors) -
Flat Top (With Doors) X Part Number -
Other Identification "RADIO-ACTIVE TRASH ONLY"
Site Condition TEMPORARY STORAGE PRIOR TO MAINTENANCE
DUMPSTER CONDITION: GENERAL BAD
PAINT OLD, FADED, GRAY & YELLOW (BROUGHT IN FOR RE-PAINTING)
EXTERNAL SURFACES SHELL CAVED IN ON PASSENGER SIDE
INTERNAL SURFACES DAY LIGHT THRU GAPS
DOOR CONDITIONS: Driver Side MASSIVE DAMAGE
Passenger Side CONSIDERABLE DAMAGE
DISCHARGE RAMP CONDITION: Driver Side Fairly good
Passenger Side fairly good
Front Fairly good Back Not visible
OTHER COMPONENTS: Top Doors -
Side Lugs OK - Reinforced w/ fish plates
Chain Adaptors OK - cast construction - Reinforced w/ channel
Pick-up Bar OK - boxed ends - 50% WELDED
Hinges OK - 75% VISIBLE
CONTACT: JOHN HARDER Phone -
Organization -
Contact Comments -

Inspector Comments -

Recommendations SCRAP

INSPECTOR Jim Fye

DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number 57

Other Identification RADIO ACTIVE WASTE C

Site Condition TEMPORARY STORAGE PRIOR TO MAINTENANCE

DUMPSTER CONDITION: GENERAL FAIRLY GOOD

PAINT OLD, FADED, GRAY & YELLOW (BROUGHT IN FOR RE-PAINTING)

EXTERNAL SURFACES NO MAJOR DAMAGE

INTERNAL SURFACES DAYLIGHT THRU GAPS

(1) DOOR CONDITIONS: Driver Side 2" VS HASP - Tight (closed) (1)

Passenger Side 3/4" GAP VS HASP

DISCHARGE RAMP CONDITION: Driver Side OK

Passenger Side 1" X 10" GAP @ Bottom

Front OK Back OK

OTHER COMPONENTS: Top Doors FAIR - could be welded shut.

Side Lugs GOOD

Chain Adaptors GOOD -

Pick-up Bar OK - BOX ENDS

Hinges OK - 50/20/10/6

CONTACT: JOHN HARPER Phone _____

Organization _____

Contact Comments _____

Inspector Comments _____

Recommendations 2nd priority for Modification

INSPECTOR [Signature] DATE 9/29/89

(1) 3/4" X 2" inspection slot - (1) DOWN ONLY

DATA SHEET

LLM DUMPSTER INSPECTION

LOCATION: TA 54 BUILDING OR AREA G
 DUMPSTER INFORMATION: MANUFACTURER —
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top X Flat Top (No Doors) —
 Flat Top (With Doors) — Part Number —
 Other Identification "RADIO ACTIVE WASTE ONLY--" C
 Site Condition TEMPORARY STORAGE PRIOR TO MAINTENANCE
 DUMPSTER CONDITION: GENERAL Fairly good - shell intact
 PAINT OLD, FADED, GRAY & YELLOW (BROUGHT IN FOR RE-PAINTING)
 EXTERNAL SURFACES Fairly good, no major damage
 INTERNAL SURFACES Daylight thru closures
 (1) DOOR CONDITIONS: Driver Side stuck open - 3/4" gap all around
 (1) Passenger Side Slightly caved in - weather strip intact - 3/8" gap across
 DISCHARGE RAMP CONDITION: Driver Side 3/8" gap - guides damaged / re-welded
 Passenger Side good fit up
 Front OK Back No lock good fit
 OTHER COMPONENTS: Top Doors —
 Side Lugs Poor condition - light weight / Bent - need to be replaced
 Chain Adaptors Fair - Cast construction - NO Reinforcement
 Pick-up Bar OK - Loop type - good weld
 Hinges 50% visible - Look OK
 CONTACT: JOHN HARPER Phone —
 Organization —
 Contact Comments —

Inspector Comments DAMAGED AREAS CAN BE REPAIRED DURING MODIFICATIONS - UNIT LOOKS TO BE BASICALLY SOUND

Recommendations MODIFY TO D-1 Condition

INSPECTOR Jim Fyfe DATE 9/29/89

(1) 1 1/3" x 1 1/2" x 3 1/2" inspection slots torch cut in both doors

DATA SHEET

LLW DUMPSTER INSPECTION

54 (6)

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) —

Flat Top (With Doors) — Part Number 637-30

Other Identification N COMPACTOR RADIOACTIVE WASTE ONLY

Site Condition Temporary Storage

DUMPSTER CONDITION: GENERAL Good

PAINT old, faded, Gray & yellow (in for painting)

EXTERNAL SURFACES Good

INTERNAL SURFACES NOT ACCESSIBLE - NOT TOO MUCH DAYLIGHT

DOOR CONDITIONS: Driver Side 1/4" Gap (closed) Across top weatherstripping ok

Passenger Side 3/8" Gap - WEATHER STRIP INTACT

DISCHARGE RAMP CONDITION: Driver Side 1/4" gap Turned up

Passenger Side 1/4" GAP TURNED UP

Front ok Back No Lock - Fairly good fit

OTHER COMPONENTS: Top Doors —

Side Lugs Bent, damaged light weight: Replace

Chain Adaptors OK - Cast construction - no reinforcement

Pick-up Bar OK loop type good weld

Hinges 75% visible - OK

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments GOOD CONDITION FOR REWORK

Recommendations MODIFY TO D-1

INSPECTOR

Jim Fyfe

DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

54-⑦

LOCATION: TA 54 BUILDING OR AREA C

DUMPSTER INFORMATION: MANUFACTURER DENKSTEN

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top - Flat Top (No Doors) -

Flat Top (With Doors) X Part Number -

Other Identification RADIOACTIVE WASTE ONLY

Site Condition Temporary for Storage

DUMPSTER CONDITION: GENERAL Fairly good

PAINT old, faded, gray/yellow (in for re-painting)

EXTERNAL SURFACES NO MASSIVE DAMAGE

INTERNAL SURFACES DAYLIGHT THRU CLOSURES

(1) DOOR CONDITIONS: Driver Side COVER IN-Slightly 3/4" gap across top (closed)

(1) Passenger Side 1 1/4" Gap vs H&S

DISCHARGE RAMP CONDITION: Driver Side 1/2" gap turned up

Passenger Side 1/4" OUT OF LINE

Front OK Back NO LOCK - NOT VISIBLE

OTHER COMPONENTS: Top Doors Slightly warped

Side Lugs Bent - Reinforced w/ fish plate - Replace

Chain Adaptors OK - cast - no reinforcement

Pick-up Bar OK boxed end - full weld

Hinges 50% visible - probably OK

CONTACT: - Phone -

Organization -

Contact Comments -

Inspector Comments -

Recommendations 2nd priority for modification

INSPECTOR Jim Fyfe DATE 9/29/89

① Inspection slot correct but in lower door edge: (1" X 3")

DATA SHEET

LLW DUMPSTER INSPECTION

LOCATION: TA 54 **BUILDING OR AREA** G
DUMPSTER INFORMATION: **MANUFACTURER** DGMPSTON
SIZE 10 Yards **TYPE** Bottom Discharge, Side Loading
CONFIGURATION: **Round Top** — **Flat Top (No Doors)** —
Flat Top (With Doors) X **Part Number** 2466
Other Identification RADIOACTIVE WASTE ONLY (No Co or NC)
Site Condition Temporary Storage
DUMPSTER CONDITION: **GENERAL** Poor
PAINT old, yellow/grey faded (in for re-painting)
EXTERNAL SURFACES SHALL FAN IN INTER
INTERNAL SURFACES NOT ACCESSIBLE: DAY LIGHT THRU CLOSURES
DOOR CONDITIONS: **Driver Side** 1" gap vs H&P - good fit (Closed)
Passenger Side 1/4" GAP CLOSED - 1" GAP VS H&P
DISCHARGE RAMP CONDITION: **Driver Side** SPRUNG 1/2" OUT OF LINE
Passenger Side 1" GAP FULL LENGTH - RAMP DOES NOT MEET WITH GUIDE
Front 1/2" GAP 60% ACROSS **Back** NOT VISIBLE FOR DIRT
OTHER COMPONENTS: **Top Doors** Fairly Flat - no sealant
Side Lugs OK - Reinforced w/ fish plate
Chain Adaptors Good - Cast construction - Reinforced w/ Channel (looking w/ink?)
Pick-up Bar OK - Boxed and no seal weld
Hinges 100% visible - rusted but probably OK
CONTACT: _____ **Phone** _____
Organization _____
Contact Comments _____

Inspector Comments _____

Recommendations second priority for modification to D-1 Top
Doors probably sufficiently flat to be seal welded
(if necessary)
INSPECTOR [Signature] **DATE** 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

54 (9)

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors) -

Flat Top (With Doors) - Part Number 44

Other Identification RADIOACTIVE WASTE - N COMPATIBLE

Site Condition Temporary Storage

DUMPSTER CONDITION: GENERAL Fairly good - few cracks in plate seams

PAINT old yellow / gray faded -

EXTERNAL SURFACES No massive damage

(1) INTERNAL SURFACES Paint still intact - Minimal rust - ok (2)

DOOR CONDITIONS: Driver Side Fairly good fit - 1/4" gap @ top (closed)

(1) Passenger Side 3/8" gap @ top - no lock

DISCHARGE RAMP CONDITION: Driver Side good fit

Passenger Side ok - good fit

Front NOT visible Back no lock - hasp BENT 90°

OTHER COMPONENTS: Top Doors -

Side Lugs Bent - no reinforcement

Chain Adaptors OK - cast construction - no reinforcement

Pick-up Bar OK - loop tight - full weld - slight flattening @ end

Hinges Pin out center Assy - 50% visible

CONTACT: _____ Phone _____

Organization _____

Contact Comments _____

Inspector Comments _____

Recommendations MODIFY TO D-1

INSPECTOR Jim Tyne DATE 9/29/89

(1) no lock: passenger side door

DATA SHEET

LLW DUMPSTER INSPECTION

54(10)

LOCATION: TA 54 BUILDING OR AREA G
 DUMPSTER INFORMATION: MANUFACTURER Dumpster
 SIZE 10 Yards TYPE Bottom Discharge, Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) —
 Flat Top (With Doors) X Part Number 2141
 Other Identification "RADIOACTIVE TRASH ONLY"
 Site Condition Temporary storage
 DUMPSTER CONDITION: GENERAL Fairly good
 PAINT old, faded gray & yellow (in for re-painting)
 EXTERNAL SURFACES Fairly good - no massive damage
 INTERNAL SURFACES stuff still inside in garbage bags
 DOOR CONDITIONS: Driver Side NO Lock - Hasp gone - tape peeled off
 Passenger Side sealed w/ tape
 DISCHARGE RAMP CONDITION: Driver side OK
 Passenger Side 1/4" out of line
 Front 7'6" gap along front Back 50% visible - looked OK
 OTHER COMPONENTS: Top Doors bent & damaged
 Side Lugs OK - cast design - no reinforcement
 Chain Adapters OK - Reinforced w/ fish plate
 Pick-up Bar OK - boxed end - full width
 Hinges 100% visible - look OK
 CONTACT: _____ Phone _____
 Organisation _____
 Contact Comments _____

Inspector Comments _____

Recommendations Second priority for Modification to D-1

INSPECTOR

Jim Fyfe

DATE

9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION 54-12

LOCATION: TA 54 BUILDING OR AREA G
 DUMPSTER INFORMATION: MANUFACTURER Dumpster
 SIZE 10 Yards TYPE Bottom Discharge Side Loading
 CONFIGURATION: Round Top — Flat Top (No Doors) X
 Flat Top (With Doors) — Part Number 20
 Other Identification RADIOACTIVE WASTE ONLY - COMPACTIBLE
 Site Condition Temporary Storage
 DUMPSTER CONDITION: GENERAL Good
 PAINT Faded / yellow & gray / (1/4" for re-painting)
 EXTERNAL SURFACES Good - Ruptured shell @ upper passenger side front corner
 INTERNAL SURFACES Not accessible - daylight thru closures
 DOOR CONDITIONS: Driver Side Good fit (closed) 1 1/4" gap vs hump
 Passenger Side Good fit closed - 1 1/4" gap vs hump
 DISCHARGE RAMP CONDITION: Driver Side 1/4" out of line
 Passenger Side Good fit
 Front GK Back No lock - fit OK
 OTHER COMPONENTS: Top Doors —
 Side Lugs Good - fishplate Reinforcement
 Chain Adaptors Good - Cast construction - channel Reinforcement
 Pick-up Bar Good - boxed end - no seal weld
 Hinges 100% visible - looked good
 CONTACT: _____ Phone _____
 Organisation _____
 Contact Comments _____

Inspector Comments Good condition Hand Top - Large Volume

Recommendations Prime Candidate for modification

INSPECTOR

Jim Fye

DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION

54(13)

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER _____

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) X

Flat Top (With Doors) — Part Number 650-48

Other Identification "RADIOACTIVE WASTE ONLY - COMPACTIBLE"

Site Condition Temporary Storage

DUMPSTER CONDITION: GENERAL Good - Checked Headplate

PAINT Faded - yellow / grey - (In for re-painting)

EXTERNAL SURFACES Good NO OBSERVABLE DAMAGE TO STEEL

INTERNAL SURFACES DARKENED THRU CLOSURES

DOOR CONDITIONS: Driver Side 1/2" gap @ bottom (closed) 1" vs hasp

Passenger Side 1" gap vs hasp full length - 3/8" gap @ bottom (closed)

DISCHARGE RAMP CONDITION: Driver Side good fit

Passenger Side good fit

Front good fit Back good fit

OTHER COMPONENTS: Top Doors —

Side Lugs ANGLE TYPE - gusset reinforcement - undamaged

Chain Adaptors OK - cast construction - no reinforcement

Pick-up Bar OK - loop type - heavy used

Hinges 75% visible - look OK

CONTACT: _____ Phone _____

Organisation _____

Contact Comments _____

Inspector Comments Good condition - hand top - large volume

Recommendations Modify for D1

INSPECTOR [Signature] DATE 9/29/89

DATA SHEET

LLW DUMPSTER INSPECTION 54-11

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER N

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top X Flat Top (No Doors)

Flat Top (With Doors) Part Number

Other Identification

Site Condition Temporary storage

(2) DUMPSTER CONDITION: GENERAL Made out of checkered heavy plate
PAINT yellow/gray in for re-painting

EXTERNAL SURFACES No major damage to shell, few cracks in seams

INTERNAL SURFACES fairly good - most paint intact

(1) DOOR CONDITIONS: Driver Side No lock - Hansen latch

(1) Passenger Side No lock, hasp & Hansen latch damaged

DISCHARGE RAMP CONDITION: Driver Side 3/4" gap @ bottom

Passenger Side good fit

Front 50% visible - looks OK Back No lock - not visible for dirt

OTHER COMPONENTS: Top Doors

Side Lugs OK - no reinforcement

Chain Adaptors OK - Cast construction - no reinforcement

Pick-up Bar OK - loop type - full weld

Hinges 50% visible - look OK

CONTACT: Phone

Organization

Contact Comments

Inspector Comments

Recommendations OK for Modification from structural

stand point - different design (2) & smaller size give it secondary

priority among hand tops.

INSPECTOR Jim Faye DATE 9/29/89

(1) 1/2" inspection slot torch cut in lower edge both doors

DATA SHEET

LLW DUMPSTER INSPECTION TA 54(14)

LOCATION: TA 54 BUILDING OR AREA G

DUMPSTER INFORMATION: MANUFACTURER DUMPTON

SIZE 10 Yards TYPE Bottom Discharge, Side Loading

CONFIGURATION: Round Top — Flat Top (No Doors) —

Flat Top (With Doors) X Part Number 42

Other Identification "RADIOACTIVE TRASH ONLY - COMPARTMENT"

Site Condition Temporary storage

DUMPSTER CONDITION: GENERAL Fair

PAINT Faded, old, yellow/gray - (in for Repainting)

EXTERNAL SURFACES Ruptured DENT @ upper Passenger side corner

(1) INTERNAL SURFACES Paint intact - not bad - DAY LIGHT THROUGH ALL CLOSURES +

DOOR CONDITIONS: Driver Side HINGE BROKEN - 1/4" / 1 1/4" PICK UP BAR

Passenger Side No lock CRIPS

DISCHARGE RAMP CONDITION: Driver Side 1/4" GAP turned up

Passenger Side 1/4" gap turned up

Front OK Back OK

(2) OTHER COMPONENTS: Top Doors flattened & sealed

Side Lugs Good - Reinforced w/ fish plate

Chain Adapters Coiled - cast construction w/ channel Reinforcement

(1) Pick-up Bar good - boxed end - No seal weld

Hinges 100% visible - OK

CONTACT: _____ Phone _____

Organisation _____

Contact Comments _____

Inspector Comments Top doors - considerable damage to shell

Recommendations 2nd priority for Modification

(2) Top doors could be welded shut if necessary

INSPECTOR Jim Lya DATE 9/29/89

12.2. FIELD DATA

SOLID RADIOACTIVE WASTE DEHPSTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
TA-55	C/Dump	Kate Comp	7-2580	10/5/88	10-18-88	Chad
TA-41	C/Dump	Kate Comp	4084	10/20/88	10-26-88	Chad
TA-44	C/Dump	Kate Comp	7-2580	10/21/88	10/27/88	Chad
TA-45	C/Dump	Kate Comp	7-2580	10/21/88	10/26-88	Chad
TA-46	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-47	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-48	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-49	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-50	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-51	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-52	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-53	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-54	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-55	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-56	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-57	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-58	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-59	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-60	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-61	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-62	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-63	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-64	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-65	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-66	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-67	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-68	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-69	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-70	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-71	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-72	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-73	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-74	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-75	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-76	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-77	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-78	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-79	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-80	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-81	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-82	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-83	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-84	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-85	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-86	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-87	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-88	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-89	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-90	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-91	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-92	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-93	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-94	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-95	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-96	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-97	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-98	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-99	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad
TA-100	C/Dump	Kate Comp	7-2580	10/21/88	10-26-88	Chad

45737

SOLID RADIOACTIVE WASTE DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
TA-18	C / Dump	Raguel Paddy	7-AC84	11/7/88	11-15-88	Vigil A.
SM-29	N/C Dump	Pat	7-3730	11-8-88	11/9/88	Vigil A.
DM-28	C / Dumps	Pat	7-3730	11-8-88	11/8/88	Vigil A.
TA-55	C / Dumps	Kate C	7-9-84	11-9-88	1/10-88	Vigil A.
TA-55	N/C Dump	Kate C	7-3730	11-9-88	11-10-88	Vigil A.
TA-18	N/C. Dumps	Raguel	7-3045	11-9-88	11-10-88	Vigil A.
TA-54	N/C / Dump	Raguel	7-4157	11-15-88	11-16-88	Vigil A.
TA-53	N/C / Dumps	Sam	7-2069	11-15-88	11-17-88	Vigil A.
TA-15	N/C / Dumps	Sam	7-9317	11-15-88	11-17-88	Vigil A.
Suble	2 N-C / Dumps	Carol	7-5402	11-15-88	11/16/88	Vigil A.
Suble	1 C / Docks	Carol	7-5402	11-15-88	11-17-88	Vigil A.
Suble	1 C / Dumps	Kate	7-2580	11-16-88	11-18-88	Vigil A.
Suble	1 N-C / Dump	Kate	7-2580	11-16-88	11-21-88	Vigil A.
TA-50	1 N/C Dumpster	Charlie	7-5397	11-16-88	11-17-88	Vigil A.
TA-50	1 C Dumpster	Li	7-6917	11-17-88	11-30-88	Vigil A.
TA-50	1 C Dumpster	Li	7-7344	11-17-88	11-16-88	Vigil A.
TA-50	1 C Dumpster	Li	7-7344	11-17-88	11-18-88	Vigil A.
TA-43	C / Dump	Carol	7-2730	11/17/88	11-17-88	Vigil A.

SOLID RADIOACTIVE WASTE DEMPSTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
TA-2 Om-48	N-C - Dump	Todd	7-4151	11-17-88	11-21-88	Vigil A
TA-50	N-C Dump	Liz	7-6917	11-18-88	11-21-88	Vigil A
TA-50	18m Drums 100.255. ASK P.K. DRIVE'S.	Bill	7-2378	11/31	11-22-88	Vigil A
TA-50	mixed waste max tank to TA-35	Dave Silzer	7-4301	11/22	11-23-88	Vigil A
TA-21 Bldg 150	mixed waste	Victor Salazar	7-5988	11/22	11-28-88	Vigil A
TA-21	5 Drums @ 2-32 gal	Kirk B	7-2138	11/22	11-29-88	Vigil A
TA-55	C Dump	Camp	7-3730	11-23	11-29-88	Vigil A
TA-48	1 N/C	Kirk B	7-2138	11-23	11-28-88	Vigil A
TA-78 CMR	C D/P	Paul Hly	7-1551	11/28/88	11-28-88	Vigil A
TA-29	C-Dump SM 29	Patcy Benez	7-3730	11/28/88	11-30-88	Vigil A
TA-3 M-102	N-C - Dumpster	Mike Salazar	7-5256	11-29-88	11-30-88	Vigil A
TA-3 M-102	N/C Dumpster	GREG Shaparro	7-5211 7-1363	11/29/88	11-30-88	Vigil A
TA-55	27 Drums 9:00 12-1-88	Bill Hany	7-2378	12-30-88	12-1-88	Vigil A
TA-55	C / D/P	Kirk Camp	7-2138	11/30/88	12-5-88	Vigil A
TA-21	N-C - Dumpster Bldg 207 12-5-88 (Call)	Mary King	7-2858	12-1-88	12-5-88	Vigil A
TA-55	2 - N-C Dumps - A -	Tony Salazar	7-7069	12-1-88	12-2-88	Vigil A
TA-55	C / DUMP SM-29	Patcy	7-3730	12-5-88	12-6-88	Vigil A
TA-55	5 Drums					

SOLID RADIOACTIVE WASTE DUMPSTER DUMPSTER LOADS

AREA	ITEM	DATE	PHONE	CALLER	DATE	PICKED UP	DRIVER
MASS	18 CWSN DUMPS 9:30	12-6-88	7-2378	Bull Hayes	12-6-88	12-9-88	A. Vigil
MASS	C/Dump	12-6-88	7-2580	Kate Camp	12-6-88	12-13-88	Andrew
MASS	C/Dump	12-7-88	7-5102	Pattie	12-7-88	12-7-88	Vigil A.
MASS	C/Dump	12-7-88	7-3730	Pattie	12-7-88	12-12-88	Vigil A.
MASS	10:00 AM. Call a day	12-9-88	7-4653	Kenny Clark	12-9-88	12-12-88	Fred A.
MASS	N/C Dump a head of time to schedule	12-9-88	7-3046	Carolyn	12-9-88	12-14-88	Vigil A.
MASS	C/Dump	12-12-88	7-5402	P. Hie	12-12-88	1-8-89	Vigil A.
MASS	C/Dump	12-12-88	7-7579	Tom	12-12-88	12-13-88	A. Vigil
MASS	OTD - Pickup	12-12-88	7-5245	Martoya	12-12-88	12-15-88	B. Vigil
MASS	OTD - Pickup	12-12-88	2577	Kate	12-12-88	12-15-88	A. Vigil
MASS	OTD - Pickup	12-16-88	7-2580	Kate Camp	12-16-88	1-3-89	Andrew
MASS	C/Dump 2ea	12-20-88	7-3730	Patricia	12-20-88	1-4-89	Vigil A.
MASS	N/C Dump 9:30	12-20-88	7-2378	Bull Hayes	12-20-88	12-28-88	Vigil A.
MASS	C/Dump N/C	1-3-89	7-3236	Mike Secane	1-3-89	1-3-89	Vigil A.
MASS	C/Dump N/C	1-3-89	7-3045	MASSO	1-3-89	1-4-89	Vigil A.
MASS	C/Dump	1-4-89	7-5402	Carol Camp	1-4-89	1-9-89	Vigil A.
MASS	C/Dump	1-5-89	7-5438	Patricia	1-5-89	1-9-89	Vigil A.
MASS	27 DUMPS 9:30 Tues	1-6-89	7-2378	Hayes	1-6-89	1-10-89	Vigil A.

SOLID RADIOACTIVE WASTE DEMPSTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
TA-48	N/C Dump So. side	Rockwell	7-3045	1-10-89	1-11-89	Vigil A.
CHL	C/Dump	Cipri	7-3730	1-10-89	1-11-89	Vigil A.
TA-53	N/C Dump Loc. B	Watson	7-7069	1-10-89	1-12-89	Vigil A.
TA-55	N/C Dump	Kate	7-2580	1/10/89	1-13-89	Vigil A.
TA-55	N/C Dump	Call	7-5702	1/10/89		
TA-55	N/C Dump	Call	7-5702	1/10/89		
TA-21	1 DRUM in/overpack pick up tag	Kirk		1/11/89	1-17-89	Vigil A.
TA-21	1 C/Dump pick up tag	Kirk		1/12/89	1-17-89	Vigil A.
TA-58	18 Drums non 9:30	Bill King	7-2378	1-13-89	1-23-89	Vigil A.
	Pick up Van		7-5702	1-13-89	1-13-89	Shawling
	Pick Van		7-5202	1-13-89	1:30	Tamm, Haly
TA-55	N/C Dump	Call	7-3730	1-17-89	1-18-89	Vigil A.
CHL	C/Dump picking up	Cipri	7-3730	1-17-89	1-18-89	Vigil A.
TA-55	C/Dump	Kate	7-2580	1-18-89	1-23-89	Vigil A.
TA-52	2 Boxes Needles/Syringes	Coral	7-7890	1-18-89	2-9-89	Andrew C.
TA-55	N/C Dump	Mike	7-3936	1-18-89	1-25-89	Vigil A.
TA-55	2 non-comp	Coral	7-5402	1-18-89	1-25-89	Vigil A.
TA-55	2 Drums	Betsy	7-H301	1-19-89	1-24-89	Vigil A.

SOLID RADIOACTIVE WASTE DEMPSTER DUMPSTER LOADS

AREA	ITEM	CARRIER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
HRL-11	Compactable Dumpster	Archie Jr.	2738	1/20/89	1-24-89	Vigil A
TA-53	Non-Compactable	Jim Walton	7-7069	1/23/89	1-25-89	Vigil A
TA-55	C / Dumpster	Kate Camp	7-2580	1/23/89	1-25-89 1-30-89	Vigil A
Wing C	N/C Dumpster 10:00 a.m. Tuesday/Mon.	Dave Stephen	7-4653	1/25/89	1-30-89	Vigil A
Wing C	C / Dump	Ciprin	7-3730	1/25/89	1-25-89	Vigil A
TA-33	N/C Dump Bldg. 8th Call 5 hrs Before regular	John Lenger	104-2529	1-25-89	1-31-89	Vigil
SM 66	C / D Dump	Casal	7-5402	1-25-89	1-25-89	Vigil A
TA-21	N/C Dump Bldg 3/4 2/11/89 8:30	David Lowe	704-2622	1-26-89	1-31-89	Vigil A
TA-55	18 CWSR Drums Wed.	Bill Haas	7-2378	1-27-89	1-31-89	Vigil A
TA-45	C / Dump	R-Beatty		1/27/89	1-30-89	Vigil A
TA-55	C / Dump (f)	Kate Camp	7-2560	1/30/89	1-31-89	Vigil
TA-21	Dumpster N/C Bldg - 150 East Side	DAVE MITZ		1/31/89	2-2-89	Vigil A
TA-55	N/C Dumpster	Kate Camp	7-2580	1-31-89	2-8-89	Vigil A
CUR #	1/C Dump	Ciprin	7-3730	1/31/89	2-1-89	Vigil A
TA-55	18 Drums 8:30 1/21/89	Bill Haas	7-2378	1/31/89	2-2-89	Vigil A
TA-55	18 Drums 8:30 2/13/89 Fr.	Bill Haas	7-2378	1/31/89	2-3-89	Vigil A
TA-55	2 Drums		7-7166	2/2/89		
TA-55	1 C / Dump	Kate Camp	7-2580	2-3-89	2-8-89	Vigil A

SOLID RADIOACTIVE WASTE DEMISTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	PICKED UP	DRIVER
TA49	N/c dumpster	Rachel Rasky	7-4094	2-3-89	2-8-89	Uziel A.
TA50	18 TRU DRUMS 9:00	Betsy	7-4301	2-7-89	2-10-89	Clas A.
TA51	N/c Dump	Paula Rasky	1-4151	2-7-89	2-7-89	Uziel A.
TA52	N/c Dumpster	Betsy	7-3730	2-8-89	2-9-89	Uziel A.
TA53	DUMPS	Betsy	?	2-8-89	2-9-89	Uziel A.
TA54	I picked up dumpster from	TA 2 7 Times	7-3730	2-8-89	2-9-89	Uziel A.
TA55	N/c pump	Kate Camp	7-3730	2-9-89	2-13-89	Uziel A.
TA56	N/c pump	Betsy	7-24301	2-10-89	2-10-89	Uziel A.
TA57	N/c pump	Betsy	7-3730	2-13-89	2-13-89	Uziel A.
TA58	C/D pump	Betsy	7-3730	2-13-89	2-13-89	Uziel A.
TA59	N/c Dumpster	Betsy	5402	2-13-89	2-14-89	Uziel A.
TA60	Camp. Dumpster	Kate Camp	2529	2-14	2-15-89	Uziel A.
TA61	N/c Dumpster	Kate Camp	12529	2-14	2-15-89	Uziel A.
TA62	N/c Dumpster	Kate Camp	7-7574	2-15-89	2-13-89	Uziel A.
TA63	N/c Dumpster	Betsy	7-2378	2-16-89	2-20-89	Uziel A.
TA64	N/c Dumpster	Betsy	7-54105	2-17-89	2-21-89	Uziel A.

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SOLID RADIOACTIVE WASTE DEMPSTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
TA-55	C / Dumpster	Kate C.	7-2580	2-17-89	2-21-89	Vigil A.
TA-55	N/C Dumpster	Kate C.	7-2580	2-17-89	2-21-89	Vigil A.
MR	C / D Dumpster	Pippin	7-3730	2-18-89	2-23-89	Vigil A.
SM102	C / D Dumpster	Mike Seaton	7-4198	2-21-89	2-24-89	Vigil A.
TA-55	C / Dump	Kate Camp	7-2580	2-24-89	3-1-89	Vigil A.
TA-55	N/C Dump	Kate Camp	7-2580	2-24-89	2-28-89	Vigil
TA-55	C / Dumpster	Kate Camp	7-2580	2-28-89	2-28-89	Vigil A.
MR	C / Dumpster	Pippin	7-3730	3-1-89	3-2-89	Vigil A.
MR	N/C Dumpster	Pippin	7-3730	3-1-89	3-2-89	Vigil A.
TA-50	S&F N/C Dumpster	Charlie W.	7-5397	3-2-89	3-2-89	Vigil +
TA-55	C / D Dumpster	Kate Camp	7-2580	3-2-89	3-6-89	Vigil A.
SM29	DANIEL GRAD		7-3730	3-6-89		DANIEL GRAD
SM29	DUMPSTER	CIPRINO	7-3730	3-6-89		
TA-55	N/C Pump call for this	Keggy Hunt	7-4653	3-7-89	3-9-89	Vigil A.
SM64	N/C Dump	Carol Gossney	7-5402	3-7-89	3-10-89	Vigil A.

3-7-89

SOLID RADIOACTIVE WASTE DEMPSTER DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
1A-16	N/C Dump	Phillip Del...	7-6705	3-7-89	3-10-89	Virgil A.
1A-16	N/C Dump	Kate Camp	7-2580	3-7-89	3-9-89	Virgil A.
1A-16	C/pump	Pippie	7-3730	3/8/89	3-8-89	Virgil A.
1A-16	C/pumpster	Gerry Mosso	7-3015 or 2105	3-8-89	3-9-89	Virgil A.
1A-16	N/C Dumpster call	Robert Baldiger	7-4963	3-8-89	3-10-89	Tom F.
1A-16	16 Drums - SS gal	Tom M.	7-7579	3-8-89	3-8-89	Virgil A.
1A-54	Greg L. Dump 70.5	Bill Haggy	7-30-3-14-89	3-9-89	3-14-89	Virgil A.
1A-54	17 Drums before picking up	John Stone	7-3378	3-9-89	3-13-89	Virgil A.
1A-53	N/C Dumpster	Walton	7-7069	3-10-89	3-14-89	Virgil A.
1A-53	C/pumpster	Kate Camp	7-2580	3-10-89	3-13-89	Virgil A.
1A-53	N/C Dumpster	Kate Camp	7-2580	3-10-89	3-13-89	Virgil A.
1A-53	27 Drums	Bill Haggy	7-2378	3-13-89	3-14-89	Virgil A.
1A-53	1 N/C Dumpster	Walton	7-7069	3-14-89	3-14-89	Virgil A.
1A-53	C/pumpster	Kate Camp	7-2580	3/14/89	3-15-89	Virgil A.
1A-53	1 N/C Dumpster	Walton	7-7069	3/14/89	3-15-89	Virgil A.
1A-53	1 N/C Dumpster	Walton	7-7069	3/14/89	3-15-89	Virgil A.
1A-50	1 N/C Dumpster	Becky		3/15/89	3-16-89	Virgil A.
1A-55	10 Drums 9:30 Fri	Bill It	7-2378	3/16/89	3-17-89	Virgil A.
1A-55	1 (C/pump)	Pippie	7-3730	3/18/89	3-21-89	Virgil A.

SOLID RADIOACTIVE WASTE DEMPSTER DUMPS TER LOADS

AREA	ITEM	CALLER	PHONE	DATE	PICKED UP	DRIVER
T-21	VC/Dump Bldg ISO	Lt Uesil	5788	3/20/89	3-22-89	Vesil A
M55	N/C Dump	Kate Camp	2580	3/20/89	3-23-89	Vesil A
M55	N/C Dump	Kate Camp	2580	3/20/89	3-23-89	Vesil A
A-48	N/C Dumpster	R-Bear	3045	3/22/89	3-24-89	Chapman
M55	N/C Dumpster 3-28-89 N/C Dumpster 3-30-89	Shelby, Sinc.	2378	3/23/89	3-28-89	Vesil A
CUR	N/C Dumpster	Jiggle	3730	3/27/89	3-28-89	Vesil A
CUR	N/C Dumpster	Jiggle	5730	3/27/89	3-29-89	Vesil A
SIN02	N/C Dumpster	Mike Secora	3030	3/27/89	3-29-89	Vesil A
DASU	14 Drum CWSIS	Betsy	2/361	3/27/89	3-31-89	Vesil A
W-21	Fruit box of truck	Carol	3730	3/31/89	4-3-89	Vesil A
M55	N/C Dumpster	Carol	3730	3/31/89	4-3-89	Vesil A
SINL6	N/C Dumpster	Carol	3730	3/31/89	4-3-89	Vesil A
CUR	N/C Dumpster	Capin	2580	3/31/89	4-4-89	Vesil A
JASS	N/C Dumpster	Kate Camp	2580	3/31/89	4-4-89	Vesil A
M55	N/C Dumpster	Kate Camp	2580	3/31/89	4-4-89	Vesil A
T-43	N/C Dumpster	Annie		4/7/89	4-3-89	Vesil A

SOLID RADIOACTIVE WASTE DUMPSTER LOADS

AREA	ITEM	CALLER	PHONE	DATE	DATE & TIME PICKED UP	DRIVER
7466	1 C Dumpster	Carol	3-3189	4-6-89	4-6-89	David A.
7455	27 Drum Cans	Bill Hag	7-2378	4-6-89	4-10-89	David A.
7450	1 C/pumpster	Betsy	4-3019	4-7-89	4-12-89	David A.
7455	2 C/pumpster	Kate Kemp	7-2580	4-7-89	4-11-89	David A.
7446	1 W/C Dumpster	Phillip Bell	7-1205	4-11-89	4-12-89	David A.
7446	1 C/pumpster	Quinn	7-3730	4-11-89	4-12-89	David A.
7453	TAKE TWO Dumpsters	Larkins	7-8982	4-11-89	4-12-89	David A.
7453	1 W/C Dumpster	Dave Shapiro	7-1153	4-12-89	4-14-89	David A.
7455	1 C/pumpster	Kate Kemp	7-2580	4-12-89	4-13-89	David A.
7455	1 W/C Dumpster	Dave Barry	7-5829	4-12-89	4-13-89	David A.
7455	27 Drum Cans	Bill Hag	7-2378	4-13-89	4-13-89	David A.
7455	1 W/C Dumpster	Dave Barry	7-5829	4-13-89	4-13-89	David A.
7455	1 W/C Dumpster	Jim Miller	7-0669	4-13-89	4-13-89	David A.
7455	1 W/C Dumpster	Jim Miller	7-2069	4-13-89	4-13-89	David A.
7455	1 W/C Dumpster	Rick Gutierrez	7-4816	4-17-89	4-19-89	David A.
7455	1 W/C Dumpster	Bill Hag	7-2378	4-17-89	4-18-89	David A.
7455	1 W/C Dumpster	Tommy Bibel	7-0184	4-17-89	4-18-89	David A.
7455	1 W/C Dumpster	Tommy Bibel	7-0184	4-17-89	4-19-89	David A.
7455	1 W/C Dumpster	Kate Kemp	7-2580	4-17-89	4-19-89	David A.

PH #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
46861	TA 54 SEC G.	COLD - DD	10	TAN	NO TOP D.
1495	TA 46 BLDG. 87	COLD - PACKMASTER	10	GREY	TOP DOOR
468821	TA 46 BLDG. 25	CONST. BOX	4	TAN	GOOD
3759	TA 46 BLDG. 77	COLD - PACKMASTER	10	GREY	GOOD
3951	TA 46 BLDG. 158	COLD - PACKMASTER	10	TAN	GOOD
651	TA 46 BLDG. 121	COLD - PACKMASTER	10	GREY	GOOD
3805	TA 46 BLDG. 24	COLD - PACKMASTER	10	BROWN	GOOD
2927	TA 46 BLDG. 42	COLD - PACKMASTER	10	GREY	GOOD
1496	TA 46 BLDG.	COLD - PACKMASTER	10	GREY	GOOD
2549	TA 46 BLDG. 24	COLD - PACKMASTER	10	GREY	GOOD
3956	TA 46 BLDG. 187	COLD - PACKMASTER	10	TAN	GOOD
3957	TA 46 BLDG. 31	COLD - PACKMASTER	10	TAN	GOOD
2462	TA 46 BLDG. 31	HOT - DD	10	GR-YEL	GOOD
46851	TA 46 BLDG. 31	HOT - DD	10	GR-YEL	GOOD
51720	TA 46 BLDG. 179	COLD - PACKMASTER	10	TAN	GOOD
4006	TA 46 BLDG. 178	COLD - PACKMASTER	10	TAN	GOOD
3761	TA 46 BLDG. 200	COLD - PACKMASTER	10	GREY	NO TOP D.
3804	TA 46 BLDG. 154	COLD - PACKMASTER	10	GREY	NO TOP D.
51739	TA 46 BLDG. 88	COLD - PACKMASTER	4	TAN	GOOD
1503	TA 52 BLDG. 155	COLD - PACKMASTER	10	GREY	GOOD
3817	TA 52 BLDG. 48	COLD - PACKMASTER	10	GREY	NO TOP D.
2122	TA 52 BLDG. 48	COLD - DD	4	GREY	NO TOP D.
596	TA 52 YARD	COLD - DD	4	GREY	NO TOP D.
46810	TA 52 YARD	COLD - DD	10	WHITE	GOOD
2916	TA 52 YARD	COLD - PACKMASTER	10	GREY	GOOD
1679	TA 52 YARD	DD - PAPER MILL	10	GREY	GOOD
NONE	TA 52 YARD	DD - PAPER MILL	10	GREY	GOOD

PN #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
2404	TA 48 RC 38	HOT - DD	10	GR-YEL	GOOD
2552	TA 48 RC 38	COLD - PACKMASTER	10	GREY	LEFT DOOR
2437	TA 48 RC 57	COLD - DD	10	WHITE	GOOD
3977	CEN GUA FAC	COLD - PACKMASTER	10	TAN	GOOD
3958	TA 59 OH 3	COLD - PACKMASTER	10	TAN	GOOD
3838	TA 59 OH 3	COLD - PACKMASTER	10	GREY	NO TOP D.
3767	TA 59 OH 1	COLD - PACKMASTER	10	GREY	NO TOP D.
46812	TA 59 OH 1	COLD - DD	10	WHITE	GOOD
2766	TA 59 OH 1	COLD - PACKMASTER	10	GREY	TOP DOOR
2126	TA 59 OH 1	HOT - DD	4	GR-YEL	GOOD
46809	TA 3 SM 130	COLD - DD	10	WHITE	GOOD
3945	TA 3 SM 282	COLD - PACKMASTER	4	TAN	NO TOP D.
1982	TA 53 MPF 2	COLD - PACKMASTER	10	GREY	GOOD
45643	TA 53 MPF 40	COLD - PACKMASTER	10	GREY	BAD DOORS
51736	TA 53 MPF 18	COLD - PACKMASTER	10	TAN	GOOD
664	TA 53 MPF 14	COLD - PACKMASTER	10	GREY	BAD DOORS
51718	TA 53 MPF 17	COLD - PACKMASTER	10	TAN	TOP DOOR
51728	TA 53 MPF 6	COLD - PACKMASTER	10	TAN	GOOD
51737	TA 53 MPF 6	COLD - PACKMASTER	10	TAN	GOOD
1985	TA 53 MPF 7	COLD - PACKMASTER	10	GREY	GOOD
51721	TA 53 MPF 405	COLD - PACKMASTER	10	TAN	GOOD
3066	TA 53 MPF 4	COLD - PACKMASTER	10	GREY	GOOD
3099	TA 53 MPF 4	COLD - PACKMASTER	10	GREY	GOOD
1984	TA 53 AREA A	HOT - DD	10	GR-YEL	GOOD
653	TA 53 AREA A	HOT - DD	10	GR-YEL	GOOD
2683	TA 53 BIO MED	COLD - DD	10	GREY	NO TOP D.
2135	TA 53 SEC. G	COLD - PACKMASTER	10	GREY	NO LEFT D

PN #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
3993	TA 53 SEC. H	COLD - PACKMASTER	10	TAN	GOOD
636	TA 53 SEC. E&F	HOT - DD	10	GR-YEL	GOOD
2528	TA 53 SEC. E&F	HOT - DD	10	GR-YEL	GOOD
48549	TA 53 MPF 26	COLD - PACKMASTER	10	BROWN	BAD DOORS
1492	TA 53 SEC. D	COLD - PACKMASTER	10	GREY	DOOR HAN.
3916	TA 53 MPF 3	COLD - PACKMASTER	10	TAN	GOOD
4010	TA 53 LOB	COLD - PACKMASTER	10	TAN	GOOD
4008	TA 53 LOB	COLD - PACKMASTER	10	TAN	GOOD
3820	TA 53 MPF 3	COLD - PACKMASTER	10	GREY	GOOD
677	TA 53 MPF 3	COLD - PACKMASTER	10	GREY	GOOD
3886	TA 53 MPF 3	COLD - PACKMASTER	10	GREY	GOOD
51727	TA 53 MPF 27	COLD - PACKMASTER	10	TAN	GOOD
549	TA 53 MPF 27	IRON BOX	4	GREY	GOOD
3697	TA 53 MAT. STO.	TOOL BOX			
578	TA 53 PA FIE.OF.	IRON BOX	4	GREY	GOOD
46860	TA 53 PA FIE OF.	CONST. BOX	4	WHITE	GOOD
3693	TA 53	MATERIAL STORATE BOX			
669	TA 53 MPF 432	COLD - PACKMASTER	10	GREY	GOOD
47819	TA 53 MPF 432	COLD - DD	10	GREY	GOOD
2509	TA 53 AREA C	HOT - DD	10	GR-YEL	GOOD
3990	FIRE RANGE	COLD - PACKMASTER	4	TAN	GOOD
2929	W. STEAM PL.	COLD - PACKMASTER	10	GREY	GOOD
43541	DOE	COLD - PACKMASTER	10	BROWN	BAD DOORS
51749	TA 21	COLD - PACKMASTER	10	TAN	GOOD
2914	TA 21 BLDG. 3	COLD - DD	10	BROWN	GOOD
2466	TA 21 BLDG. 3&4	HOT - DD	10	GR-YEL	GOOD
2438	TA 21 BLDG. 228	COLD - DD	10	GREY	GOOD

PN #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
2802	TA 52 YARD	DD - PAPER MILL	10	GREY	GOOD
3776	TA 52 BLDG. 11	DD - PAPER MILL	10	GREY	GOOD
2763	TA 52 BLDG. 35	COLD - PACKMASTER	10	GREY	NO TOP D.
3764	TA 50 BLDG. 37	COLD - PACKMASTER	10	GREY	NO TOP D.
3399	TA 50 BLDG. 37	HOT - DD	10	GR-YEL	GOOD
3398	TA 50 BLDG. 37	HOT - DD	10	GR-YEL	GOOD
3712	TA 50 BLDG. 69	WASTE TANK	10	TAN	GOOD
2765	TA 50 BLDG. 39	COLD - PACKMASTER	10	GREY	TOP DOOR
251	TA 50 BLDG. 39	HOT - DD	10	TA-YEL	GOOD
46856	TA 50 BLDG. 1	HOT - DD	10	GR-YEL	GOOD
2355	TA 50 BLDG. 1	HOT	SD	GREY	GOOD
681	TA 50 BLDG. 1	COLD - PACKMASTER	10	GREY	GOOD
2789	TA 35	CONST. BOX	4	GREY	GOOD
1983	TA 35 BLDG. 270	COLD - PACKMASTER	10	GREY	NO TOP D.
46844	TA 35 BLDG. 86	COLD - DD	10	WHITE	NO TOP D.
48543	TA 35 BLDG. 189	COLD - PACKMASTER	10	BROWN	NO TOP D.
2409	TA 35 BLDG. 188	COLD - PACKMASTER	10	GREY	GOOD
2922	TA 35 BLDG. 87	COLD - PACKMASTER	10	GREY	BAD DOORS
2410	TA 35 BLDG. 87	HOT - DD	10	GR-YEL	GOOD
48548	TA 35 BLDG. 87	COLD - PACKMASTER	10	BROWN	NO TOP D.
667	TA 35 BLDG. 2	COLD - PACKMASTER	10	GR-WHI	BAD DOORS
46821	TA 35 BLDG. 67	COLD - DD	10	TAN	GOOD
2338	TA 35 BLDG. 2	COLD - PACKMASTER	10	GREY	GOOD
4682	TA 35 BLDG. 2	HOT - DD	10	GR-YEL	GOOD
2334	TA 35 BLDG. 2	HOT - DD	10	GR-YEL	GOOD
NONE	TA 35 BLDG. 2	COLD - PACKMASTER	10	GREY	LEFT DOOR
2768	TA 35 BLDG. 2	COLD - PACKMASTER	10	GREY	NO TOP D.

PN #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
46347	TA 35 BLDG. 7	COLD - DD	10	WHITE	GOOD
2925	TA 35 BLDG. 27	COLD - PACKMASTER	10	GREY	LEFT DOOR
3953	TA 35 BLDG. 253	COLD - PACKMASTER	10	TAN	GOOD
3952	TA 35 BLDG. 127	COLD - PACKMASTER	10	TAN	GOOD
2398	TA 35 BLDG. 125	COLD - PACKMASTER	10	GR-WHI	NO TOP D.
2542	TA 35 BLDG. 125	COLD - DD	4	BROWN	GOOD
47817	TA 35 BLDG. 213	HOT - DD	10	TA-YEL	GOOD
2336	TA 35 BLDG. 213	HOT - DD	4	TA-YEL	GOOD
3842	TA 35 BLDG. 213	COLD - PACKMASTER	10	GREY	NO TOP D.
3995	TA 55 PF 3	COLD - PACKMASTER	10	TAN	GOOD
3991	TA 55 PF 3	COLD - PACKMASTER	10	TAN	GOOD
4020	TA 55 PF 2	COLD - PACKMASTER	10	TAN	GOOD
4009	TA 55 PF 4	COLD - PACKMASTER	10	TAN	GOOD
4012	TA 55 PF 42	COLD - PACKMASTER	10	TAN	GOOD
658	TA 55 PF 42	CONST. BOX	4	GREY	GOOD
47820	TA 55 DOCK 2&3	HOT - DD	10	TA-YEL	GOOD
632	TA 55 DOCK 2&3	HOT - DD	10	GR-YEL	GOOD
2405	TA 55 DOCK 2&3	HOT - DD	10	GR-YEL	GOOD
4011	TA 55 PF 6	COLD - PACKMASTER	10	TAN	GOOD
4005	TA 55 PF 124	COLD - PACKMASTER	4	TAN	GOOD
635	TA 48 BLDG. 1	HOT - DD	10	GR-YEL	GOOD
637	TA 48 BLDG. 1	HOT - DD	10	GR-YEL	GOOD
48546	TA 48 BLDG. 1	COLD - PACKMASTER	10	BROWN	NO TOP D.
3955	TA 48 BLDG. 1	COLD - PACKMASTER	10	TAN	GOOD
2402	TA 48 BLDG. 1	HOT - DD	10	GR-YEL	GOOD
3949	TA 48 BLDG. 1	COLD - PACKMASTER	10	TAN	GOOD
2408	TA 48	HOT - DD	10	GR-YEL	GOOD

PN #	LOCATION	HOT/COLD - TYPE	YARDS	COLOR	REMARKS
51734	TA 36 BLDG. 47	COLD - PACKMASTER	10	BROWN	TOP DOOR
1500	TA 36 BLDG. 12	COLD - PACK/DD	10	GREY	TOP DOOR
3405	TA 36 IJ POINT	COLD - PACKMASTER	4	GREY	TOP DOOR
51743	TA 36 BLDG. 69	COLD - PACKMASTER	4	TAN	GOOD
3997	TA 18 BLDG. 139	COLD - PACKMASTER	10	TAN	GOOD
2821	TA 18 BLDG. 139	COLD - DD - CONST.	4	GREY	GOOD
3992	TA 18 BLDG. 129	COLD - PACKMASTER	10	TAN	GOOD
644	TA 18 BLDG. 30	COLD - PACKMASTER	10	GREY	GOOD
3840	TA 18 BLDG. 30	COLD - PACKMASTER	10	GREY	GOOD
2548	TA 18 BLDG. 30	ASBESTOS - DD	4	GREY	GOOD
2556	TA 18 BLDG. 32	HOT - DD	10	GR-YEL	GOOD
2681	TA 18 BLDG. 116	HOT - DD	10	TA-YEL	GOOD
2336	TA 18 BLDG. 23	HOT - DD	10	TA-YEL	GOOD
2411	TA 18 BLDG. 23	HOT - DD	10	GR-YEL	GOOD
2557	TA 54 AREA G	COLD - PACKMASTER	10	GREY	RIGHT D.
47419	TA 54 AREA G	HOT - DD	SD	GREY	GOOD
2856	TA 54 AREA G	HOT - DD	SK	GR-YEL	GOOD
2412	TA 54 AREA G	HOT - DD	10	GR-YEL	GOOD
2339	TA 54 AREA G	HOT - DD	10	TA-YEL	GOOD
2432	TA 54 AREA G	HOT - DD	SD	YELLOW	GOOD
2444	TA 54 AREA G	HOT - DD	SD	YELLOW	GOOD
47420	TA 54 AREA G	HOT - DD	SD	GR-YEL	GOOD
2393	TA 54 AREA G	HOT - DD	4 DD	GR-YEL	GOOD
46855	TA 54 AREA G	HOT - DD	10 DD	GR-YEL	GOOD
2414	TA 54 AREA L	COLD - PACKMASTER	10	GREY	LEFT DOOR
NONE	TA 54 AREA L	HOT - DD	SD	BLACK	GOOD
NONE	TA 54 AREA L	HOT - DD	SD	BLACK	GOOD

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

The purpose of this survey is to obtain field performance data on approximately 70 10-cubic-yard dumpster type containers that are used exclusively for temporary storage and on-site transportation of LLW at 16 waste generating sites at Los Alamos National Laboratory (LANL). Reports of water leakage from LLW dumpsters onto the highway during transportation from the generating site to TA-54 have been recorded. It is the goal of our overall program, therefore, to solve this leakage problem both on a short term "immediate fix" as well as long range basis so that the potential for contamination from compactable and non-compactable wastes in transit will be reduced to an absolute minimum.

We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name J.A. WALTON Organization HSE-11
2. How many Dumpsters do you work with? 6
3. Approximately how often do you call TA-54 for Dumpster pick up? TWO WEEK INTERVALS
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 2000 feet.
5. Non-compactable wastes? 2000 feet.
6. Do you have LLW dumpsters that are rarely used? YES
7. If so, how many? ONE
8. Do you need more dumpsters? NO
9. If so, how many? _____
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? NO
11. Have you ever observed or received reports of your dumpsters leaking fluids? YES
12. Approximate Date SIX MONTHS AGO
13. What was the source of the leakage? Rain _____ Snow _____
Other ☒ UNKNOWN AND UNSOLVED
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors _____
Bottom discharge ramp ☒ Top doors _____
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

J.A. Walton

Date

8/7/89

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

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We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name Cipriano Gomez Organization MST-10
2. How many Dumpsters do you work with?
3. Approximately how often do you call TA-54 for Dumpster pick up? once a week
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 40 feet.
5. Non-compactable wastes? 35 feet.
6. Do you have LLW dumpsters that are rarely used? no
7. If so, how many?
8. Do you need more dumpsters? no
9. If so, how many?
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? no
11. Have you ever observed or received reports of your dumpsters leaking fluids? no
12. Approximate Date
13. What was the source of the leakage? Rain Snow
Other none
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors none
Bottom discharge ramp none Top doors none
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Cipriano Gomez

Date

8/22/77

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

The purpose of this survey is to obtain field performance data on approximately 70 10-cubic-yard dumpster type containers that are used exclusively for temporary storage and on-site transportation of LLW at 16 waste generating sites at Los Alamos National Laboratory (LANL). Reports of water leakage from LLW dumpsters onto the highway during transportation from the generating site to TA-54 have been recorded. It is the goal of our overall program, therefore, to solve this leakage problem both on a short term "immediate fix" as well as long range basis so that the potential for contamination from compactable and non-compactable wastes in transit will be reduced to an absolute minimum.

We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop C 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

Raquel Beatty

1. Name Jerilyn Mosso Organization HSE-10
2. How many Dumpsters do you work with? 5
3. Approximately how often do you call TA-54 for Dumpster pick up? every 3 weeks
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 150 feet.
5. Non-compactable wastes? 75 feet.
6. Do you have LLW dumpsters that are rarely used? no
7. If so, how many? _____
8. Do you need more dumpsters? no
9. If so, how many? _____
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? no
11. Have you ever observed or received reports of your dumpsters leaking fluids? no
12. Approximate Date _____
13. What was the source of the leakage? Rain _____ Snow _____
Other _____
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors _____
Bottom discharge ramp _____ Top doors _____
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Raquel Beatty
Jerilyn Mosso

Date

8/9/89

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

The purpose of this survey is to obtain field performance data on approximately 70 10-cubic-yard dumpster type containers that are used exclusively for temporary storage and on-site transportation of LLW at 16 waste generating sites at Los Alamos National Laboratory (LANL). Reports of water leakage from LLW dumpsters onto the highway during transportation from the generating site to TA-54 have been recorded. It is the goal of our overall program, therefore, to solve this leakage problem both on a short term "immediate fix" as well as long range basis so that the potential for contamination from compactable and non-compactable wastes in transit will be reduced to an absolute minimum.

We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name C. Goosney Organization HSE-1
2. How many Dumpsters do you work with? 7
3. Approximately how often do you call TA-54 for Dumpster pick up? 2-4 x / mon.
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 250 feet.
5. Non-compactable wastes? 250 feet.
6. Do you have LLW dumpsters that are rarely used? yes
7. If so, how many? 1
8. Do you need more dumpsters? no
9. If so, how many?
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? no
11. Have you ever observed or received reports of your dumpsters leaking fluids? yes
12. Approximate Date JAN/FEB 89
13. What was the source of the leakage? Rain ☒ Snow ☒ Other
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors 2nd Bottom discharge ramp Top doors 1st
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed Carol Goosney HSE-1 Date 8/9/89

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

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We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop ES17. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name ANDREW L. VIGIL Organization Pan AM TEAM TEN
2. How many Dumpsters do you work with? 10 +
3. Approximately how often do you call TA-54 for Dumpster pick up? every day in the morning
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? N/A feet.
5. Non-compactable wastes? N/A feet.
6. Do you have LLW dumpsters that are rarely used? yes
7. If so, how many? Three or so
8. Do you need more dumpsters? NO
9. If so, how many? NO
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? yes
11. Have you ever observed or received reports of your dumpsters leaking fluids? NO
12. Approximate Date NO
13. What was the source of the leakage? Rain NO Snow NO Other NO
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors NO Bottom discharge ramp NO Top doors YES
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Andrew Vigil

Date

2-1-83

T.K. Thompson, Incorporated

July 28, 1989

JAF-89-13

Mr. Andrew Vigil
Pan-American World Services, Inc.
TA 54 Area G
c/o LANL Waste Management

Subject: Development of Improved Dumpsters for LLW Handling

Dear Mr. Vigil:

I would appreciate very much if you would take a few minutes of your time to answer the following questions concerning the LLW handling operations.

1. Do you recall the circumstances involved in picking up seven (7) dumpster loads of material from TA-2 on February 2, 1989? (Copy of Log included.) Was this construction refuse or special clean-up? Only one container

was picked up. No more than that. Some one call 7 days
ago to pick it up. a day - compactible 1 each.

We are trying to determine whether or not to allow for this type of peak loading at TA-2 in the future. Is there someone at TA-2 we should contact for this information? Name: Todd 7-4151 Robert-4151 Gerald R...

2. Is the listing of LANL personnel who call you for LLW pick-up current?

Yes Do you know of additional personnel we should contact? Names and TA Numbers THE WASTE Generator of each
area. There is a lot of Name and people

3. There seems to be a three to four day period between the date when a user calls for pick-up and the date of actual pick-up. Is this by design to provide ample lead time prior to pick-up, or is it because you are overloaded? *

Overloaded. And for the time. Some where else. I think it is

What do the users do with accumulated LLW during this period? Store it in the

dumpster. And if it is full, they will call you again.

Could, in your opinion, some dumpsters be eliminated if this lead time could be reduced? No because some dumpster full up at different times

than others. Some take 1 day some 2 days.

The enclosed questionnaire was designed primarily for LANL users at each pick-up point but since we certainly value any input you might have in solving the dumpster leakage problem I have included a copy for your review. Please answer the questions you feel are applicable to your position and return them with the other information.

* This average time period appears excessive over the 48 hour protection period for security reasons.

JUL

Mr. Andrew Vigil
June 28, 1989
JAF-89-005
Page 2

5. Do you have any objections to our including the information you provide us in our report to LANL? Yes _____ No ✓

6. Is it permissible to use your name in connection with this survey? Yes ✓ No _____

Please return the answers to these questions, along with any other information you feel would be useful, to T.K. Thompson, Mail Stop MS-E517, or call me at (505) 672-9444 and I will pick up this paperwork from Mr. Catanach. Please do not hesitate to call me if you have questions or if you prefer to discuss this project over the phone or during lunch.

Thank you, again, for your help during my field survey last month and I hope to see you again in the near future.

Yours truly,

Jim Frye

Jim Frye
Principal Engineer

JF:at

Enclosures (3)

*Call me to T.K. If need to know anything else
or I could see you some where and I could let you know
I will see you soon! I know that you*

Andrew Vigil

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

The purpose of this survey is to obtain field performance data on approximately 70 10-cubic-yard dumpster type containers that are used exclusively for temporary storage and on-site transportation of LLW at 16 waste generating sites at Los Alamos National Laboratory (LANL). Reports of water leakage from LLW dumpsters onto the highway during transportation from the generating site to TA-54 have been recorded. It is the goal of our overall program, therefore, to solve this leakage problem both on a short term "immediate fix" as well as long range basis so that the potential for contamination from compactable and non-compactable wastes in transit will be reduced to an absolute minimum.

We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name Phillip DeNaglas Organization WLX-3
2. How many Dumpsters do you work with? 1
3. Approximately how often do you call TA-54 for Dumpster pick up? 1 every 2 months
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 100 feet.
5. Non-compactable wastes? 150 feet.
6. Do you have LLW dumpsters that are rarely used? NO
7. If so, how many?
8. Do you need more dumpsters? NO
9. If so, how many?
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? NO
11. Have you ever observed or received reports of your dumpsters leaking fluids? NO
12. Approximate Date
13. What was the source of the leakage? Rain Snow
Other
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors
Bottom discharge ramp Top doors ✓
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Phillip DeNaglas

Date

8/22/89

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

The purpose of this survey is to obtain field performance data on approximately 70 10-cubic-yard dumpster type containers that are used exclusively for temporary storage and on-site transportation of LLW at 16 waste generating sites at Los Alamos National Laboratory (LANL). Reports of water leakage from LLW dumpsters onto the highway during transportation from the generating site to TA-54 have been recorded. It is the goal of our overall program, therefore, to solve this leakage problem both on a short term "immediate fix" as well as long range basis so that the potential for contamination from compactable and non-compactable wastes in transit will be reduced to an absolute minimum.

We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name Kenny Ault Organization HSE-10
2. How many Dumpsters do you work with? 1
3. Approximately how often do you call TA-54 for Dumpster pick up? Once a month
4. What is the farthest estimated distance that ^{non}compactable wastes are hauled or carried to your Dumpsters? 125 feet.
5. Non-compactable wastes? feet.
6. Do you have LLW dumpsters that are rarely used?
7. If so, how many? we only have one dumpster in wing-9 that
8. Do you need more dumpsters? is a N-C waste
9. If so, how many?
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site?
11. Have you ever observed or received reports of your dumpsters leaking fluids? NO
12. Approximate Date
13. What was the source of the leakage? Rain Snow
Other
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors
Bottom discharge ramp Top doors
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed K. Ault Date 8-4-89

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

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We would appreciate your assistance in answering these questions and returning this Questionnaire to T.K. Thompson, Inc., mail drop E 517. Please do not hesitate to call Jim Frye or T.K. Thompson at 672-9444 for assistance in filling out this Questionnaire.

1. Name Mike Sacman Organization mec-1
2. How many Dumpsters do you work with? Two
3. Approximately how often do you call TA-54 for Dumpster pick up? Twice a month
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 100 feet.
5. Non-compactable wastes? 125 feet.
6. Do you have LLW dumpsters that are rarely used? NO
7. If so, how many? _____
8. Do you need more dumpsters? _____
9. If so, how many? _____
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? YES
11. Have you ever observed or received reports of your dumpsters leaking fluids? NO
12. Approximate Date _____
13. What was the source of the leakage? Rain _____ Snow _____
Other _____
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors _____
Bottom discharge ramp _____ Top doors _____
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Mike Sacman

Date

8-4-59

T.K. Thompson, Incorporated

QUESTIONNAIRE - LOW LEVEL WASTE (LLW) SURVEY

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1. Name GERALD RAMSEY Organization INC-5
2. How many Dumpsters do you work with? 4
3. Approximately how often do you call TA-54 for Dumpster pick up? RADIOACTIVE - APPROX MONTHLY NON RADIOACTIVE - BIWEEKLY
4. What is the farthest estimated distance that compactable wastes are hauled or carried to your Dumpsters? 100 feet.
5. Non-compactable wastes? 500 feet.
6. Do you have LLW dumpsters that are rarely used? YES
7. If so, how many? 2
8. Do you need more dumpsters? NO
9. If so, how many? _____
10. Would your requirements be better served by calling TA-54 as soon as LLW is ready for pick up and not using dedicated dumpsters permanently located at your site? NO
11. Have you ever observed or received reports of your dumpsters leaking fluids? NO
12. Approximate Date _____
13. What was the source of the leakage? Rain _____ Snow _____ Other _____
14. Where, in your opinion, is the location of the greatest amount of in-leakage due to the weather? Side doors _____ Bottom discharge ramp _____ Top doors X
15. Please include any comments and/or suggestions you may have concerning this problem. Feel free to include as many separate sheets as required. Your help will be greatly appreciated.

Signed

Gerald Ramsey

Date

8/7/89

12.3. CORRESPONDENCE, TELECONS
AND
MEETING REPORTS

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544

PROPOSED PROJECT PLAN

Portable Container Study - Radioactive Waste Transportation Program

PROJECT OBJECTIVES

The objectives of this study are twofold:

- (A) To investigate the condition of dedicated containers presently used in the over-the-road transportation of radioactive wastes generated at various Los Alamos National Laboratory (LANL) sites, as well as the type of routine operations to which these containers are currently subjected. Results of this investigation should include cost-effective recommendations for short range solution of the leakage problem inherent with the type of bottom discharge units currently employed at LANL for both combustible and non-combustible radioactive wastes.
- (B) Make long-range recommendations for optimum over land transportation systems and equipment to be compatible with both existing and future requirements. Typical future requirements include, but are not limited to, the following:
 - Transportation of radioactive wastes as received from the automated waste handling system planned for TA-55
 - Unloading and handling of radioactive wastes to new incinerator(s) currently in the planning stage.
 - Handling and transportation of large, bulky, contaminated objects using equipment as nearly interchangeable with that required for routine container transfer as is practical.
 - Handling and transportation of contaminated soil.

In order to implement this project, the following tasks are proposed:

1.A KICK-OFF MEETING(S)

One or more kick-off meetings are recommended for the following purposes:

- 1.1 Insure complete understanding of the project scope.
- 1.2 To establish methods for implementing and reporting the project.
- 1.3 To establish a working schedule including intermediate review dates and submittals.
- 1.4 To identify technical contacts for the various areas involved in the project.

1.B A PROJECT PLAN AND SCHEDULE will be prepared and presented within two weeks after completion of the kick-off meetings and an intermediate meeting scheduled for review.

2.0 REVIEW MEETINGS

2.1 Two additional intermediate review meetings are proposed for the following purposes.

2.1.1 Review progress of the study as indicated by the status of the technical submittals.

2.1.2 Insure compliance with the established project scope.

2.1.3 Incorporate client comments and direction.

2.2 A final project review meeting is proposed prior to submittal of the finished report.

3.0 FIELD WORK

Work to be performed in the field will consist of the following:

3.1 Inspection of typical containers used in existing operations.

3.2 Dimensional sketches of containers to be used in studying potential retrofit solutions to the leakage problem (e.g., elastomer seals, new discharge doors, container liners, etc.).

3.3 Observation of container transportation operations including: loading, opening, discharging, and closing.

3.4 Interviewing users, equipment operators waste management personnel and engineers that have been associated with the problem, and recording their suggestions and comments.

3.5 Although not part of this project scope, waste generation volumes and frequency of container fill-up at LANL sites will be generally noted. This study will be coordinated with the work of other investigators into waste generation.

3.6 A section of the report will be dedicated to data obtained from field work.

4.0 VENDOR LIAISON

Past and potential manufacturers of over-the-road waste handling systems and equipment will be contacted and their recommendations screened and recorded. Budgetary cost estimates will be solicited for potential short and/or long range solutions.

5.0 CONCEPTUAL ANALYSIS

Concepts for (a) solving the short range container leakage problem and (b) long range, over land transportation of radioactive wastes at LANL will be analyzed and optimum concepts selected for recommendation.

6.0 REPORT PREPARATION

A project report will be prepared that will include the following:

- 6.1 Project scope description.
- 6.2 Executive summary.
- 6.3 Description of recommended short-range solution to container leakage problem, including cost estimates and alternate solutions.
- 6.4 Description of a recommended long-range over land transportation system (if different from #6.3), including cost estimates and alternate solutions.
- 6.5 Pictorial drawings as required to illustrate recommended concepts 6.3 and 6.4.
- 6.6 Estimated schedules for implementing engineering/construction projects for both short and long-range waste handling solutions.
- 6.7 Report Appendix, including:
 - 6.7.1 Vendor correspondence, catalog information and telephone notes.
 - 6.7.2 Material handling calculations.
 - 6.7.3 Technical input from other D.O.E. Laboratories, government facilities, and other available sources.

7.0 COST ESTIMATES OF RECOMMENDED CONCEPT(S)

In addition to Intermediate and Final Review Meetings, it is proposed that a bi-monthly progress report will be submitted that will discuss work status, man hours utilized, schedule and scope compliance, and problem areas. Telephone notes, copies of correspondence, and minutes of meetings and conferences will accompany each progress report.

Conference Notes: Kick Off Meeting for the Low-Level Waste (LLW) Dumpster
Study, Task 009 on April 7, 1989

Attendees: Karen Balo, Waste Management
Jim Frye, T.K. Thompson, Inc.

Results of Meeting:

1. Jim Frye will submit detailed project plan and schedule including review dates and deliverables at the next meeting scheduled for 1:30 pm April 18, 1989.
2. Karen Balo will coordinate field activities (i.e., truck routes, loading/unloading operations) through John Harper.
3. Jim Frye will call Bill Radzinski (667-2116) for engineering input and results of any prior investigations.
4. Container and waste transportation vendors are to be contacted by Jim Frye during course of investigation.
5. Future loading/unloading operations are to be analyzed as well as those presently in use. Typical future requirements include, but are not limited to, the following:
 - Transportation of radioactive wastes as received from the Automated Waste Handling System planned for TA-55;
 - Unloading and handling of radioactive wastes to new incinerator(s) currently in the planning stage;
 - Handling and transportation of large, bulky, contaminated objects using equipment as nearly interchangeable with that required for routine container transfer as is practical; and
 - Handling and transportation of contaminated soil.
6. It was emphasized that the scope of the existing project has schedule priority over the additional waste generation survey to be discussed on April 10, 1989.

Jim Frye
Project Engineer

Distribution: Karen Balo
T.K. Thompson
Project Files

T.K. Thompson, Incorporated

Conference Notes: LLW Container Study

Date: Wednesday, 26 April 1989

Attendees: Bill Radzinski - ME6
Jim Frye - TKT, Inc.

Mr. Radzinski was extremely helpful in providing technical information concerning the 10 yard dumpster type container that is primarily used for temporary storage and on-site transportation of low level wastes (72 10 yard D.D containers vs. 18 other sizes and types).

We were provided with a detailed list of all containers currently used at LANL that was broken down by container size, type, service (hot or cold), location (TA and building or area), part number, color coding, and general condition. This is information very important to the study.

Mr. Radzinski also suggested that consideration be given to the use of Bonar Industries (or equivalent) bulk containers as liners for the 10 yard containers. These liners are manufactured from polypropylene castings for specific applications. Mr. Radzinski reported excellent service in handling contaminated graphite at LANL and provided pricing information that indicated that the cost of using Bonar containers as disposable liners would probably not be prohibitive.

A cold ten yard container outside Building 30 was inspected so that typical internal conditions could be noted.

JF:at

Copies to: Bill Radzinski
T.K. Thompson
Project Files

T.K. Thompson, Incorporated

May 8, 1989

Marathon Equipment Company
Box 609A, Dept. TR
Vernon, AL 35592

SUBJECT: Request for Information - Refuse Container Weatherseal-
Short/Long Term for Los Alamos National Laboratory

Gentlemen:

As Engineering Consultants to the Waste Management Division of the Los Alamos National Laboratory, we are currently investigating periodic water leakage reported to have emanated from some of 72 ten yard refuse containers used in on-site storage and transportation of low level radioactive wastes (LLW). These containers are manually loaded with assayed and sealed 12"x12"x24" cardboard cartons containing dry LLW. Refuse is presorted, classified and stored as "compactible" or "non-compactible."

The ten yard containers are the standard "dumpster" bottom discharge type with flat or rounded tops (reference enclosed drawing). The vehicle normally assigned to LLW service is an International S1900 with a Perfection-Cobey Liftainer hydraulic handling system.

All LLW is currently transported to a controlled on-site landfill but combustible material will eventually be presorted and routed to an on-site incinerator.

Since all LLW is dry when packaged, it is evident that any moisture observed to be emanating from the 10 yard containers has been the result of in-leakage from rain and/or snow through inadequate weathersealing around the container openings.

Since the containers cannot be relocated indoors, we are faced with providing two types of solutions that center around the 10 yard containers themselves:

1. Short-Term Solution. This solution involves modification or replacement of existing containers with

preference given to inexpensive retrofit installations including, but not limited to, elastomer door seals, new types of weatherproof loading and discharge doors, plastic or sealed fabric liners, etc. Short-term solutions should include the use of off-the-shelf, readily available hardware from an existing or easily modified product line.

2. Long-Term Solutions. Future requirements dictate planning for the eventual use of innovative, enclosed systems and equipment for overland, on-site transportation of low level wastes. Solutions to the long-range handling problem could conceivably include, but not be limited to, specially developed containers, on-site shredding and/or compaction, air-lock loading and discharge, purged and/or ventilated systems. Future requirements will also include the safe handling of contaminated soil and bulky objects through the use of interchangeable equipment within the same transportation system.

A secondary but highly important requirement for both short- and long-range solutions is that neither cycle time nor physical effort expended by the operators should be increased and both should ideally be reduced to a minimum.

Cost, as always, is an important consideration and budgetary pricing information for standard product lines when included in your initial response will be appreciated.

In the event your firm is interested in providing assistance in solving this problem, we would appreciate receiving, as a minimum, catalog information and other pertinent company publications within two weeks after receipt of this letter, along with the name of your technical representative assigned to discuss the project.

Yours truly,

Jim Frye
Project Engineer

JF/hy

Enclosure

cc: Karen Balo, LANL
T.K. Thompson
Project Files

TKT Inc.

119 Yosemite Drive White Rock, New Mexico 87544

SAME LETTER SENT TO:

Consolidated Baling Machinery Company
5400 Rio Grande Avenue
Jacksonville, FL 32205

Galbreath, Inc.
Box 220
Winamac, IN 46996

Dempster Systems, Inc.
Box 3127-T
Knoxville, TN 37917
Attention: Mr. R. Whitson, Vice President
Sales and Marketing

Nott Company
Engineered Material Handling Division
1722 New Brighton Blvd.
Minneapolis, MN 55413

Tubar, Uhrden, Inc.
Box 561
Sugar Creek, OH 44681

CECOR, Inc.
102 Lincoln Street
Verona, WI 53593

Pewerless, Inc.
Box 447
Tualatin, OR 99062

FMC
Material Handling Systems Division
400 Highpoint Drive
Chalfont, PA 18914

SP Industries
2982 Jefferson Row
Hopkins, MI 49328
Attention: Mr. D. Pool, Director of Marketing

Wright Division
McCullough Industries
P.O. Drawer 222
Kenton, OH 43326
Attention: Mr. W. W. McCullough

Serpentix Conveyor Corporation
9085 Marshall, Dept. 7
Westminster, CO 80030

Solids Conversion Systems
203 3rd Street
Hopkins, MN 55343

Accurate Industries
Box 451-T
Williamstown, NJ 08094

Coastal Conveyor Systems, Inc.
Box 79728
Houston, TX 77279
Attention: Sidney M. Pattillo

American International Company
Box 515T
Wayne, PA 19087
Attention: R.D. Sharp

Benlee Trailers
750-T South Deacon
Detroit, MI 48217-1609

Compaction Technologies, Inc.
Dept. T, 621 S.W. Morrison Street
Suite 203
Portland, OR 97205
Attention: M. P. Malone

Compac Specialties, Inc.
138 E. Sixth Street
Holland, MI 49423

Custom Metal Industries, Inc.
4000T-S.W. 113th Street
Oklahoma City, OK 73119

McClain Industries
Box 913
Utica, MI 48087
Attention: K. McLain

Blaw-Knox Equipment
Box 1450-T
Pittsburgh, PA 15238

T.K. Thompson, Incorporated

TYPICAL 10YD CONTAINER

TELECON RECORD

DATE:
30 MAY 1989

TIME:
10:30

☒ AM
☐ PM

CALL: ☒ TO 404 886-2327
☐ FROM AREA CODE PHONE NUMBER

NAME(S): GLEN BARINOWSKI SALES MGR- DEMPSTER SYSTEMS, INC

PROJECT REFERENCE: 0900: LLW DUMPSTER STUDY

SUMMARY OF CONVERSATION:

DEMPSTER PROVIDED MOST OF THE TEN CUBIC YARD DUMPSTERS CURRENTLY USED IN LANL LOW LEVEL WASTE SERVICE. THEY ARE INTERESTED IN WORKING WITH US BUT DO NOT HAVE AN IMMEDIATE SOLUTION OF THEIR OWN.

CURRENT REPLACEMENT COST FOR THE EXISTING DUMPSTERS IS \$5460 EACH. F.O.B. SHOP TOCCOA, GEORGIA

COMMENTS:

REPLACEMENT OF 72
NON MODIFIED DUMPSTERS
SHIPPED TO LANL WOULD
BE ~ (5460 + 540 E&H) 72
OR: \$432,000

ACTION REQUIRED:

- ☐ FILE
- ☐ FOLLOW-UP
- ☐ VERBAL AGREEMENT
- ☐ SEND LETTER

- ☐ FYI
- ☐ WILL RECEIVE LETTER
- ☐ RESPOND WITH COMMENTS
- ☐ OTHER _____

DISTRIBUTION:

Report

RECORDED BY:

Jim Inye
NAME

EXT.: _____

T.K. Thompson, Incorporated

June 8, 1989
JAF-89-103

Mr. J. Keith Tarbett, Product Manager
SMR Technologies, Inc.
Engineered Rubber Products Division
Box 1299
Uniontown, OH 44685-1299

Subject: SMR Inflatable seal for Los Alamos National Laboratory (LANL) applications.

Dear Mr. Tarbett:

Thank you for your recent SMR catalog. As I indicated in our recent telephone conversation, T.K. Thompson, Inc. has been retained by LANL to solve the problem of water leakage into ten cubic yard dumpsters used for on-site transportation of low level radioactive wastes (LLW).

A conceptual design indicating the use of your "J" section inflatable seal to isolate the dumpster from external water sources (rain, snow, mud, wash-down, rising waters) is shown on the two enclosed lay-outs: 0900-X-1001 and -1002. We have also included the completed "Request for Engineering Recommendations" per instructions in your catalog. Ideally, we would re-inflate the seal using a portable compressed air tank as used by tire repair companies after every delivery of LLW to the disposal site (once per week maximum).

We would appreciate receiving your technical recommendations plus a budgetary cost/delivery estimate for:

- (a) prototype seals in quantities of 1 to 5, including special tooling, if required, and
- (b) production lot of 75 seals to be used in converting existing dumpsters of fabricating new units.

We would appreciate receiving your response no later than June 23, 1989, for inclusion in our project cost estimate due July 1, 1989.

Please do not hesitate to contact me for additional information and/or clarification required for your cost estimating.

Yours Truly,

Jim Frye, P.E.
Principal Engineer

JF:at

Enclosures (3)

Copies to: Karen Balo, LANL Program Manager
T.K. Thompson
Project File

T.K. Thompson, Incorporated

June 7, 1989

JAF-89-102

Sales Department
Marine Structures, Inc.
Box 398
Spring Valley, CA 92077

Gentlemen:

We need immediate unit prices and installation dimensions for carbon steel lightweight marine hatches in your standard sizes as close to the following as you normally stock:

(a) 36" x 36"

(b) 30" x 30".

Our application is construction of weathertight enclosures for low level, dry radioactive wastes. Total estimated project volume within next two years is 120 to 140 hatches.

Please enclose your current catalog and other pertinent company publications.

Yours truly,

James A. Frye

Principal Mechanical Engineer

JAF:at

Same letter sent to sales departments of:

Standard Equipment Company
75 Beauregard Street
P.O. Drawer G, Dept. 7R
Mobile, AL 36601

Pacific Marine Systems, Corp.
1135 Kirkwell Road
Azusa, CA 91702

McDermott, Inc.
Box 60035
New Orleans, LA 70160

Door Engineering & Mfg. Co.
410 Cherry Street
Kasota, MN 56050

Juniper Industries Mfg. Co.
71-17 Metropolitan Ave.
Middle Village, NY 11379

Marine Structures, Inc.
Box 398
Spring Valley, CA 92077

TELECON RECORD

DATE: 7/7/89

TIME: 3:30

☐ AM
☒ PM

CALL: ☒ TO ☐ FROM 665 7137
AREA CODE PHONE NUMBER

NAME(S): JOHN GALLIMORE HSE-1

PROJECT REFERENCE: 0900 DUMPSTER STUDY

SUMMARY OF CONVERSATION:

Mr. Gallimore was very helpful in reinforcing the assumption, gained from inspecting the LLW Dumpsters, that leakage was due entirely to accumulations of natural moisture induced by weather:

- Driving Rain through damaged side and top doors,
- Drifting snow and water run-off through the bottom discharge ramp

Mr. Gallimore agreed that little used dumpsters standing in the weather empty or partially filled with LLW presented a problem and should be removed where practical.

He further contended that ill-fitting doors not originally designed for leak tight operation and then damaged during routine operations were the primary culprit.

Mr. Gallimore knew of no actual cases of contamination because of the double enclosure of sealed plastic bags and cardboard cartons but he reiterated that the leakage of water from the dumpsters during on-site transportation had been a major problem for over ten years.

COMMENTS:

ACTION REQUIRED:

- ☐ FILE
☐ FOLLOW-UP
☐ VERBAL AGREEMENT
☐ SEND LETTER

- ☐ FYI
☐ WILL RECEIVE LETTER
☐ RESPOND WITH COMMENTS
☐ OTHER _____

DISTRIBUTION:

RECORDED BY: John Foye

NAME

EXT.: _____

	TELECON RECORD		DATE: 7/20/89	TIME: 2:15	☐ AM ☒ PM
	CALL:	☒ TO ☐ FROM			
			AREA CODE	PHONE NUMBER	
	NAME(S): JOHN HANSEN				
PROJECT REFERENCE: 0900 LLW DUMPSTER STUDY					

SUMMARY OF CONVERSATION:

(1) John expressed agreement in reducing the number of containers (10yd³ dumpsters) at low volume generation sites. His primary concern is that low level wastes in cardboard cartons are not exposed to the elements through inadequate storage for "months at a time".

^{*}(2) He would like to see the dumpsters fitted with internal (BONAR type) Polypropylene Liners and deposited in the pits in one sealed-bin flexible containers.

^{*}(2.7)

COMMENTS: I agree we should consider liners for the long-range dumpster for TA-55 and for small "mail-run" lots. Particularly for non - combustible wastes.	ACTION REQUIRED: ☐ FILE ☐ FOLLOW-UP ☐ VERBAL AGREEMENT ☐ SEND LETTER	☐ FYI ☐ WILL RECEIVE LETTER ☐ RESPOND WITH COMMENTS ☐ OTHER _____	DISTRIBUTION: Report
	RECORDED BY: Jim Fye NAME: _____ EXT.: 74063		

	TELECON RECORD		DATE: 7/28/89	TIME: 2:00	☐ AM ☒ PM
	CALL:	☒ TO ☐ FROM	303	789-2231	
			AREA CODE	PHONE NUMBER	
	NAME(S): Rick YOUNG - CRNENCO - DENVER				
PROJECT REFERENCE: 0900 DUMPSTER STUDY					

SUMMARY OF CONVERSATION:

A Budgetary price for a double sided (5'-0" wide) GLOVED FRONT GLOVE BOX 8'-0" LONG & 2 WORKING STATIONS HIGH WOULD COST FROM \$60,000 TO \$100,000 (ET) DEPENDING UPON REFINEMENTS (LEAD SHIELDING, KYNAR LINING, EXTRA NOZZLES, ETC.)

The price for a glove box handling LLW operations would probably cost \$60,000.

COMMENTS:	ACTION REQUIRED:	DISTRIBUTION: Report
	☐ FYI ☐ FILE ☐ FOLLOW-UP ☐ VERBAL AGREEMENT ☐ SEND LETTER	
RECORDED BY: <u>[Signature]</u>	EXT.: _____	
NAME		

T.K. Thompson, Incorporated

MEETING REPORT
DEVELOPMENT OF LLW DUMPSTER
TO
INTERFACE WITH AUTOMATED T-55 SYSTEM

To: Karen Balo

From: Jim Frye, T.K. Thompson, Inc.

Meeting Held: 11 July 1989, 2:00 to 3:00 p.m.
@ TA-35, TSL-2

Attendees:	Hugh Staley, LANL Project Leader	MEE-3
	Len Stovall, Technical Liaison	MEE-3
	Dennis Schneider, Technical Liaison	MEE-3
	Chris Keddy, C.R.A.	MEE-3
	Jim Frye, Principal M.E.	TKT, Inc.

The purpose of the meeting was to familiarize all parties with current and projected requirements for interfacing custom Low Level Waste (LLW) Dumpsters with the automated carton monitoring/handling system being developed for TA-55. Criteria discussed included the following:

- Schedule for having a working unit installed in the basement of TA-55 is July 1991.

- Available space is approximately 15 ft x 40 ft (between 20 ft column lines including clearance).

- Two Dumpsters per unit will be required, one each for compactible and non-compactible wastes.

- Dumpsters must be capable of being moved from the loading area and out doors through an existing air lock between columns 8 and 9 without the use of the TA-54 truck.

- The Dumpsters must be compatible with the existing truck and its integral Lifter Perfection hydraulic handling system.

-The Dumpster should have flanged loading and discharge openings for airtight interface with compaction and/or incinerator loading stations (to be determined).

-The Dumpster should also be capable of discharging non-compactible LLW directly into the TA-54, Area G, landfill in accordance with current operations.

-Since the Dumpsters for compactible and non-compactible wastes should be identical, an enclosed loading/discharge gate will be required at at least one opening.

-Due to headroom limitations, horizontal loading is preferred, either through one end of the Dumpster or through both sides.

-Loading at TA-55 will be accomplished through the use of a robot arm or indexing conveyor permanently installed in the area. Dumpster self-loading is not required.

-Dumpster payload should consist of the maximum number of cartons possible that will meet both space and weight restrictions. Only 1 ft x 1 ft x 2 ft cartons will be loaded out of TA-55. The existing 10 cubic yard flat top Dumpsters are routinely loaded with 90 cartons.

-The TA-55 system after installation and de-bugging will probably be duplicated at the new SNM facility.

-At least two, and possibly three, compactible and con-compactible Dumpsters will be required at TA-55.

Various initial concepts were discussed. Mr. Staley suggested a Dumpster with a container section that would rotate 180 degrees around two stationary horizontal stub shafts or trunnion arrangement so that only one (probably clam-shell) gate at one end would be required. Using this concept, the Dumpster would be rotated 90 degrees and loaded while in the horizontal position, rotated back to vertical with the gate on top during the transportation mode, then rotated 180 degrees with the gate on the bottom for gravity discharge. The container section would be mounted by means of the horizontal stub shaft to a heavy duty structural frame that would, in turn, interface with the handling truck.

Although not discussed in the meeting, successful application of this concept would appear to be adaptable to solving the long range problem of contained handling of contaminated soil and large, bulky objects.

The rotating container concept will be investigated for potential in the long range, on-site handling of LLW.

Jim Frye
Principal M.E.

Distribution: Hugh Staley
T.K. Thompson, Inc.
Project Files

Administrative Requirement 10-2

LOS ALAMOS NATIONAL LABORATORY

Low-Level Radioactive Solid Waste

Introduction

This administrative requirement specifies the rules and general procedures for low-level radioactive solid waste disposal at the Laboratory, including segregation, packaging, labeling, documentation, and transportation.

Definitions

Compactible Waste - solid waste that consists of trash-type materials such as paper, plastic, rubber, and small items of glassware up to a 1-gal. size; and small items such as short lengths of pipe conduit and small pieces of wood or sheet metal. Excluded are larger noncompactible items, waste chemicals, free or absorbed liquids, biological waste, pressurized containers, powders, and other particularly hazardous materials.

Hazardous Chemical Waste - any waste chemical or mixture of chemicals that is corrosive to living tissue, is toxic, carcinogenic, teratogenic, mutagenic, or infectious; or in any way poses a present or potential hazard to human health or the environment.

Low-Level Waste - solid radioactive waste that is not classified as transuranic waste.

Mixed Waste - a combination of radioactive waste and hazardous chemical waste. Included are solvents, pyrophoric substances, spray cans, and any other chemically contaminated items.

Noncompactible Waste - large or bulky waste exceeding the maximum dimensions for compactible packages (16 in. by 19 in. by 36 in.) or other obvious noncompactible "common" waste such as heavy pipe, angle iron, equipment, lumber, building rubble, and soil. Also included is tritium waste greater than 20 mCi/m³.

Packaging - the waste container; refers to the device(s), including liners and closures, used in the packaging of waste. The waste *package* is the final configuration of the waste in its container ready for transport to the disposal site. *NOTE: Neither the packaging nor the package refers to any special overpack required solely to meet transport criteria.*

Sanitary Landfill Waste - waste material that does not contain radioactive materials, hazardous chemicals, or explosives. Noncontaminated waste originates from areas and facilities where no radioactive/hazardous materials are handled or from radiation/hazardous materials work areas under controlled conditions. Sanitary landfill wastes are placed in dumpsters for disposal in the Los Alamos County Landfill. There are no special handling requirements for this waste type.

Tritium Waste - solid waste that is contaminated with tritium in excess of 20 mCi/m³ (for example, 1 mCi/cardboard box measuring 1 ft by 1 ft by 2 ft).

Transuranic Radionuclides - alpha-emitting radionuclides of atomic number greater than 92 and half-lives greater than 20 years.

Transuranic (TRU) Waste - solid waste that is contaminated with transuranium radionuclides to levels greater than 100 nCi/g. Also included are wastes that are contaminated with ²³³U and its daughter products, and ²²⁶Ra sources at levels in excess of the above.

- Overall Responsibility** Unless otherwise stated in this administrative requirement, the group leader must ensure that the requirements specified herein are met.
- Burial** The only approved Laboratory disposal site for burial of low-level solid radioactive waste containing no hazardous chemical component is at TA-54, Area G. No other disposal means may be used without prior approval from the Waste Management Group's (HSE-7) Solid Waste Section.
- Reduction of Waste Volume**
- Waste-generating groups must make every reasonable effort to reduce the volume of radioactive waste at the source by controlling the movement of materials through identified radioactive material work areas. Specific procedures are detailed below.
- Office-Type Wastes.** To the extent practicable, office-type wastes shall be excluded from radiation areas.
- Mixed Waste.** Mixed waste shall be segregated from other radioactive waste.
- Facilities Design.** When designing new facilities or modifying existing facilities, management must separate offices from radiation areas.
- Number of Radiation Work Areas.** The number of areas where radioactive material is handled must be kept to a minimum. Similar operations shall be grouped in a single area, if possible.
- Packaging Materials.** Group leaders shall establish and enforce administrative controls to keep large quantities of packaging material and other waste materials from becoming known or suspected radioactive waste. A staging area for unpacking incoming materials must be established for routine operations at facilities that handle radioactive materials. When *large items* are unpacked in a radiation area, special procedures must be implemented to keep packaging materials from becoming radioactively contaminated.
- Housekeeping.** Special care must be taken during general cleanup campaigns in and around Laboratory facilities to ensure that uncontaminated wastes are kept segregated from contaminated items.

Standard Operating Procedures

Standard operating procedures (SOPs) or special work permits (SWPs) are required for operations that generate low-level radioactive solid waste. The SOPs and SWPs must be prepared, reviewed, and approved as specified in Administrative Requirement 1-3, "Standard Operating Procedures and Special Work Permits."

Inclusions. The SOPs/SWPs must include the following information:

- a description of the waste-generating processes and operations;
- identification of the wastes, including physical, chemical, and radionuclide characteristics;
- identification of waste-reduction procedures; and
- a description of how waste segregation, preparation, packaging, and transportation will be handled in accordance with the requirements defined in this administrative requirement.

Waste Management Review. In addition to the review procedures specified in Administrative Requirement 1-3, SOPs/SWPs involving the generation of low-level radioactive solid waste must be reviewed and approved by Waste Management before implementation. To ensure compliance with the SOP and appropriate regulations as well as to determine where program improvements are needed, HSE-7 also annually reviews the SOP, operation, and facility with the waste generators, area health physics personnel (HSE-1, -10, and -11), and other appropriate Laboratory personnel.

Waste Management Coordinator

Group leaders must identify a Waste Management Coordinator for each facility or area and provide HSE-7's Solid Waste Section with that information. This coordinator will be the primary contact for Waste Management personnel and must have approval authority on waste management matters for that waste-generating site.

Nonroutine Waste

Nonroutine waste is handled on an individual basis. Sufficient leadtime must be allowed for adequate planning. Proposed solutions and funding considerations for unusual problems are the responsibility of the waste generator.

To initiate planning, contact the Solid Waste Disposal Section and provide them with the following information:

- number, size, type, and condition of containers (if applicable);
- waste matrix;
- identity and quantity of radionuclides (in each container, if applicable); and
- Department of Energy authorization to dispose of wastes by burial/storage (if disposal involves special nuclear materials).

The HSE-7 staff works with the operating group and the Radioactive Materials (RAM) Shipping Advisor in HSE-1. This latter arrangement helps ensure that waste transport is made in accordance with applicable regulations.

Fig. 1. Waste classifications.

Waste Segregation and Special Handling

Radioactive solid wastes must be segregated as shown in Fig. 1 to help ensure their safe and efficient treatment and disposal.

Nonradioactive Hazardous Chemical Waste. See Administrative Requirement 10-3, "Nonradioactive Chemical Waste," for disposal requirements.

Mixed Waste. Specifically regulated by the Environmental Protection Agency and DOE, mixed waste must not be handled as *just* chemical waste or *just* radioactive waste.

Low-Level Waste. Solid waste generated in a radiation work area, as defined by the health physics staff, shall at least be considered low-level waste. Under approved standard operating procedures or special work permits, such work areas may produce uncontaminated sanitary landfill waste.

Low-level waste must be segregated as either *compactible* or *noncompactible*. Compactible low-level waste must be segregated from noncompactible low-level waste for separate packaging and placed in separate dumpsters for treatment and burial.

Transuranic Waste. See "Transuranic Waste," Administrative Requirement 10-5, for disposal requirements.

Packaging

The waste packaging guidelines for the materials described below must be followed unless prior approval has been granted by HSE-7 or unless special procedures are described in an approved SOP. Mixed waste must be packaged separately.

Room Trash. Low-level room trash (for example, paper, plastic, and glassware) must be packaged in cardboard boxes that have an inner plastic bag liner. Compactible waste boxes must be identified with a large "C." Noncompactible waste is identified by an "N" when placed in the same dumpster. Compactible packages shall not exceed the dimensions 16 in. by 19 in. by 36 in. (Also see "Large/Heavy Wastes.")

Where possible, low-level *noncompactibles* must be packaged in cardboard boxes whenever any of the following situations applies:

- external contamination has been detected,
- the waste consists of glass, metal pieces, or other materials that are potentially dangerous to handle, or
- after being unloaded, the waste could be easily dispersed by the wind.

Waste Oils. The waste generator must ensure that low-level waste oils are absorbed in an approved manner. (See "Solidifying Oils.")

Large/Heavy Wastes. Items that are large or heavy (for example, pipe, equipment, and other bulky objects) must be packaged in wooden crates and/or plastic bags or wrap unless other disposal procedures are covered in an approved SOP. Metal and fiber drums are also acceptable packages. *NOTE: Additional packaging may not be required if all contamination is fully contained within the waste material (for example, pumps and electrical motors).*

Large Volumes. Large volumes of certain bulky waste (for example, low-level contaminated soil, building rubble, pavement, and area cleanup debris) shall be contained in an enclosed transport vehicle such as a plastic-lined, tarp-covered dump truck.

Tritium Waste. As detailed in the following, special packaging with asphalt is required for tritium waste (greater than 20 mCi/m³). Low-level waste from a *tritium work area* (less than or equal to 20 mCi/m³) *does not require special packaging or handling.*

Waste contaminated with activity levels

- up to 100 Ci/m³ must be packaged in asphalt-lined metal drums, the lids of which are also sealed with asphalt. Approved containers are 55-gal. and 30-gal. drums with locking rings.
- greater than 100 Ci/m³ must be completely encapsulated in asphalt. Typically, this entails a 30-gal. drum within a 55-gal. drum, with asphalt filling the void space between the two.

Under the procedures for nonroutine waste, exceptions to these packaging specifications (for example, large waste items) may be considered.

Solidifying Oils

Solidification is required before disposal of low-level waste oil. (Oil that contains a hazardous chemical, such as solvents, is considered a mixed waste. See AR 10-3 for packaging requirements.) Absorption onto an approved sorbent material such that the resulting mass is a nonflowing semisolid is a currently approved solidification method. Contact Waste Management for further guidance on this and other solidification procedures.

Absorption Mixture. For waste oils, the approved and preferred sorbent is *ground (60 mesh or finer) exfoliated vermiculite* (Stock CI-6617). Oil shall be mixed with this vermiculite in the following proportions:

- by volume: 0.6 part waste oil to 1.0 part vermiculite. *NOTE: the oil will occupy void space only (total volume = volume of vermiculite);* and
- by weight: 3.3 parts waste oil to 1.0 part vermiculite.

Also approved is the use of *coarse-ground vermiculite* (industrial type No. 1, Stock CI-6616). Oil shall be mixed with this vermiculite as follows:

- by volume: 0.5 part waste oil to 1.0 part vermiculite (total volume = volume of vermiculite only);
- by weight: 2.6 parts waste oil to 1.0 part vermiculite.

These portions of oil/vermiculite are based on SAE 10/40-weight oils. The above ratios of waste to vermiculite will have to be adjusted by the generator if much heavier or lighter oils will be disposed of.

Layered Procedure. The recommended procedure for the absorption of contaminated oils in an appropriate container with the required liner is to alternately add vermiculite and oil in a layered fashion. Proper absorption is ensured by mixing while the oil is being added.

Dumpsters

Disposal procedures other than those specified below are acceptable only if they are covered in an approved SOP.

All waste placed in dumpsters must be packaged, surveyed before loading, and free of removable external contamination. Unless otherwise approved, the maximum beta/gamma reading at the surface of any package is limited to 200 mrem/h. *NOTE: Even if packaged, radioactive waste must never be left outside a dumpster.*

Allowed Wastes. Only low-level solid waste shall be placed in dumpsters labeled for radioactive waste.

Disallowed Wastes. Wastes that must *never* be disposed of in dumpsters include

- unpackaged wastes,
- free liquids,
- mixed waste (such as oils, chemicals, spray cans), and
- TRU wastes.

Weight Limitation. A waste package placed in a dumpster for compactible waste must not exceed 30 lbs.

Compactibles/Noncompactibles. Major waste generators possessing separate dumpsters for compactibles and noncompactibles must not mix such wastes in the same dumpster.

Box-Type Dumpsters. Box-type dumpsters for radioactive waste must be kept locked at all times. If a dumpster for sanitary landfill waste is closer than 100 feet to a radioactive waste dumpster, the sanitary landfill dumpster also must be locked. Health physics personnel issue and control the keys. Any dumpster with missing locks or broken clasps must be sealed and posted to ensure that waste is not placed in that dumpster. Notify HSE-7 immediately to have the dumpster picked up, emptied, and repaired as necessary.

Skip-Type Dumpsters. Although normal loads consist of metal and/or fiber drums, other packages such as boxes may be transported only with approvals from Waste Management and from the RAM Shipping Advisor. The waste generator shall load or arrange for the loading of the packages. *Maximum load is 5000 lbs.* Drums or other packages must be secured with a chain and must not be stacked in a skip-type dumpster.

Labeling

General Requirements. Packages of waste destined for disposal or storage must be clearly labeled as containing radioactive material. Tape and signs appropriate for this purpose are obtainable through Safety Stock and should be used as indicated below. Mixed waste should be labeled as such to avoid treatment as only radioactive waste.

Cardboard Boxes and Bags. "CAUTION-RADIOACTIVE WASTE" tape (Stock CM-3262) must be used to mark all boxes and bags to be disposed of by burial. The building and room number of the waste's origin shall be marked on all cardboard boxes.

Drums. Drums must have a Radioactive Material Transfer tag properly filled out and securely attached. In addition, the drum must be marked "Radioactive Material NOS" in 1-in. letters. Contact the health physics staff for assistance.

Documentation/ Certification

To properly maintain the required records for waste disposal, each consignment of low-level solid waste must be accompanied by a Los Alamos Radioactive Solid Waste Disposal Record (HS Form 10-2A). Waste will not be accepted at the disposal site without this form properly completed. The waste generator, HSE-1/-10/-11 area representative, and HSE-7 representative must sign the statements on the form to certify that the waste meets regulatory concerns.

Property (and Classified Waste) Disposal. Disposal of a property-numbered item or classified contaminated item requires an additional form, 252-R, "Disposal of Contaminated and/or Classified Property." The waste-generating group initiates this form, which is obtainable from Stock (ST-2623). Contact HSE-7 for disposal instructions.

Transportation

Described here are the policy and procedures required to transport low-level radioactive solid waste from waste-generating sites to the disposal/storage area (TA-54, Area G). Any deviation from the following must be in accordance with Administrative Requirement 3-5, "Shipment of Radioactive Materials." *NOTE: This section does not address shipments made outside of Los Alamos County.*

Policy. On-site shipments of radioactive material must be made in a manner that protects the health and safety of employees and the public and prevents releases of such materials to the environment.

Transport by Waste Generators. Radioactive waste must not be transported to Area G by a waste generator unless the generator has an approved SOP for the operation or approval from the health physics personnel and the Waste Management staff.

The following rules apply for transport by waste generators.

- **Authorized Transport Vehicles.** Unless otherwise authorized, use government trucks in which the driver is physically separated from the material being transported. Open-ended trucks are acceptable **ONLY** when transporting gaseous or bulky items. (Contact the RAM Shipping Advisor for further clarification.) *Do not use vans or passenger cars.* Private vehicles shall never be used for waste transport.
- **Requirement Verification.** The health physics monitor at the generator site verifies that all waste packaging, labeling, and documentation requirements are met.
- **Securing and Approving the Load.** Loads shall be positively secured with chains or other tiedown means, and/or covered with a secured tarp. The truck shall not leave the generator site until the health physics monitor has approved the load and signed the required accompanying documentation.

Transport by Others. The waste generators must initiate arrangements for waste transport to Area G through contact with, as necessary, the health physics staff, HSE-7's Area G site supervisor, and the generator site representative from the Field Operations Group (ENG-5).

ENG-5 will contact health physics personnel and the Waste Management staff regarding specific transport and handling requirements. ENG-5 will write individual work orders as required for transport of waste (except for dumpsters) by the Laboratory's support services subcontractor (Pan Am) and arrange the necessary Pan Am support at the generating site and at Area G for disposal. HSE-7's Area G site supervisor notifies Pan Am directly of a required dumpster pickup and coordinates the operation with the appropriate health physics supervisor.

Escort Requirements. If the shipment involves any of the following, specially trained health physics personnel shall escort the waste shipment from the originating site to Area G:

- >200 mrem/h beta-gamma radiation at the vehicle's (or dumpster's) outer surface, or >10 mrem/h at 6 ft from the vehicle's (or dumpster's) surface;
- drums containing uranium chips and turnings (potential fire hazard);
- other wastes containing DOT Type B quantities of contaminants, *unless* packaged in an approved Type B overpack as defined in AR 3-5, in which case the escort requirement may be waived; or
- any other waste as deemed necessary by health physics staff and/or HSE-7 personnel.

Placards. The use of placards on the transport vehicle may be required if the radioactive limits are exceeded or if a highway route control quantity is being moved. (Contact the RAM Shipping Advisor for further information.)

Vehicle Breakdown. If a transport vehicle becomes inoperative during the transportation of waste, the driver must contact his/her supervisor and request assistance without leaving the vehicle unattended. If the vehicle must be taken to the repair shop, it first must be towed to an appropriate Laboratory-secured area where the waste must be either transferred to another truck or stored at the approved site until the next workday. If the vehicle cannot be moved, the waste must be transferred to another vehicle for transport to Area G. The disabled vehicle, after being emptied, must be monitored by health physics personnel before the vehicle is moved.

Transportation Accident. Any accident involving a vehicle carrying low-level radioactive solid waste must be reported immediately to the Health, Safety, and Environment Division. In the event or possibility of fire, the Fire Department (9-911) must be notified immediately. Vehicle accidents occurring offsite also must be reported immediately to the Los Alamos Police Department.

References

"Hazardous and Radioactive Mixed Waste Management," DOE Order 5480.2 (most recent).

"Nonradioactive Chemical Waste," Administrative Requirement 10-3, in *Health and Safety*, Los Alamos National Laboratory Manual, Chapter 1 (August 1984).

"Radioactive Liquid Waste," Administrative Requirement 10-1, in *Health and Safety*, Los Alamos National Laboratory Manual, Chapter 1 (August 1984).

"Radioactive Waste Management," DOE Order 5820.2 (most recent).

"Safety Requirements for the Packaging and Transportation of Hazardous Commodities," DOE Order 5480.3 (most recent).

"Shipment of Radioactive Materials," Administrative Requirement 3-5, in *Health and Safety*, Los Alamos National Laboratory Manual, Chapter 1 (March 1987).

"Standard Operating Procedures and Special Work Permits," Administrative Requirement 1-3, in *Health and Safety*, Los Alamos National Laboratory Manual, Chapter 1 (April 1985).

"Transuranic Waste," Administrative Requirement 10-5, in *Health and Safety*, Los Alamos National Laboratory Manual, Chapter 1 (in preparation, May 1987).

Referrals

HSE Division Emergency Assistance, 7-7878 (7-7080 after normal work hours)

Radiation Protection Group (HSE-1), 7-7137

RAM Shipping Advisor (HSE-1), 7-4127

Solid Waste Disposal Section of HSE-7, 7-6095

Chemistry Health Protection Group (HSE-10), 7-7218

Accelerator Health Protection Group (HSE-11), 7-5890

Field Operations Group, (ENG-5), 7-4657

Property Management Group (MAT-2), 7-5217

Forms

HS Form 10-2A, Los Alamos Radioactive Solid Waste Disposal Record

252-R, Disposal of Contaminated and/or Classified Property

Tag

Radioactive Material Transfer tag

**Los Alamos National Laboratory
Los Alamos, New Mexico 87545**

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095. MS J592

1. Form Number

S | 8 | 8 | | | |

2. Date

M	M	D	D	Y	Y

3. Retrievable Serial Number	
---------------------------------	--

4. Origin of Waste									
Group	TA	Building	Wing	Program Code					

5. Waste Code	
---------------	--

[illegible][illegible]

8. Gross Volume	
Amount	$\left(\begin{array}{l} M = \text{meter}^3 \\ F = \text{foot}^3 \\ G = \text{gallon} \end{array} \right)$
<div style="display: flex; justify-content: space-around;"> <div> <div style="width: 10px; height: 10px; background-color: black; margin-bottom: 5px;"></div> <div style="width: 10px; height: 10px; background-color: black; margin-bottom: 5px;"></div> <div style="width: 10px; height: 10px; background-color: black;"></div> </div> <div> <div style="width: 10px; height: 10px; background-color: black; margin-bottom: 5px;"></div> <div style="width: 10px; height: 10px; background-color: black; margin-bottom: 5px;"></div> <div style="width: 10px; height: 10px; background-color: black;"></div> </div> </div>	

2. Package Radiation at	
Surface (mr/hr)	1 Meter (mr/hr)

10. Gross Weight	
Amount	(K = kilogram P = pound T = ton)
<div style="display: flex; justify-content: space-around;"> <div style="border-bottom: 1px solid black; width: 20px; height: 20px;"></div> <div style="border-bottom: 1px solid black; width: 20px; height: 20px;"></div> <div style="border-bottom: 1px solid black; width: 20px; height: 20px;"></div> </div>	

11. Additional Description of Packaging and Packaging Materials	

[illegible]

APPROVALS

APPROVALS		
Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Signature certifies that waste is not a hazardous chemical or mixed waste and is packaged in accordance with ALL applicable disposal requirements. (Signature)	Signature certifies that waste package or shipment is safe to handle and transport. (Signature)	

13. Date Disposed						
M	M	D	D	Y	Y	

14. Disposal/Storage Location					
Area	Shaft	Pit	Post(s)	Layer	Pos

15. Shaft Surface Dose

mr/hr

_____ ● _____

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
---	----------	---------	----------	----------

INSTRUCTIONS FOR WASTE GENERATOR

Filling Out the Form. The waste generator must complete this form to document all waste buried or retrievably stored at the Laboratory's TA-54, Area G, site. Be sure to complete each section before proceeding to the next section. The waste generator must follow these instructions:

1. Don't use more than the allotted spaces on the form (one letter or number per space).
2. Ensure that all data recorded on this form are legibly printed and clearly readable.
3. Note that the decimal point positions are already indicated in the sections where decimals would be needed (for example, see Section 7 on the front of this form). Enter information accurately in relation to these decimal points. *Do not alter decimal point positions.*
4. Use the number zero (0) on the form *ONLY* on entries requiring that numerical designation. *Do not use the number zero to fill blank spaces.*
5. Where the amount of information available does not allow recording all data on one form, use additional forms for different portions of the waste.

When the Form is Completed. The waste generator must ensure that the properly completed form accompanies each waste shipment and each package of retrievable transuranic (TRU) waste delivered to the disposal/storage site. Waste generators may keep a copy of the completed form for their files.

PERTINENT INSTRUCTIONS FOR SPECIFIC SECTIONS OF THIS FORM

Section 5, Waste Code. Identify all waste by a 3-digit description code, as given in Attachment I, "Valid Waste Codes." Choose the code that best describes the waste material.

Section 6, Waste Description. Allow one space for each letter and one space after each word. Use this section to provide any additional information about the waste.

Section 9, Package Radiation. Do not use symbols for "greater than ($>$)," for "less than ($<$)," for "greater than or equal to ($\geq$)," or for "less than or equal to ($\leq$)." Round off fractions to the nearest whole number. If radiation levels exceed that which can be listed, leave this section blank and record the data in Section 11.

Section 11, Additional Description of Packaging and Packaging Materials. Use this space to provide property number, related form numbers, data that cannot be entered in Sections 6 or 9 (see above), etc.

Section 12, Radionuclide Content. List radionuclides using either the normally accepted notations (for example, U235, Pu239, Co60, and H3) or, for accountable materials, the element identification plus the SS Material Type Code (for example, Pu52 for plutonium code 52, U38 for uranium code 38). Acceptable codes include MFP for mixed fission products and MAP for mixed activation products.

For nonradioactive chemical or hazardous waste, enter the correct chemical identification, such as CHEM, PCB, or ASBES. If more than one contaminant is identifiable, each contaminant should be listed (with all appropriate data) on a separate line in Section 12. If there are more than six (6) radionuclides identified, or if there are any questions regarding the completion of this form, contact HSE-7 at 7-5397.

Questions regarding the handling or packaging of radioactive or hazardous wastes should be referred to Disposal Site Operations (7-6095).

APPROVAL SIGNATURES

Waste Generator. The waste generator must sign the form in the space allotted to indicate compliance with applicable waste packaging and disposal requirements. This signature is required for all waste, whether radioactive or nonradioactive. Note that both the generator's *printed name* and *written signature* are required.

HSE-1/-10/-11 Area Representative. An area representative from either the HSE-1, -10, or -11 group must sign the form if the wastes are radioactively contaminated. This signature indicates that the package or shipment is safe to handle and transport. Note that both the area representative's *printed name* and *written signature* are required.

Additional Signatures. An area representative from HSE-3 or HSE-5 may be required to sign this form before certain hazardous materials are transported. This signature space also may be used for the group

No.

FORM 252-R (3/81)

DISPOSAL OF CONTAMINATED AND/OR CLASSIFIED PROPERTY

QUANTITY	DESCRIPTION	CLASSIFICATION	PROPERTY		MONITORING		COST	W/R NO. TO 21A
			NO.	GROUP CHARGE	RESULTS/ISOTOPE	DATE		

I certify that the above items are:

- ☐ Highly contaminated and cannot be decontaminated and present a health hazard.
- ☐ Contaminated and not economical to decontaminate.
- ☐ It is recommended that these items be buried.
- ☐ Classified.

FROM HEALTH PHYSICS GROUP CLASSIFICATION GROUP

Information hereon verified with records and is complete.

APPROVED:

DIVISION/GROUP PROPERTY REPRESENTATIVE

LABORATORY PROPERTY MANAGER

The above articles were properly disposed of by Waste Management

at DISPOSAL LOCATION

by NAME on / / DATE
CLASSIFIED MATERIAL.
DISPOSAL WITNESSED

Approved:

HEALTH PHYSICS GROUP OFFICE

INSTRUCTIONS FOR DISPOSAL OF RADIOACTIVE CONTAMINATED ITEMS

(For specific instructions, refer to section 1 - 5 of Materials Management Manual)

1. H-1 HPS to indicate isotope and mass number of the contaminate in monitoring column, if known. Include surface contamination in a d/m or/and mr/hr or uCi/M³ of ³H if known. Otherwise, provide a statement justifying the condemnation for other reasons.
2. Include date of monitoring results.
3. Check appropriate box in lower left corner and sign for the Health Physics Group.
4. Forward to the H-1 Group Office for their approval and signature.
5. Forward with completed Radioactive Solid Waste Disposal Form (s) (HS & E 7-1A) and with item(s) for disposal to Group H-7 at TA-54, Area "G".
6. Forward form to MAT-2, Group Office for their approval and signature.
7. Distribution to made by MAT-2.

PLANNED LOCATION
FOR AUTOMATED
LLW MONITORING
& HANDLING
SYSTEM
8/1/89

12.4. VENDOR DATA, CATALOGS
AND
CORRESPONDENCE

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 677-9444

D.A. MEYERS PACKAGING
DAMPAC
2364 CAVALIER DR.
SALT LAKE CITY, UT 84121
801-942-3508

OK by HSE-7
Check it first, but the
Solid Graphics in Broadcast
Area

A Leader in the Field

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

3 of 3

HERE IS THE STORY

fill/weigh stations

THE BONAR

I.B.C. FILLING STATION:

Our advanced design is suitable for all types and makes of I.B.C.'s and offers unique and special features. The pure electronic construction is completely solid state and designed for industrial applications.

- We offer immediate adjustment for varying I.B.C. heights.
- We offer an inflatable collar for dust control.
- We offer an air blower for polyethylene liner inflation.
- We offer powered take away roller conveyors and other features. See our Bonar filling brochure for complete details.

FILLING:

MULOX and BONABIN containers are easily filled. We offer spout type tops, cone shaped tops with spouts and duffel type tops to accommodate different product characteristics.

storage

STORAGE:

MULOX and BONABIN containers can be stacked three high. Pyramid stacking helps to stabilize the stack.

When stored outdoors we recommend that pallets be used under the bottom row and the stack covered with an opaque tarpaulin.

OF...

Bonar Industries, Inc.

BONAR INDUSTRIES INC. is a subsidiary of BONAR INC. the North American holding company for Low and Bonar P.L.C. of Dundee, Scotland. BONAR INC.'s chosen activities are specific sectors of the packaging and plastic markets in North America.

BONAR INDUSTRIES INC. specializes in the manufacture of Intermediate Bulk Containers (I.B.C.'s) producing, under license the famous MULOX container and its own high performing BONABIN. Both of these containers meet rigid world wide performance specifications.

discharge

DISCHARGE:

The bottom spout makes discharge simple. Controlled flow rates can be accomplished using different diameter spouts or with a "Cord Lok" tie. A simple discharger will allow product flows to be interrupted as required.

testing

TESTING AND QUALITY CONTROL:

Rigid quality control ensures consistent and reliable products. To maintain high standards of quality our MULOX and BONABIN containers and component parts are tested in our own laboratory on a regular basis.

TRANSPORTATION AND HANDLING:

No special equipment is required to handle MULOX or BONABIN containers. Standard fork trucks are the usual mode for moving containers. See handling instructions attached to each MULOX and BONABIN.

A spreader bar or slings should be used when loading with a crane. We offer longer lift straps or stevedore straps for one point pick up. For one man operations we offer "self raising lift straps" at an extra cost.

specifications

SPECIFICATIONS AND SPECIAL FEATURES:

MULOX and BONABIN containers are designed for working loads of up to two metric tons. Contact our office or local agent to ensure the correct type of container for your application.

MULOX I.B.C.'s are made from polypropylene fabric with 8 polyester reinforcing bands woven in for added strength and to provide an eight point lift system.

BONABIN I.B.C.'s are made from polypropylene fabric in various weights to meet customer requirements.

Coated (non breathable) and uncoated (breathable) fabric is standard for both MULOX & BONABIN containers.

Bonar Industries, Inc.

INTERMEDIATE BULK CONTAINER

features

DUFFLE TOP (OPEN)

DUFFLE TOP (CLOSED)

OPTIONAL FEATURES OFFERED INCLUDE:

- Self raising lift straps (extra) patented.
- Duffel or spout top. Spouts of different diameters and lengths to customer specification. (Included)
- Webbing and velcro closure in discharge for reusable containers (no rope ties) (Extra)
- Anti-bridging bottom for hard to discharge products (Extra)
 - Full opening bottoms with remote release (Extra)
- Polyethylene liners fixed in place will not slide out when discharging product (Extra)
- Stencilling or silk screening of bags (Extra)
- Anti-static material which allows for grounding of the bag (Extra)
- Anti Sift Seams (Extra)

FILLER
SPOUT
TOP
(OPEN)

BOTTOM
SPOUT (OPEN)

BOTTOM SPOUT (CLOSED)

LOS ALAMOS NATIONAL LABORATORY
MAT-14 RECEIVING REPORT

R251006
DATE: 03-13-87
ME: 1413

BUYER: 1R
EXPEDITOR: 0

VENDOR: BONAR IND. INC.

RECEIVING REPORT NO: 137352

PURCHASE ORDER: 1-VRH-1482M-T
SUBSEQUENT RECEIPT: 001

GROUP: ENG-4 REQUESTOR: MIRABAL MS: 6770 PIECES: 1 WEIGHT: 418

SITE: 3 BUILDING: 66 ROOM: H2 ROUTE: 3 PHONE: 7-2718

ROUTING:

DATE DOCKED: 03-13-87

* WARNING *
* NOTE TO REQUESTOR: RECEIVING REPORT MADE ACCORDING TO *
* PACKING LIST. CHECK MATERIAL RECEIVED AND REPORT DISCREPANCIES *
* TO MAT 14 RECEIVING WITHIN 15 DAYS. PHONE 667-4186 *

CLERK: LEONARD LOVATO

DATE WORKED: 03-13-87

CARRIER: Roadway

FREIGHT BILL #: 414458641

FOB: F

FREIGHT CHARGES: PREPAID

(RMS: 2 30

PACKING LIST: B602

SHIPPING MEMO #:

DELIVERY RECEIPT #:

ITEM	DESCRIPTION	REC'D	REJ'D	UNIT	UNIT COST
001		50.00	0.00	EA	21.40

SERIES 2200 SQUARE CONTAINER CODE
S65, 44 X 74, TOP SPOUT, PLAIN
BOTTOM, 3 1/2 MIL INSERTED LINER.
12' X 18' FILLER SPOUT.
ACCT CODE: 6930 W777 0 1 10

***** RECEIVING REPORT TOTAL *****

\$1070.00

Accurate's Custom Engineered Bulk Handling Equipment For...

Specialty, Sludge or Hazardous Wastes...

Consult Accurate to Meet All Your Requirements for

**Customized Equipment & Advanced Technology Combine
to Solve a Wide Variety of Hazardous Waste Disposal Problems**

Sludge Push-Out
Hydraulically Operated
Ejection Container for filter
cake (dried sludge)
w/gasketed rear door. (2, 4, 6)*

Liquid Container
For hazardous or non haz-
ardous waste with interior
baffles, two fill ports and a
6" gate valve for discharge.
(1, 2, 3, 5)*

Vacuum Pump & Tank
Vacuum Sludge Pump and
Gas Driven Engine mounted
on 22' roll-off skid with 3,000
gallon tank for pumping and
hauling sludge. (1, 2, 3, 5)*

Dust Container
Receives dust from
electrostatic precipitator.
Door is gasketed, container
is watertight. (2, 4, 6)*

Custom for Sun Oil
Specialty container for
contaminated diatomaceous
earth with hydraulically
operated rear door for con-
trolled discharge.

Proctor & Gamble
Designed for semi solid
sludge removal. Three
loading hatches, gasketed
door, watertight welded and
tested.

Recycling Container
Custom designed two
section recycling container
with side door for recyclable
corrugated waste and trash.

Semi Solid
Hazardous or non
hazardous waste—water
tight with 20" diameter
hatches and gasketed
tailgate. (2, 4, 6)*

Sludge—Semi Solid
Holds sludge from industrial
processes, filter cake, etc.
Door opens full for dumping
and is gasketed. (2, 4, 6)*

Custom for Cecos
Liquid tight container with
rolling top lids and unique
rear door designed for ease
of operation.

*Numbers refer to hazardous waste chart on next page.

Specialty, Sludge and Hazardous Waste Containers...

Accurate's Products are Custom Engineered to Meet All of Today's Complex Government Regulations

Specialty Dust Container

For handling dust from electrostatic precipitator in petroleum refinery. Container is emptied by using compressed air in the floor to create a fluidized bed and metered through an air operated butterfly valve. (2, 4, 6)*

Spring Assist Lids
Mounted on container for transporting dry bulk, hazardous and non hazardous wastes. (2, 4, 6)*

Screw Container
Metal hydroxide sludge waste from vacuum filter is fed into hatch at door end of container. Screw conveyor automatically distributes material evenly throughout container. (2, 4, 6)*

Gasket Material
Photo shows gasket material used on tailgate. 35 durometer neoprene rubber. Other gasket designs and gasket materials are available.

Loading Hatches
10" and 20" gasketed. Other types available.

Sludge Semi Liquid
Sludge Roll-Off with hydraulic tailgate for dumping—container has a steam floor to keep material from freezing. For safety, truck operator stays in truck cab while opening hydraulically operated gasketed door and dumping load. (2, 3, 4, 5, 6)*

Steam floor is insulated with sprayed foam to retain heat in container.

Designed for Allied Chemical

Installation of a steam system for petroleum waste liquid to maintain heat so that it won't solidify during storage and transit.

Discharge End

Showing double safety gate valves and steam connection system which is protected behind standard door.

Suitability of Various Hazardous Wastes in Accurate's Containers

PROPER SHIPPING NAME

1. Waste Combustible Liquid, N.O.S.
2. Waste ORM A, B or C, N.O.S.
3. Hazardous Waste Liquid, N.O.S.

REGULATORY REFERENCE

- DOT-Title 49- CFR 173.118a
DOT-Title 49- CFR 173.510
DOT-Title 49- CFR 173.1300
DOT-Title 49- CFR 173.510

PROPER SHIPPING NAME

4. Hazardous Waste Solid, N.O.S.
5. Corrosive Liquid, N.O.S.
6. Corrosive Solid, N.O.S.

REGULATORY REFERENCE

- Same as No. 3
DOT-Title 49- CFR 173.245(b)
DOT-Title 49- CFR 173.245b

- A) All containers are manufactured to Non-Hazardous waste standards unless specifically ordered for Hazardous Waste.
B) In all cases, hazardous waste containers also meet the general requirements of 173.24 and 173.32 of Title 49 CFR.
C) Accurate containers are suitable for many other hazardous materials. Contact our engineering department with the D.O.T. Proper Shipping Name for your material.
D) Suitability is predicated on general assumption that the waste material is compatible with steel and Neoprene (in gasketed containers). For other waste material, the containers must be lined with a compatible lining, or stainless steel.
E) Accurate containers are not designed for use under pressure or vacuum.
F) Accurate will meet the Federal D.O.T. regulations specified above as required for a particular application.
G) We do not represent that our equipment will meet any other Federal, State or local codes; it is the responsibility of the purchaser to make this determination.

Customized Containers designed to meet the strictest requirements.

Sludge Semi Liquid . . . with hydraulic tailgate for dumping—container designed with a steam floor to keep material from freezing.

Screw Container . . . Designed so waste from vacuum filter is fed into hatch at door end of container. Screw conveyor automatically distributes material evenly throughout container.

Sludge—Semi Liquid . . . container with interior dump plate and gasketed top dump door with hand winch.

Custom for Sun Oil . . . this specialty container has a hydraulically operated rear door for controlled discharge.

Glass Recycling Container Used by municipalities and private organizations for glass and/or can recycling. Different color glass is sorted and put into each compartment.

150,000 Square Feet of Plant Space is Devoted to Manufacturing & Assembly of Waste Handling Equipment

floor in upside down position . . . showing solid bullnose, rollers, . . . bottom of hook plate and wheels. bullnose is inserted *into* tube for added strength.

workers laying out and welding sides on container for assembly.

inside of sludge container being water tight welded.

sludge containers being water tested to assure watertight integrity.

container being moved into one of two 25' x 75' paint booths for painting.

finished sludge container being picked up by an Accurate 75,000# hoist.

Engineering Know-how Has Made Accurate the Leader in Hazardous Waste Disposal Containers.

The President is a mechanical engineer with over 20 years of experience in design and fabrication of solid waste handling equipment. He personally supervises an experienced and qualified staff during the layout and design of the hazardous and special waste containers.

An inventory of
containers always ready
for prompt delivery.

Accurate now has three plants with a total manufacturing,
design & engineering capacity of 150,000 square feet.

Williamstown, NJ Plant

This 60,000 square foot facility houses the corporate, engineering and design offices and the manufacturing plant for roll-off containers, luggers and small containers.

Erial, NJ Plant

This new 30,000 square foot facility located on 16 acres is just 7 miles from headquarters and houses the company's hoist and compaction division.

Alexandria, LA Plant

This 60,000 square foot plant is the most modern in the industry. It is a manufacturing and distribution location for containers, compactors, transfer trailers and roll off hoist.

Refuse Handling Equipment to meet all your needs

Now a full line of the most advanced
and efficiently engineered refuse
handling equipment is available.

Roll-Off Hoists—Truck and Trailer
mounted

Inside/Outside Rail Hoists, 60,000# & 75,000#

Outside Rail Only 60,000# & 75,000#

Extendable Tail Hoist 50,000#

Dead Lift 50,000#

Extendable Tail Hoist/Dead Lift 50,000#

Tri-Axle Available on All Hoists

Transfer Trailer 65, 75 & 100 cu. yd.

Transfer Compactors

Stationary Compactors

Hydraulic Baler

Cart Dumpers

Closed Containers

Open Containers

Scrap Metal & Demolition Container

Luggers

Dump Trailers

Special Liquid, Sludge, Dust Containers

Front Load Containers

Roll-Off Flat Beds

The East Coast's largest
manufacturer of refuse equipment

Distributed by

Roll-Off Hoists
Truck & Trailer Mounted

Roll-Off Containers
Standard & Specials

Stationary Compactors

Balers

ACCURATE INDUSTRIES
a Sudbury Company

P.O. BOX 451, NEW BROOKLYN ROAD AND FILBERT STREET
WILLIAMSTOWN, NJ 08094 (609) 629-2800

P.O. BOX 1231
ALEXANDRIA, LA 71309 (318) 445-8624

Transfer Trailers

Transfer Compactors

TO

FROM

T.K. THOMPSON, INC

118 YOSEMITE DRIVE

WHITE ROCK, NEW MEXICO 87544

ACCURATE INDUSTRIES/A SUDBURY COMPANY
Box 451 • New Brooklyn Rd. & Filbert St.
Williamstown, New Jersey 08094

SUBJECT ATTN: JIM FRYE

FOLD HERE

DATE

05-19-89

505-672-9444

Enclosed please find the ACCURATE PRODUCT LITERATURE that you
requested: SPECIALTY, 60 OR, 30 SINGLE AXLE

please feel free to call if you have any questions or if I
can be of further service. 609-629-2800

PR/rew

PAUL ROSENCRANS

SIGNED

T.K. Thompson, Incorporated

July 3, 1989

JAF-89-104

Mr. Paul Rosencrans
Accurate Industries
Box 451
Williamstown, NJ 08094

Subject: Request for Budgetary Pricing

Dear Mr. Rosencrans:

Thank you very much for your response to our general technical inquiry of 8 May 1989.

We would appreciate receiving budgetary pricing for the following items as described in your catalogs:

1. Twenty (20) full ejection carbon steel containers for storing and transporting approximately four hundred (400) 12" x 12" x 24" sealed cardboard boxes containing from 15 to 20 pounds each of dry non-compactible low level wastes (LLW). Containers are to be water and weather tight. They are to be provided with water tight hatches of a sufficient size (approximately 36" x 36") and quantity (approximately four) to allow for uniform manual loading from the top of the container.
2. One (1) truck and roll-off hoist assembly for handling and transporting the full ejection containers.

Our proposed operations will consist of the following:

1. One (1) container will be stationed at a dedicated location near the waste generation site.
2. Containers will be manually loaded from the top by qualified Laboratory personnel.
3. Upon accumulation of a predesignated number of boxes containing LLW, the truck with the roll-off hoist will transport the container directly to a controlled on-site land fill.
4. All boxes will be ejected by the container and will be immediately covered by earth moving equipment.

Mr. Paul Rosencrans
June 29, 1989
JAF-89-104
Page 2

5. The truck will return the container to its station.

The features of your system design that are most interesting to us are:

1. The inherent weatherproof capability of your container (solid bottom; vertical, gasketed discharge; availability of marine-type loading hatches).
2. Large volumetric capacity with geometry that closely matches our package design.
3. Apparently quick, easy remote controlled discharge capability.

We would appreciate receiving your budgetary pricing no later than 15 July 1989 for inclusion in our recommendations to the Los Alamos National Laboratory.

Yours truly,

Jim Frye
Principal Mechanical Engineer

JF:at

Copies to: Karen Balo, Program Director LANL
T.K. Thompson
Project Files

TKT Inc.

114 Yosemite Drive White Rock, New Mexico 87514

ACCURATE ROLL-OFF HOIST OUTSIDE RAIL 60,000 LBS. CAPACITY

STANDARD FEATURES INCLUDE:

- Outside Rails
- Single Stage Double Acting Cylinders One Size Cylinder For Both Lift and Winch
- Cylinder Covers
- Outside Controls
- Lights
- Unit Factory Tested at 60,000 lbs. (Under Field Conditions)
- Sub Frame
- Main Frame 4" x 8" x 1/2" Structural Tube
- I.C.C. Bumper
- Outside Rollers on Cold Rolled Alloy shaft with 2 point support for extra strength and positive alignment
- Bumper with Lights and Mud Flaps
- Set Up for Tri Axle (single tire only)
- Body Raise Warning Light
- Reverse Alarm

Main Frame 4" x 8" x 1/2" Structural Tube

I.C.C. Bumper

OPTIONS:

- Air Shift P.T.O.
- Full Fenders
- Inside Controls: Air or Cable Control Single or Joy Stick
- Dual Wheel Tri Axle

OTHER MODELS AVAILABLE

Here Are A Number of Reasons Why The Accurate Outside Hoist Should Be Your Hoist

Container Hold Down And Automatic Roller Lock Works On Outside Rail

Outside Controls—standard
Inside Controls—optional

40 Gallon Oil Tank

1/2" Steel Cylinder Mounting Plates and Rear Hinge Mounting Plate

(Optional) 7GA Heavy Duty Fenders with Formed Rubber Edge

TRUCK CHASSIS REQUIREMENTS

Model AH-OR-60

Cable	7/8" x 75'-0", 6 x 25 IWRC, EIPS, 79,600 lbs. Breaking Strength
Cable Hook End	2" Thick Steel Hook w/Steel Swaged Button
Cable Anchor End	2" Thick Steel Eye w/ (5) U-Clips
Cable Travel	28'-8"
Free Cable	4'-4"
Cable Sheaves	10" Dia. w/Bronze Bushing
Maximum Dump Angle	50°
Outside Rollers	(8) 4" O.D. x 3" Lg. w/Bronze Bushing
Rated Capacity	60,000
Factory Tested	60,000
Containers	Up to 22'
Weight	7,500 lbs. Mounted with oil
Operating Pressure	2100 PSI
Oil Tank Capacity	40 Gallon
Total Oil in System	70 Gallon
Oil Pump Spec.	27 GPM @ 1200 RPM 42 GPM @ 1800 RPM
Oil Filter Spec.	50 GPM @ 200 PSI (on return line) replaceable cartridge & pressure gauge
Control Valve Spec.	50 GPM 2 Spool Commercial
Cylinders—Hoist & Winch (Interchangeable)	8" Bore x 79" Stroke, 4" Rod, Single Stag, Double Acting
Hoist Up	27 Seconds
Hoist Down	15 Seconds
Winch On	27 Seconds
Winch Off	15 Seconds
Hoist Frame	4" x 8" 1/2" Tubing (one piece)
Sub Frame	2" x 3" x 3/16"
Lubrication	Zerte Fittings at all Wear Points
Outside Frame	35-1/2"

OPTIONAL HYDRAULIC STABILIZER JACK AVAILABLE

CHECK THESE UNIQUE FEATURES FOUND ONLY ON ACCURATE'S ROLL-OFF HOIST OUTSIDE RAIL

Single Stage Cylinders minimize problems. Rated at 3,000 PSI
Lift & Winch Cylinders are Completely Interchangeable
Rollers have outside Support Bracket for extra strength
All Rollers have Bronze Bushing and Grease Fittings
1/2" Plate Steel Hinge/Chassis and Cylinder Mounting Plates
Main Tube Frame 4" x 8" x 1/2" ASTM A500—Grade C-50,000# Yield Minimum
Unit Factory Tested at 60,000 lbs.
Oil level sight gauge in tank

Accurate	Others
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

Largest Dump Angle available—50° on all 60,000 Hoists
Heavy Duty Bumper—meets ICC requirements
7 GA Heavy Duty Fenders with Formed Rubber Edge
Integral Rear Sealed Lights
7/8" Cable 6 x 25 IWRC, EIPS
Cast Alloy Steel Universal Cable Hook—Standard
Positive but simple Container Lock for outside Roller Containers
Cast Alloy Steel Rear Container Hold Downs—Standard
Weight of Hoist—mounted, with oil 7,500

Accurate	Others
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓

Open & Closed Roll-off Containers—heavy duty, rugged construction for long trouble free operation. Available in any length from 10' long to 34' long for tractor operations.

Transfer Station Packer—several models to fit small communities and large cities. High performance compaction with minimum energy requirements.

Power Wedge Compactor All Models—shown with walk on ramp, safety rails and hopper extension. Ideal for many industrial applications.

Ejection Containers—designed to handle densely compacted material that will not dump from standard compactor containers. Built to fit any compactor or roll-off hoist. Partial ejection or full ejector models available.

ASK YOUR ACCURATE DISTRIBUTOR TO SHOW YOU OUR FULL LINE OF EQUIPMENT

ACCURATE INDUSTRIES
a Sudbury Company

5712 3rd Street
Alexandria, LA 71302 (318) 445-8624

P.O. Box 451, New Brooklyn Road and Filbert Street
Williamstown, NJ 08094 (609) 629-2800

Distributor:

Accurate's specifications are subject to change without notice in order to accommodate improvements to its equipment.

60-OR-3M-MP-3/89

ACCURATE ROLL-OFF HOIST SINGLE AXLE 30,000 LBS. CAPACITY

FEATURES INCLUDE:

- 30,000 lbs. rated capacity (factory tested at 30,000 lbs.)
- Cylinder Winch, Reaving System
- Outside Controls
- Single Stage Cylinders
- Lights

OPTIONS:

- Air Shift P.T.O.
- Full Fenders

- Main Frame
3" x 7" x $\frac{3}{8}$ " Structural Tubing
- This model has been factory tested at 30,000 lbs. (under field conditions.)

I.C.C. Bumper

Bumper With Lights and Mud Flaps

OTHER MODELS:

- Inside-Outside rails

Here Are A Number Of Reasons Why The Accurate Single Axle Hoist Should Be Your Hoist

Container Hold down and Automatic Roller lock works on Outside Rail Containers

$\frac{3}{4}$ " Cable IWRC, EIPS 39,600 # Capacity
 $\frac{1}{4}$ " Plate Steel Cylinder Mounting Plates

Outside Controls, 30 Gallon Oil Tank

Outside Rollers on Cold Rolled Alloy shaft, with 2 point support for extra strength and positive alignment

TRUCK CHASSIS REQUIREMENTS

Model AH-OR-30

Cable	3/4" x 65'0", 6 x 25 IWRC, EIPS, 39,000 lbs. Breaking Strength
Cable Hook End	1" Weldless Alloy Ring
Cable Anchor End	1 1/2" Alloy Pin
Cable Travel	21'-8"
Free Cable	4'-4"
Cable Sheaves	10" Diameter with Bronze Bushing
Maximum Dump Angle	50°
Outside Rollers	(8) 4" O.D. x 3" lg
Rated Capacity	30,000 lbs.
Factory Tested Weight	30,000 lbs.
Operating Pressure	3695 lbs.
Oil Tank Capacity	1800 PSI
Total Oil in System	30 Gals.
Oil Pump Spec.	45 Gals.
Oil Filter Spec.	30 GPM. @ 1800 RPM
	35 GPM. @ 200 PSI (on return line)
Control Valve Specs.	replaceable cartridge and pressure gauge
Lift Cycle	35 GPM Commercial
	5" Bore 3" Rod 65" Stroke, Single Stage, Double Acting
Winch Cycle	5" Bore 3" Rod 55" Stroke, Single Stage, Double Acting
	19 seconds
Hoist Up	12 seconds
Hoist Down	22 seconds
Winch On	14 Seconds
Winch Off	3" x 7" x 1/4" tubing
Hoist Frame Lubrication	Zarte fittings @ Wear Point
Outside Frame	35 1/2"

OPTIONAL HYDRAULIC STABILIZER JACK AVAILABLE.

REAR OF CAB, EXHAUST PIPE, AIR CLEANER OR OTHER OBSTRUCTIONS

CHECK THESE UNIQUE FEATURES FOUND ONLY ON ACCURATE INDUSTRIES' ROLL-OFF HOIST OUTSIDE RAIL

Single Stage Cylinders minimize problems. Rated at 3,000 PSI
Rollers have outside Support Brackets for extra strength
All Rollers have Bronze Bushing and Grease Fittings.
3/4" Plate Steel Hinge/Chassis and Cylinder Mounting Plates
Main Tube Frame 3" x 7" ASTM A500—Grade C-50,000# Yield Minimum

Accurate
Others

Largest Dump Angle available—50° on all 30,000 lbs. Hoists
Positive but simple Container Lock for outside Roller Containers
Heavy Duty Bumper—meets ICC requirements
7 GA or Formed 14 GA are available.
Integral Rear Sealed Lights
3/4" Cable 6x25 IWRC, EIPS
Weldless Alloy Steel Universal Cable Ring—Standard
Cast Alloy Steel Rear Container Hold Downs—Standard
Weight of Hoist—mounted, with oil 3,695

Accurate
Others

Open & Closed Roll-off Containers—heavy duty, rugged construction for long trouble free operation. Available in any length from 10' long to 34' long for tractor operations.

Transfer Station Packer—several models to fit small communities and large cities. High performance compaction with minimum energy requirements.

Power Wedge Compactor All Models—shown with walk on ramp, safety rails and hopper extension. Ideal for many industrial applications.

Ejection Containers—designed to handle densely compacted material that will not dump from standard compactor containers. Built to fit any compactor or roll-off hoist. Partial ejection or full ejector models available.

ASK YOUR ACCURATE DISTRIBUTOR TO SHOW YOU OUR FULL LINE OF EQUIPMENT

Distributor:

ACCURATE INDUSTRIES
a Sudbury Company

P.O. Box 451, New Brooklyn Road & Filbert Street,
Williamstown, N.J. 08094 (609) 629-2800

JUNIPER INDUSTRIES INC.

72-15 Metropolitan Ave.

Middle Village, N.Y. 11379

Telephone: (718) 326-2546 Fax: (718) 326-3786 Telex: 12-5141

QUOTATION

T.K. Thompson, Inc.
118 Yosemite Drive
White Rock, New Mexico 87544

DATE 6/16/89

REFERENCE JAF-89-102

THANK YOU FOR THE OPPORTUNITY TO QUOTE ON YOUR REQUIREMENTS FOR THE
FOLLOWING:

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE
1	100 to 120 pcs. (minimum combined)	36" X 36" Carbon Stl. lightweight marine hatches.	\$495.00
2	100 to 120 pcs. (minimum combined)	30" X 30" Carbon Stl. lightweight marine hatches.	465.00

PACKAGING: STANDARD

SHIPMENT: 12 weeks WEEKS AFTER RECEIPT OF ORDER, AT THE
PRESENT TIME.

TERMS: Net 30 (Subject to F.O.B. Middle Village, N.Y.
credit approval)

REMARKS:

VERY TRULY YOURS,

Elliot J. Wiener
AUTHORIZED SIGNATURE

STANDARD EQUIPMENT COMPANY, INC.

75 Beaugard Street P.O. Drawer G

Mobile, Ala. 36601 205 / 432 / 1705

Fax Line: 1-205-438-3642

Industry's Partner In Progress Since 1906

QUOTATION

T. K. Thompson, Inc.

118 Yosemite Drive

White Rock, New Mexico 87544

Attention: James A. Frye - Principal
Mechanical Engineer

DATE June 19, 1989

TERMS Net 30-Days

FOB POINT Mobile, Alabama

DELIVERY Mobile Stock - Subject to
prior sale.

ITEM	QUANTITY	DESCRIPTION	PRICE	
			UNIT	TOTAL
	120-140	Stock #BD-3030, As per Drawing #10100, 30" X 30" Raised Watertight Hatch. (Drawing #10100 Enclosed).	\$366.00 each	\$555. each

WE APPRECIATE THE OPPORTUNITY TO OFFER THIS QUOTE. QUOTATIONS EXPIRE 30 DAYS FROM ABOVE DATE AND ARE SUBJECT TO AND DEEMED TO INCLUDE THE TERMS AND CONDITIONS BELOW. SHOULD YOU REQUIRE ADDITIONAL INFORMATION, PLEASE DO NOT HESITATE TO CONTACT US. WE LOOK FORWARD TO RECEIVING YOUR ORDER.

STANDARD EQUIPMENT COMPANY, INC.

75 Beaugard Street P.O. Drawer G

Mobile, Ala. 36601 205/432/1705

BY:

E. Burnley Davis

TERMS AND CONDITIONS

- 1 This quotation is based on prices now in effect and is subject to change without notice unless specifically noted to the contrary.
- 2 Quantities are to our best judgement, accurate but cannot be guaranteed.
- 3 Quoted deliveries from stock are subject to prior sale.
- 4 Delivery is subject to delay caused by not strike, fire, flood, accident, governmental law, regulation, or order, and any other cause beyond Seller's control. Seller reserves the right to terminate delivery.

- 5 Buyer assumes liability for all state taxes which are or may become applicable to this transaction. Prices do not include any state taxes unless so specified on quotation or on acknowledgment order.
- 5 If Buyer repudiates the contract or notifies Seller to proceed no further therewith, Seller shall have right to deliver all finished goods and goods in process, and Buyer agrees to accept same and pay to Seller the contract price for goods finished and delivered by Seller plus reimbursement.

July 14, 1989

Mr. Jim Frye
T.K. Thompson, Inc.
118 Yosemite Drive
White Rock, NM 87544

RE: Los Alamos National Laboratory

Dear Mr. Frye:

Listed below you will find the budgetary pricing you requested in your letter dated July 3, 1989.

Option: - (20) Full Ejection Containers - 45 Cubic Yards..... \$11,181.00/ea
- (20) Rectangular Sludge Containers - 40 Cubic Yards..... \$8,065.00/ea

- (1) Truck & Roll-Off Hoist:
Mack #DM-690 - 300 HP - 6 Speed - 20,000# Front Axle - 44,000# Rear Axle - 11R22X5 Tires
With Excise Tax..... \$80,231.00/ea
With Out Excise Tax..... \$71,800.00/ea

** Note: The Rear Door On The Full Ejection Container Is Not Water Tight.

Again, the above pricing is strictly for budgetary reasons.

We appreciate your interest, and are looking forward to hearing from you in the near future. If you have any questions or if I may be of assistance in any way, please do not hesitate to call.

Respectfully,
James S. Reeves
Special Projects Coordinator

jt:JSR

TKT Inc.

- FEATURES:
1. HORIZONTAL GUIDES SUPPORT THE BOTTOM ROW OF 1" x 2" CARTRONS ABOVE ANY POSITIVE LIMIT HAVE COLLECTED IN THE BOTTOM. THEY ALSO ADD STRENGTH AND RIGIDITY TO THE DISCHARGE RAMP.
 2. THE DISCHARGE RAMP SHOULD BE SLIGHTLY BLUMED FOR DRAINAGE INTO THE RAMP. A PROTECTED DRAIN VALVE SHALL BE PROVIDED. A PROTECTED DRAIN VALVE IS PROVIDED.
 3. VERTICAL GUIDES PREVENT CARTRONS FROM CONTACTING THE INTERNAL WALLS THAT COULD HAVE VOLUNTARY COMPRESSION ON AROUND. VERTICAL GUIDES ALSO PROTECT THE SEAL SUPPORT ANGLE. ANGLE-TO-SEAL RETAINER COLLARS AND THE SEAL AIR FITTING.
 4. THE SEAL IS ACTIVATED BY 10 PSIG AIR PRESSURE THAT PREVENTS WATER, SOIL, AND RUM FROM ENTERING THE SHIPPER THROUGH THE SEAL. THE SEAL IS ACTIVATED BY THE OPERATOR THROUGH THE PROTECTED INFLATION RELEASE VALVE NOT SHOWN PRIOR TO DISCHARGE. THE SEAL AUTOMATICALLY RETRACTS INTO THE SHIPPER AFTER DISCHARGE. THE SEAL IS PROTECTED FROM IMPACT BY THE SHIPPER AND ALSO STRENGTHEN AND RIGIDITY.
 5. THE LOCK PINS PREVENT THE DISCHARGE RAMP FROM OPENING ACCIDENTALLY UP IN DOWNWARD FORCE FROM THE INFLATABLE SEAL ON OTHER BEARINGS. THE SEALS WILL HAVE TO BE VENTED BEFORE THE LOCK PINS CAN BE DISMANTLED.

DETAIL - INFLATABLE SEAL
SCALE: FULL

NOTE: Δ

To relieve existing side plate-
flange from discharge ramp-
shell to eliminate discharge ramp-
shell re-weld to discharge ramp-
pride mild steel about to fill
triangular cutout in shell.
Typical-2 sides.

SECTION A-A
NOTE: VERTICAL GUIDES NOT SHOWN FOR CLARITY

PARTIAL VIEW B-B
SCALE: 1/4"=1"
NOTE: SEAL SHOWN DE-FLATING

CONCEPTUAL LAYOUT TBN YARD DAMPSTER MODIFIED FOR WEATHER-PROOFING

CONCEPTUAL DRAWING
PROPOSED PLATFORM FOR 11W TEN CUBIC YARD DUMPMSTER

TKT Inc.

118 Yosemite Drive White Rock, New Mexico 87544

CONCEPTUAL SCHEMATIC LAY-OUT
6 CUBIC YARD DUMPMSTER FOR
AUTOMATED LOADING

MODE 1 - AUTOMATED LOADING

**MODE 2 - OUTDOOR STORAGE
(GATES CLOSED & LOCKED)**

**MODE 3 - ROAD TRANSPORTATION
(GATE CLOSED & LOCKED)**

**MODE 4 - DISCHARGE
(GATES OPENED AFTER FLANGES SEAL)**

**MODE 5 - HORIZONTAL LOADING OF
BULKY CONTAMINATED OBJECTS OR SOIL**

**MODE 6 - VERTICAL DUST FREE LOADING
OF CONTAMINATED SOIL, GRAVEL, ETC.**

12.6 PHOTOGRAPHS

TKT Inc.

118 Yosemite Drive, White Rock, New Mexico 87544

T.K. Thompson, Incorporated

T.K. Thompson, Incorporated

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 870-9444

T.K. Thompson, Incorporated

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 672-9444

T.K. Thompson, Incorporated

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 672-9444

T.K. Thompson, Incorporated

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 672-9444

T.K. Thompson, Incorporated

118 Yosemite Drive, White Rock, New Mexico 87544
(505) 672-9444

DATE

FILMED

7/29/94

END