

## **15. FINAL SURVEY PLAN: AFFECTED OUTDOOR AREAS OUTSIDE OF FORMER RCA**

### **15.1 INTENT OF SURVEY**

#### **15.1.1 Scope**

The scope of this portion of the final survey includes the land areas outside of the formerly fenced-in Radiologically Controlled Area (RCA) that are either affected areas or unaffected areas in close proximity to the affected areas. This area surrounds the engineering building (Bldg 3), the boiler house (Bldg 5), the administration building (Bldg 4), the waste storage building (WSB), and two storage (Butler) buildings. This final survey will address asphalt driveways, soil areas, concrete sidewalks and pads, manholes and drain pipes, excavated trenches, and spoils pile areas.

This survey does not include outdoor areas south of the reactor building which were previously surveyed as part of the Hold-Up Tank (HUT) interim survey, unaffected undeveloped portions of the property, nor the outdoor areas inside the RCA boundary. This survey also excludes areas where known contaminated bedrock and/or soil was encountered directly underneath the reactor or hot laboratory buildings. These excluded areas have either been previously surveyed and reported or will be the subject of future survey efforts.

#### **15.1.2 Purpose**

The purpose of this outdoor area final survey is to produce data that will demonstrate that this portion of the site meets the criteria for unrestricted release (see Sections 15.3.1 and 15.3.2).

### **15.2 REMEDIATION WORK PRIOR TO THE SURVEY**

Some outdoor land areas outside of the RCA have been included in previous survey reports. The balance of land areas on site that completes the survey per the decommissioning plan are included in this report. A brief description of the remediation work in these areas follows.

#### **15.2.1 Soil Areas (500 Area)**

The UCD landfill area at the north end of the site was originally classified as an unaffected area but was reclassified as affected after a single metal filter that was contaminated was discovered at the surface about 10 meters west of the entry gate. This area had been used as a landfill for rubble from construction and renovation projects on site between 1957 and 1980. No radioactive material was ever deposited here intentionally. The area has been fenced off and locked since 1980.

About one foot of soil was removed from two small areas close to where the above-mentioned radioactive filter was found because trace amounts of radioactivity other than background were detected, although they were within the soil acceptance criteria. Also, during the final survey of this area some elevated radioactivity above natural background from radium, thorium, and uranium was detected in a small area on the northeast bank of this landfill. This material could be traceable to operations with some uranium ore that were conducted in Bldg 3 during the late 1950s under NY Dept of Labor registry. This area is currently being studied under a remediation investigation plan that is on file with the NY DEC. A report of our findings, including any dose assessment if appropriate, will be submitted to the NY DEC and the NY DOL as part of the final surveys required by them to terminate NY State licenses and permits.

Land around the exhaust stack was remediated by removing up to one foot of surface soil from the immediate area around the stack. Some small surface areas on the exhaust duct pedestals were scarified. More extensive scarification was required on the stack pedestal and an imbedded drain pipe was removed from the center of the pedestal.

Extensive soil remediation was required in the land area east of Buildings 3 and 5 (also referred to as S-5 and S-3 respectively). One to two feet of soil was removed from an area of approximately 150m<sup>2</sup> extending from the storm drain outfall at S-3. Soil was removed to a depth of 4 to 5 feet from an area of about 300 m<sup>2</sup> that was the original stream bed about 50 meters east of S-5. Soil was also removed to a depth of 4 feet from an area of about 100 m<sup>2</sup> at the S-5 outfall. A small amount of soil was removed to a depth of about one foot from an area of about 2 m<sup>2</sup> east of the stream about 15 meters south of the retention pond. All of the soil from these areas was disposed of as LARW. Large rocks from these excavations were cleaned and left in these areas. Another area of about 150 m<sup>2</sup> immediately south of the retention pond consists predominantly of large rocks with some organic loam filling the spaces between the rocks. The interstitial loam exhibits some elevated contamination above background but the soils underlying the rocky area are at or below the average background levels of radiation. This area was not remediated because it would be very difficult to do so and because, if the rocks were moved, the small amount of interstitial loam present would be mixed with the underlying soil and it would be diluted to a point of becoming undetectable. Since this area is atypical of the standard soil model, and since it would have to be altered significantly before it would be configured to be useful and hence become a source of radiation to anyone under the resident farmer scenario, it would not fit the model upon which the current soil criteria are based (i.e., the soil criteria was based upon a large surface area of soil up to a meter thick whereas the soil present here is comprised of small deposits between very large rocks). Furthermore, if it were altered to a more useful configuration to fit the dose calculation model, the organic loam in the interstitial spaces would effectively disappear.

Some soil was excavated from the surface of an area of about 100m<sup>2</sup> north of the waste storage building. This was an extension of the remediation of the soil immediately north of that building inside of the RCA.

Some soil was excavated from the surface of an area of about 200 m<sup>2</sup> immediately north of the paved surface on the north side of the Butler Buildings.

Liquid waste holding tanks were removed from the east side of Bldg 3. The tanks and connecting piping were disposed of as LARW. Some soil from under some of the pipe joints was disposed of as LARW. This work was an extension of remediation work inside Bldg 3. Most of the soil from this excavation was released for future use on site. This excavation was backfilled.

#### 15.2.2 Paved Areas (501 Area)

The S-3 storm-drain pipe was excavated. The steel pipe and some of the soil immediately under some of the pipe joints were disposed of as LARW. Most of the soil was released for future use on site. A replacement pipe was installed and the trench was backfilled.

The S-4 storm-drain pipe was excavated. The steel pipe and some of the soil immediately under some of the pipe joints were disposed of as LARW. Most of the soil from this excavation was systematically sampled and analyzed and it was released for future use on site. A replacement pipe was installed and the trench was backfilled.

Minor remediation of isolated spots in paved areas was accomplished by removing the pavement and disposing of it as LARW as necessary.

#### 15.2.3 Other Areas (502 Area)

Some soil was removed from under the east end of the three 10,000 gallon process liquid storage tanks and it was disposed of as LARW. The drain pipe from these tanks was exhumed and disposed of. The soil from this excavation was systematically sampled and analyzed and it was released for future use on site. The pipe trench was backfilled to allow continued access to the S-5 area.

Two spoils piles were created in this area during the decommissioning project, the concrete rubble pile and the south soil pile. The land area under these piles east of the boiler house was surveyed prior to depositing any spoils. All materials in these piles were systematically sampled and analyzed and released for future use on site before they were placed there.

Three manholes that were part of the process liquid waste piping system were removed. These were located in the mall, east of Bldg 5 and east of Bldg 3. The concrete rubble and some of the underlying soil were disposed of as LARW. Most of the soils from these excavations were systematically analyzed and released for future use on site. The excavations were backfilled. The process drain pipe between Buildings 5 and 3 and east of Bldg 3 was left in the ground after it was surveyed internally and the soil around the outside of it was sampled, analyzed, and found to be within the acceptance criteria of the plan.

The foundations of the exhaust duct and stack were remediated by scarification. An embedded drain pipe was removed from the center of the stack base.

## 15.3 FINAL SURVEY OVERVIEW

### 15.3.1 Survey Objectives

The purpose of this final survey is to demonstrate that the radiological conditions of the outdoor areas outside the RCA satisfy NRC guidelines for unrestricted release. The data produced will also be used in conjunction with additional data from the final survey for other areas of the site to allow the entire site to be released from regulatory control. The specific objectives of this survey are to provide the following confirmations.

#### A. Surface Activity of Outdoor Structures

1. Average surface contamination levels for each survey unit are within the authorized values (refer to Section 15.3.2).
2. Small areas of residual activity, known as "hot spots" do not exceed three times the average value. The hot-spot limit applies to areas of up to 100 cm<sup>2</sup>. The average activity level within the 1 m<sup>2</sup> area containing a hot spot must be within the guideline for the average level.
3. Reasonable efforts have been made to clean up removable activity and removable activity does not exceed authorized values (refer to Section 15.3.2).
4. Exposure rates in occupiable locations are no more than an average of 5 µR/h above background. Exposure levels are measured at one meter from surfaces and are averaged over the survey unit/area. Individual hot spots will not exceed 10 µR/hr above background at one meter.

#### B. Volume Activity of Soil

1. Average radionuclide soil concentrations are within the authorized limits, as shown in Table 15.1. Averaging is based on a 100 m<sup>2</sup> grid area.
2. Reasonable efforts have been made to identify and remove hot spots that may exceed the average limits by greater than a factor of  $(100/A)^{1/2}$ , where A is the area (in square meters) of the hot spot or three times the average limits, whichever is less.
3. Exposure rates do not exceed 5 µR/h above background at one meter above the surface. Exposure rates may be averaged over a 100m<sup>2</sup> grid area. Maximum exposure rates over any discrete area of within the 100m<sup>2</sup> area may not exceed 10 µR/h above background.

The above conditions will be demonstrated at a 95% confidence level for each survey unit as a whole.

### 15.3.2 Identity of Contaminants

Based on the knowledge of site operations and the results of sampling during the initial site characterization and the D&D process, two distinct radionuclide contaminant mixtures were found to exist for surfaces within the reactor and hot laboratory buildings. Areas of outdoor soil or structural surface contamination would have become contaminated with radioactive material originating from these buildings. For the purposes of this final survey it will be assumed that all beta-gamma contamination detected on a structural surface (i.e., roads, pads, sidewalks, etc.) is due to the hot laboratory mixture unless otherwise specified. In reality, surface contamination on outdoor structural surfaces could be comprised of any combination of the reactor and hot laboratory radionuclide mixtures. Accounting for these differences would be difficult at best, due to the very large surface area surveyed with the potential for an infinite number of radionuclide ratios. Therefore, the simple yet conservative approach of using the most restrictive radionuclide mixture will be used. This hot lab mixture, decayed to January 1, 1997, consists of the following:

<u>Radionuclides *</u>	<u>Fractional Abundance</u>
Ce-144	0.019
Cs-137	0.216
Fe-55	0.0026
H-3	0.00419
Ni-63	0.0181
Ru-106	0.0025
Sb-125	0.00426
Sr-90	0.732
Tc-99	0.00151

\* Radionuclides reported comprising  $\geq 0.1\%$  of total radioactivity; results are rounded to three significant figures.

Surface contamination release criteria will be based upon Regulatory Guide 1.86 Table I limits, as modified for H-3 and Fe-55, per NRC approval (October 3, 1994). On that basis, the effective beta-gamma surface contamination limits for the area of concern (for the January 1997 hot lab mixture) using the sum-of-fractions rule, are:

1,273 dpm/100 cm<sup>2</sup>, averaged over 1 m<sup>2</sup>  
3,819 dpm/100 cm<sup>2</sup>, maximum not to exceed 100 cm<sup>2</sup> area  
255 dpm/100 cm<sup>2</sup>, removable

Within the buildings in the RCA, alpha contamination as Highly Enriched Uranium (HEU) has only been encountered in a small isolated area of the hot lab building, where a vestige of uranium labs remains on the second floor. Therefore, if alpha contamination were to have migrated outdoors, the criteria from Reg. Guide 1.86 would apply, as follows:

5,000  $\times$  dpm/100 cm<sup>2</sup>, averaged over 1 m<sup>2</sup>

15,000  $\times$  dpm/100 cm<sup>2</sup>, maximum not to exceed 100 cm<sup>2</sup> area

1,000  $\times$  dpm/100 cm<sup>2</sup>, removable

Soil contaminant mixture makeup and ratios have been found to vary, depending upon the particular leak source (e.g., HUT, canal, hot cell exhaust duct) as well as distance from the release point. As such, no single concentration guideline can be specified since any combination of radionuclides from the reactor or hot laboratory could exist outdoors. Instead, individual site-specific radionuclide guidelines were developed by site personnel and approved by NRC. Table 15.1 presents this soil criteria. The sum-of-fractions method will be used where a soil contaminant mixture meets "must not exceed" unity (exclusive of uranium and plutonium radionuclides).

Example: if radionuclides A, B and C are present in concentrations Ca, Cb and Cc, and if soil guideline concentrations are Ga, Gb, and Gc, then the soil concentrations will not exceed unity for the following relationship:

$$(Ca/Ga) + (Cb/Gb) + (Cc/Gc) \leq 1$$

### 15.3.3 Organization and Responsibilities

The final survey for the outdoor areas within the RCA will be performed by qualified personnel from the site's Health, Safety, Environmental Affairs Department (HSEA) or equivalent. Logistical support will be provided by the site's D&D Operations Department (or equivalent). Figure 15.1 presents an organizational chart for the survey activities.

The survey organization will be directed by the Manager of HSEA. The HSEA Manager will have the authority to make appropriate changes to the survey plan (subject to established site procedural revision protocol), as deemed necessary as the survey progresses.

Field measurements, sample collection and sample analysis will be performed by the Health Physics (HP) Support and Environmental Monitoring groups (or equivalent) from the HSEA Department.

QA/QC responsibilities will be handled by the Project QA Manager or equivalent.

The Project Industrial Safety Specialist (or equivalent) will provide industrial safety oversight for the survey process.

Independent data review will be performed by members of the HP staff who do not have direct responsibility for generating data.

Logistical Support will be provided by the D&D Operations group. They will be responsible for gridding survey locations and providing scaffolding erection.

Qualifications of each key team member have been previously reviewed by the NRC during routine periodic inspections.

#### 15.3.4 Training

Cintichem provides continual training for its HP personnel and other workers who may be exposed to radioactive materials. Training varies according to potential exposure and the nature of the employee's job duties. In addition to the regular training, special training will be provided on equipment, special techniques, and practices relative to the survey activities for those employees who will be involved in taking radiological measurements and samples. All members of the survey team will attend an in-house orientation session reviewing radiation protection, survey procedures, and quality assurance activities. Documentation will be retained in Cintichem training files.

#### 15.3.5 Laboratory Services

Analytical services for gross alpha/beta levels on smears, and gamma spectroscopy and Sr-90 analysis of bulk samples will be performed by the site's environmental monitoring group and/or a contract laboratory in accordance with existing procedures. These procedures have been reviewed by the NRC during past routine inspections. Contract laboratories (typically Teledyne, Inc.) will be used for wet chemistry analysis for soil and/or special bulk samples, when required. QA/QC programs for both in-house and contractor laboratory services will be monitored by the QA Manager (or equivalently qualified personnel).

#### 15.3.6 General Survey Plan

This survey plan consists of systematic processes and procedures that have been deemed acceptable by industry standards and the NRC. Activities (organized units of work needed to complete a function) have been defined and tasks (specific work assignments within a specific activity) have been delegated to the appropriate team members. Table 15.2 provides a breakdown of activities and tasks that are currently a part of the termination survey plan.

Tasks will be performed in general accordance with guidelines stated in the "Manual for Conducting Radiological Survey in Support of License Termination," NUREG/CR-5849.

#### 15.3.7 Tentative Schedule

Field activities for the final survey of the outdoor areas outside of the former RCA began in September of 1995 and will be completed by the end of May, 1997.

#### 15.3.8 Survey Report

A report describing the survey procedures and findings will be prepared and submitted to the following regulatory agencies: NYDOL, NYDEC, NRC. Report format and content will follow the recommendations contained in NUREG/CR-5849.

## 15.4 SURVEY PLAN AND PROCEDURES

### 15.4.1 Instrumentation for Outdoor Surveys Outside of the Former RCA

Table 15.3 lists the instrumentation to be used for the survey activities, along with typical parameters and detection sensitivities for the instrumentation and survey techniques. The radionuclides Fe-55, H-3 and Ni-63 comprise about 2.5% of the radioactivity in the mixture used for the outdoor survey and are not detectable with the field instrumentation being used. The other 97.5% of the radioactivity in the mixture (Ce-144, Cs-137, Ru-106, Sb-125, Sr-90, and Tc-99) is detectable with the field instrumentation being used. For every radiation event detected (counted), 0.026 radiation events are not counted. Therefore, one count represents 1.026 counts. As such, a correction or scaling factor must be applied to a net count rate in order to account for all detectable and non-detectable radionuclides present. This factor (for the hot laboratory building beta-gamma mixture) is a multiplier of 1.026 or, equivalently, a divisor of 0.975. The combination of instrumentation and technique yield a detection sensitivity for direct survey beta-gamma measurements of about 40% or less of the guideline levels for beta-gamma emitters (1,273 dpm/100 cm<sup>2</sup>).

The basic equation for determining field instrument direct survey detection limits will be:

$$\text{MDA} = \frac{2.71 + 4.65 (\text{background} \times \text{count time})^{1/2}}{\text{count time} \times \text{efficiency} \times (\text{probe area}/100) \times \text{scaling factor}}$$

Sensitivities for scanning techniques are based on (1) movement of the detector over the surface at one detector width per second, and (2) use of audible indicators and count-rate meter to sense changes in instrument count rate. Data obtained experimentally with the equipment and technicians who will be used on this final survey indicate that qualified surveyors can detect approximately 2880 dpm/100 cm<sup>2</sup>) with a 90% confidence level. As this level is 2.26 times the average guideline value, an increased direct beta measurement sampling frequency will be used (see Section 15.4.2.4). All instruments will be calibrated a minimum of once every three months, using NIST-traceable standards. Calibrations of beta detection instruments will be made with Sr-90. Operational and background checks will be performed at least once each four hours on instrument use.

In-the-field survey instrument readings (counts per time) will be corrected for instrument background, detector efficiency, non-detectable radionuclides, and probe area size to produce a result in dpm/100 cm<sup>2</sup> (as previously shown).

$$\text{dpm}/100 \text{ cm}^2 = \frac{([\text{gross counts}/\text{count time}] - [\text{background counts}/\text{count time}]) \times 1}{(\text{efficiency} \times \text{non-detectable scaling factor} \times 100/\text{probe area})}$$

This dpm/100 cm<sup>2</sup> value will then be corrected for the specific surface materials natural background if the material has a natural background sufficiently high as to interfere with achieving releasable levels. This will be accomplished by subtracting an average background value that will be determined for each type of material (rock, concrete, asphalt, wood, etc.) in dpm/100 cm<sup>2</sup> (see Section 15.4.3)

#### 15.4.2 Survey Plan

##### 15.4.2.1 Area Classification

For purposes of establishing the sampling and measurement frequency and pattern, survey areas have been divided into affected and unaffected areas (as indicated in Table 15.4) and general arrangement of the outdoor areas, as shown in Figure 15.2. The bases for these classifications are described here.

###### A. Affected Areas

Areas that have potential radioactive contamination (based on plant operating history) or known radioactive contamination (based on radiological characterization and/or measurements made during D&D operations). This includes:

- areas where radioactive materials were used and stored
- where records indicate spills or other unusual occurrences that could have resulted in spread of contamination
- where radioactive materials leaked from systems or structures
- where decontamination work has been performed.

Areas immediately surrounding or adjacent to these locations are included in this classification because of the potential for inadvertent spread of contamination.

###### B. Unaffected Areas

All areas that are not classified as affected. These areas are not expected to contain residual radioactivity, based on a knowledge of site history and previous survey information.

Table 15.4 lists the various survey units and areas for the outdoor areas within the RCA and the classification of each.

##### 15.4.2.2 Reference Grids

Grids will be established for the purpose of referencing locations of affected area samples and measurements relative to building and other site features. The gridding intervals are based on the potential for residual contamination in the various plant areas (i.e., affected or unaffected area classification). All affected area surfaces will be gridded at one meter intervals for areas of high contamination potential (such as sidewalks, ramps, and stairs providing access from formerly contaminated areas) and at 10 meter intervals for open land areas and driveways. Five measurements will be taken within each (i.e.,

center and mid-way between the center and each of the four corners). Structural surfaces in unaffected areas will not be gridded. Unaffected area measurements will be evenly distributed and referenced to prominent building features and indicated on maps.

Each survey area will be divided into "survey units" having common history, function, contamination potential, or that are naturally distinguishable from other site areas. Unaffected area structural surfaces identified by direct measurements as exceeding expected range of background levels will be reclassified as affected areas and will be gridded and resurveyed accordingly.

#### 15.4.2.3 Surface Scans

Scanning of surfaces to identify locations of residual radioactive contamination will be performed according to the following schedule:

Affected Area, Structural:	100% of surface, beta and alpha radiations
Affected Area, Exposed Soil	100% of surface gamma radiations
Unaffected Area, Exposed Soil	10% of surface gamma radiations
Unaffected Area, Structural	none

Structural surface scans will be conducted for alpha and beta radiations. Soil surfaces will be scanned for gamma radiations.

Instrumentation for scanning is listed in Table 15.3. Scanning speeds will be no greater than one detector width per second for alpha and beta detection instruments and 0.5 meter per second for gamma instruments. Audible indicators will be used to identify locations having elevated levels. All scanning results will be noted on standard field record forms; locations of elevated radiation will be identified for further investigation. Table 15.4 lists the specific areas and frequency of surface scan measurements.

#### 15.4.2.4 Surface Activity Measurements

##### A. Direct Measurements

Direct measurements of alpha and beta surface activity will be performed at selected locations using the instrumentation described in Table 15.3. Measurements will be conducted by integrating counts over a one minute period.

Direct surface activity measurements will be systematically placed using grids with ten meter intervals on all structural surfaces of affected areas. Direct measurements will be at a frequency of five per grid box. A one meter grid may be used for surfaces with a high potential for contamination (see Section 15.4.2.2).

Unaffected surface areas will be surveyed with a minimum of 30 random measurements or an average measurement of one per 50 m<sup>2</sup> of survey unit area (whichever is greater) will be performed for each unaffected area survey unit.

**B. Removable Contamination Measurements**

Smears for removable contamination will not be performed for outdoor surfaces. The weathering process (i.e., rain, snow, wind, etc.) would have removed and transferred any non-fixed radioactive contamination to nearby soil, where it would have become trapped. Therefore, smear sampling is unlikely to produce any relevant data.

**15.4.2.5 Exposure Rate Measurements**

Gamma exposure rates will be measured at one meter above surfaces using a gamma scintillation instrument calibrated for Cs-137. Measurements will be uniformly spaced according to the following frequency for structural surfaces:

Affected Structural Areas: 5 measurements per 100 square meters or one per square meter for high potential areas (see Section 15.4.2.2)

Unaffected Structural Areas: 30 measurements per area

Table 15.4 shows the specific measurement frequency for each survey area.

**15.4.2.6 Soil/Sediment Sampling**

Samples (about 500 grams each) of surface soil (0 - 15 cm) will be systematically collected. Soil samples will be collected from the center and four points midway between the center and the block corners for each 10 m x 10 m grid in affected areas.

All of the soil regions of the outdoor areas will be scanned with a 2" x 2" NaI detector (100% for affected areas and 10% for unaffected areas). Biased soil samples will be taken from any grid location that exhibits a gross gamma count rate above the expected background range. Additionally, soil samples will also be taken from locations where known contaminated soil had been removed during D&D work. Unaffected soil areas will be sampled at a rate of 30 per area, plus biased-sampled at locations of elevated gamma activity.

**15.4.2.7 Special Measurements and Samples**

The following lists additional measurements and sampling that were performed as part of the affected outdoor area outside of the former RCA. These measurements and/or samples represent unusual structures that, because of their configuration, could not be measured or sampled for radioactivity using the aforementioned techniques.

The process drain line and 8-inch diameter ceramic pipe, which ran underground from the mall area 5,000-gallon tank to Bldg 3 and then to an off-site outfall, could not be surveyed for surface contamination in a manner consistent with the requirements outlined by this plan and NUREG 4859 guidance. This is due to (1) the curvature of the pipe which precludes placement of the detector at a consistent distance of one centimeter from the interior surface and the depth of one centimeter from the interior surface, and (2) the depth and length of the pipe precludes the use of standard alpha/beta

detectors. Therefore, the pipes will be surveyed ("gamma logged") with a high resolution NaI. Measurements will be made at 0.6 meter (or less) increments. The detector will be calibrated for a pipe geometry using a simulated line source of Cs-137 and/or Co-60 with each incremental measurement representing a 0.6m interval of pipe.

The quantity of Cs-137 or Co-60 will be determined from the net counts in the 662 KeV and 1172 KeV regions, respectively, and other radionuclides in this pipe's mixture will be scaled-in as appropriate. The total quantity of radioactivity detected is assumed to be distributed over the bottom half of the 0.6m interval of pipe (2280 cm<sup>2</sup>).

A sample of sediment from the Bldg3 sump (at the end of the 5,000-gal tank to Bldg 3 sump run of pipe) was obtained during decontamination of this pipe. The radionuclide mixture, specific to this pipe, was determined to be as follows:

<u>Radionuclide</u>	<u>Fractional Abundance</u>
Co-60	0.0234
Sr-90	0.0982
Ag-108m	0.0097
Cs-137	0.8687

Therefore, using the sum of fractions rule, the surface contamination criteria would be 3762 dpm/100 cm<sup>2</sup>.

The process drain line is constructed of four foot sections of ceramic pipe, with interlocking bell and spigot with rubber o-ring connections. Therefore, a possibility of containment leakage existed from these connections. As such, soil sampling will be performed around this pipe. Soil samples will be obtained by core drilling next to the pipe, through the surface soil to an elevation of 0.33 meters above the pipe. Three core soil samples of 0.33m lengths will be taken; one at 0.33 meters above the pipe, one directly adjacent to the pipe, and one 0.33 meters below the pipe. Sets of three samples will be taken at ten evenly-spaced locations along each run of drain pipe (i.e., for a total of 60 samples).

#### **15.4.3 BACKGROUND LEVEL DETERMINATIONS**

Background levels for typical construction and natural materials were previously determined during the HUT interim survey. These background levels have been used for prior surveys and will be used for both this survey and future final survey efforts. The following describes the approach that was taken.

Background exposure rates were determined for the outdoor areas by taking a minimum of 30 gamma scintillation microRem measurements at unaffected locations of similar off-site terrain. Results of background exposure rates will be evaluated to ensure that the averages determined are representative of the true averages, using procedures described in NUREG/CR-5849.

Direct beta-alpha backgrounds were taken from representative materials (e.g., bedrock, concrete) and determined and tested as specified in NUREG/CR-5849. Additional sampling or measurements will be performed if necessary to satisfy statistical criteria.

Bedrock and/or soil background samples have been previously collected from off-site locations to determine fallout fission product concentrations. Soil fallout concentrations have been determined to contain Cs-137 at 1.25 pCi/gm at the 90<sup>th</sup> percentile. This value has been accepted by NRC as part of the soil criteria review process.

Bedrock and/or soil on site are known to contain deposits of natural uranium/thorium ore. These localized ore deposits may cause direct measurements of beta-gamma and alpha surface contamination as well as gamma exposure rates to appear to exceed free-release criteria on these or nearby materials, even when corrected with average background values. It will therefore be necessary to distinguish "real" contamination from natural hot spots. Locations where direct surface contamination measurements appear to be greater than expected (average) background levels or release criteria for the material in question will be sampled and analyzed by gamma spectroscopy. If the sample result indicates the presence of uranium/thorium ore without non-natural radionuclides, the high readings will be dismissed as background. If non-natural radionuclides are detected, part or all of the high result will be attributed to "real" contamination, dependent upon the ratio of natural and non-natural radionuclides and the associated decay schemes.

A similar approach will be taken with higher than expected gamma exposure rate results. When this occurs, gamma spectrum will be taken at the same location with a portable intrinsic germanium detector and multi-channel analyzer. If the resulting gamma spectrum indicates the presence of Th-232+D and U-238/235+D without non-natural photopeaks, the higher readings for that area will be attributed to natural background. If non-natural photopeaks are identified, part or all of the high result will be attributed to "real" contamination, dependent upon the distribution of natural and non-natural photopeaks and the associated dose conversion factors.

## **15.5 DATA INTERPRETATION**

Measurement data will be converted to units of dpm/100 cm<sup>2</sup> (surface activity) and  $\mu\text{R}/\text{h}$  (exposure rates) for comparison with guidelines. Values will be adjusted for contributions from natural background. Individual measurements will be compared with hot spot criteria. Average values for survey units and/or grid boxes will be determined and compared with guideline levels. Data for each survey unit will be tested against the confidence level objective using guidance and procedures described in NUREG/CR-5849.

Additional remediation and/or further sampling and measurements will be performed where guidelines are not met or cannot be demonstrated to the specified level of confidence. Additional measurements, computations, and comparisons will be repeated as necessary.

## 15.6 REPORT

A report describing the procedures and findings of the hot laboratory final survey will be prepared and submitted to the NRC. Data will be summarized in tables. Measurement and sampling locations will be shown on scale drawings. All field and analytical data will be archived by the site until such time as the NRC and other regulatory agencies authorize disposal.

TABLE 15.1  
SOIL RELEASE CRITERIA

<u>Radionuclide</u>	<u>pCi/g</u>
H-3	815.4
Mn-54	3.3
Fe-55	521920.7
Co-60	0.9
Ni-63	42500.0
Zn-65	3.7
Sr-90	17.4
Zr-95	2.5
Nb-95	2.3
Tc-99	450.0
Ru-106	13.5
Ag-108m	1.1
Ag-110m	0.7
Cd-109	63.1
Sb-125	6.5
Cs-134	1.8
Cs-137	3.8
Ce-144	63.4
Eu-152	2.0
Eu-154	1.8
EU-155	99.5
U-234	19.6*
U-235	15.9*
U-238	21.9*
Pu-238	24.1*
Pu-239	4.3*
Pu-241	26.4*
Cm-244	17.1

\* Excluded from sum of fractions

TABLE 15.2

MAJOR ACTIVITIES AND TASKS FOR TERMINATION SURVEY PLAN

Activity	Task
Evaluate contamination potential	<ol style="list-style-type: none"><li>1. Review operating history with respect to facility use, spills, releases, etc.</li><li>2. Review radiological data from scoping, characterization and D&amp;D progress surveys</li><li>3. Identify radionuclides of concern and determine guidelines</li><li>4. Classify areas as to affected and unaffected</li></ol>
Establish grid reference system	<ol style="list-style-type: none"><li>1. Install grids</li><li>2. Prepare facility survey maps</li></ol>
Determine background levels	<ol style="list-style-type: none"><li>1. Measure indoor exposure rates and ambient beta-gamma levels</li><li>2. Measure outdoor exposure rates</li><li>3. Collect background soil samples</li></ol>
Perform direct measurements	<ol style="list-style-type: none"><li>1. Conduct surface scans</li><li>2. Determine frequency &amp; locations of measurements to meet criteria</li><li>3. Conduct surface activity measurements</li><li>4. Measure exposure rates</li></ol>
Collect samples	<ol style="list-style-type: none"><li>1. Determine frequency &amp; locations of sampling to meet criteria</li><li>2. Collect systematic and special samples</li></ol>
Analyze samples	<ol style="list-style-type: none"><li>1. Count smears and swabs</li><li>2. Analyze soil, paint, residue and other solid samples for activation and fission product</li></ol>
Interpret data	<ol style="list-style-type: none"><li>1. Convert data to standard units</li><li>2. Calculate average levels</li><li>3. Compare data with criteria</li><li>4. Compute total residue activity inventory</li></ol>
Prepare report	<ol style="list-style-type: none"><li>1. Construct data tables</li><li>2. Develop graphics</li><li>3. Prepare text</li><li>4. Submit report to NRC</li></ol>

*Cintichem Final Survey Plan  
Outdoor Areas Outside of Former RCA*

**INSTRUMENTATION USED**

ID	Detector	Meter	Type of Measurement	Backgrnd	Nom. 4P: eff (%)	Detect
1.	Nuclear Enterprises AB100, 100cm dual phosphor (alpha, beta) scintillation detector	Bicron Lab Tech dual channel scaler	surface scans, alpha	0 - 3.6 cpm	16	4375 c
			surface scans, beta	400 - 700 cpm	Sr90=25	2880 c 90% c
			surface activity, alpha	0 - 3.6 cpm	16	0 - 72
			surface activity, beta	400 - 700 cpm	Sr90=25	390-52
2.	2x2 Nal, Ludlum 43.2	Ludlum 2200 single analyzer	qualitative gamma scans of pipes, etc.	1500 cpm	n/a	n/a
3.	$\mu$ Rem meter, Bicron organic scintillator	see detector (Item 1)	gamma exposure rates	10-15 $\mu$ Rem/hr	n/a	2 $\mu$ Rem
4.	Twin window - gasflow proportional	Tennelec LB5100	gross alpha smears	0.2 cpm	35.6	14 dpm
			gross beta smears	2.5 cpm	36.8	48 dpm
5.	1x1 Nal, Bicron G1	Ludlum 2200 single channel analyzer	qualitative gamma scans of pipes, land areas, etc.	1500 cpm	n/a	n/a
6.	HPGe (d)	(d)	soil activity assay in 250 ml geometry	varies with energies	gamma	(e)
7.	Canberra sealed proportional detector	alpha beta Model 2404	soil activity for Sr90	3cpm	27	< 0.5 p
8.	Portable High Purity Germanium detector, EG&G Ortec, 10% efficient relative to a 3x3@ Nal detector	MCA, model 7500B, EG&G Ortec	qualitative isotope mix of in-situ soil, building material, etc.	n/a	n/a	
9.	Pancake GM, Ludlum 44-9	Ludlum 2200 scaler/ratemeter	"Pigeon Hole" survey	$\geq$ 60	24	$\leq$ 1174

TABLE 15.3  
OR RADIOLOGICAL SURVEY ACTIVITIES

Sensitivity	Notes																
m/100cm <sup>2</sup> (a)	(a) Sensitivity is linked to combined counts in alpha and beta channels, see (b)																
m/100cm <sup>2</sup> at tainty (b)	(b) Empirically determined at 90% certainty																
pm/100cm <sup>2</sup> (c)	(c) Based on 1.0 minute count times																
dpm/100cm <sup>2</sup> count) (c)	(d) -- Five Ortec high purity germanium detectors, 2 n-type thin windowed and 3 p-type, all approximately 30% efficient (relative to 3x3" NaI) -- Five Ortec 92x MultiChannel Buffers (MCB), including high voltage power supply, pre-amp power supply, a 16K multichannel buffer and a proprietary computer interface -- MCBs are connected to a 386/32 MHz IBM/PC-compatible computer -- EG&G Ortec's Maestro software is an MCA emulator which allows the storage and examination of gamma spectra. The Ortec Omnidigm software provides for the analysis of gamma spectra to calculate radionuclide identity and concentrations.																
hr	(e) Typical values in pCi/g (approximately 405 gram samples)																
Ci/g	<table> <tbody> <tr> <td>Mn-54 &lt;0.05</td> <td>Cd-109 &lt;1.5</td> </tr> <tr> <td>Co-60 &lt;0.04</td> <td>Sb-125 &lt;0.2</td> </tr> <tr> <td>Zn-65 &lt;0.3</td> <td>Cs-135 &lt;0.06</td> </tr> <tr> <td>Zr-95 &lt;0.2</td> <td>Cs-137 &lt;0.06</td> </tr> <tr> <td>Nb-95 &lt;0.07</td> <td>Ce-144 &lt;0.34</td> </tr> <tr> <td>Ru-106 &lt;0.5</td> <td>Eu-152 &lt;0.07</td> </tr> <tr> <td>Ag-108 &lt;0.05</td> <td>Eu-154 &lt;0.4</td> </tr> <tr> <td>Ag-110m &lt;0.12</td> <td>Eu-155 &lt;0.2</td> </tr> </tbody> </table>	Mn-54 <0.05	Cd-109 <1.5	Co-60 <0.04	Sb-125 <0.2	Zn-65 <0.3	Cs-135 <0.06	Zr-95 <0.2	Cs-137 <0.06	Nb-95 <0.07	Ce-144 <0.34	Ru-106 <0.5	Eu-152 <0.07	Ag-108 <0.05	Eu-154 <0.4	Ag-110m <0.12	Eu-155 <0.2
Mn-54 <0.05	Cd-109 <1.5																
Co-60 <0.04	Sb-125 <0.2																
Zn-65 <0.3	Cs-135 <0.06																
Zr-95 <0.2	Cs-137 <0.06																
Nb-95 <0.07	Ce-144 <0.34																
Ru-106 <0.5	Eu-152 <0.07																
Ag-108 <0.05	Eu-154 <0.4																
Ag-110m <0.12	Eu-155 <0.2																
n/a	(f) GM Pancake case/handle has been modified to fit into pigeon holes.																
pm/100 cm <sup>2</sup>	<b>ANSTEC APERTURE CARD</b>																
	Also Available on Aperture Card																

9707240076-01

*Cintichem Final Survey Plan  
Outdoor Areas Outside of Former RCA*

TA  
LISTING OF SURVEY AREAS, UNITS

Survey Area	Unit	Location Description	Affected / Unaffected	Med
<b>500 Soil Areas</b>				
	500.01	UCD (Union Carbide Landfill)	A	Soil with
	500.02	Land area east and north of Building 4 and its parking lot	U	Soil with
	500.03	Land area west of Bldg 4 and its parking lot	U	Soil with
	500.04	Land area surrounding ventilation exhaust stack and duct	A	Soil with
	500.05	Land area east of Buildings 3 and 5	A	Soil with
	500.06	Land area north & east of waste storage bldg	A	Soil with
	500.07	Land area surrounding Butler buildings	A	Soil with
	500.08	Land area north of Building 3	A	Soil with
<b>501 Paved Areas</b>				
	500.01	Road to Butler Building	A	Asph
	500.02	Road between main site entrance & boiler house	A	Asph
	500.03	Butler building laydown area	A	Asph
	500.04	Building 4 parking lot	A	Asph
	500.05	Building 4 sidewalks	A	Concr
	500.06	South driveway (south RCA gate to Building 4 parking lot)	A	Asph
	500.07	Road between north RCA gate & boiler house	A	Asph
<b>502 Other</b>				
	502.01	Tank trench east of Building 3	A	Soil and
	502.02	East spoils pile (concrete)	A	Concrete
	502.03	East spoils pile (soil, surface)	A	Soil with
	502.04	Process drain line	A	Cerami
	502.05	Manhole # 8	A	Concr
	502.06	Exhaust stack base	A	Concr
	502.07	Exhaust duct foundations (A-O)	A	Concr
	502.08	Manhole # 10	A	Concr
	502.09	S-4 Pipe trench	A	Soil
* Subsurface soil is a separate investigation under jurisdiction of NYDEC; a separate report will be provided.				
** Rubble was released from the Rx building based on surveys conducted inside that building; gamma survey population included.				
*** Soil was released from other areas of the site based on batch sampling; this survey population included.				
+ Gamma log: 1/0.66m				

**ANSTEC  
APERTURE  
CARD**

Section 15

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LE 15.4

Also Available on  
Aperture Card

AND MINIMUM ANALYSIS FREQUENCY

Surface Area, m <sup>2</sup>	Soil/Sediment (Y Spect & Sr90)	Direct Beta/Gamma & Alpha		Removable Beta/Gamma and Alpha	Qualitative Gamma Scan w/ Sample at Elevated Locations	Gamma Exposure Rate at 1 Meter	Special Analysis/ Samples
		Time-Integrated	Scanned				
ock	3000	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters *
ock	6200	30	N/A	N/A	N/A	10%	30 N/A
ock	8600	30	N/A	N/A	N/A	10%	30 N/A
ock	2600	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters
ock	12,600	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters N/A
ock	2300	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters N/A
ock	1300	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters N/A
	400	5/100 sq meters	N/A	N/A	N/A	100%	5/100 sq meters N/A
	1200	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
	750	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
	900	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
e	5700	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
e	120	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
e	1900	N/A	5/100 sq meters	100%	N/A	N/A	5/100 sq meters N/A
e	2995	N/A	5/100 sq meters	100%	N/A	N/A	30 N/A
etal	300	N/A	5/100 sq meters	100%	N/A	N/A	1/ sq meter N/A
bble	300	N/A	N/A	N/A	N/A	100%	30 **
bble	600	5/100 sq meters	N/A	N/A	N/A	100%	5/sq meter ***
ipe	N/A	60	N/A	N/A	N/A	N/A	N/A +
e	N/A	N/A	5/sq meter	100%	N/A	N/A	1/ sq meter N/A
e	~10	N/A	5/sq meter	100%	N/A	N/A	1/ sq meter N/A
e	~10	N/A	5/sq meter	100%	N/A	N/A	1/ sq meter N/A
e	N/A	N/A	5/sq meter	100%	N/A	N/A	1/ sq meter N/A
e	N/A	N/A	N/A	N/A	N/A	100%	1/ sq meter N/A
d.							
and exposure rate measurements are performed as a spot check. the pile's surface as a spot check.							

9707240076-02

FIGURE 15.1  
FINAL SURVEY ORGANIZATION

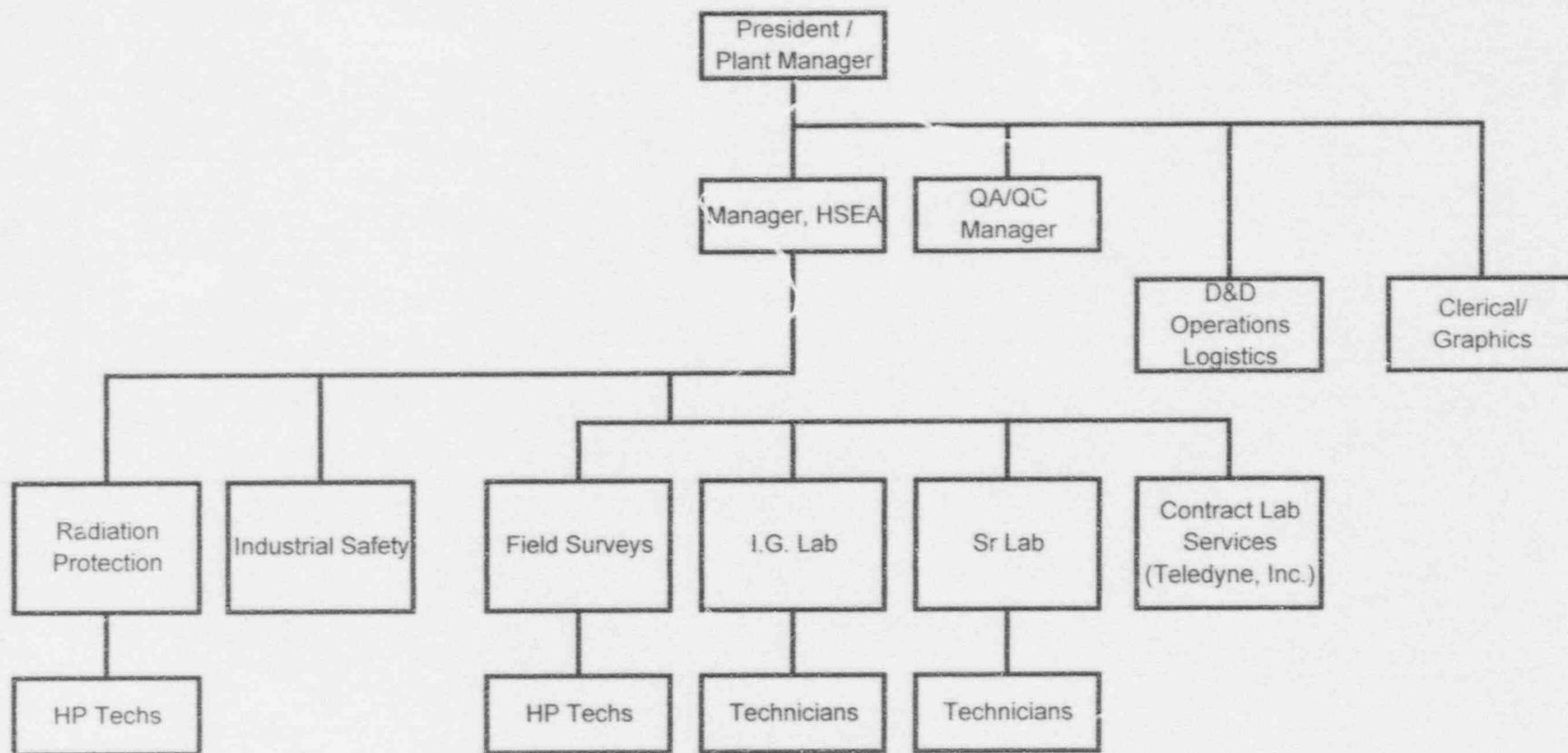
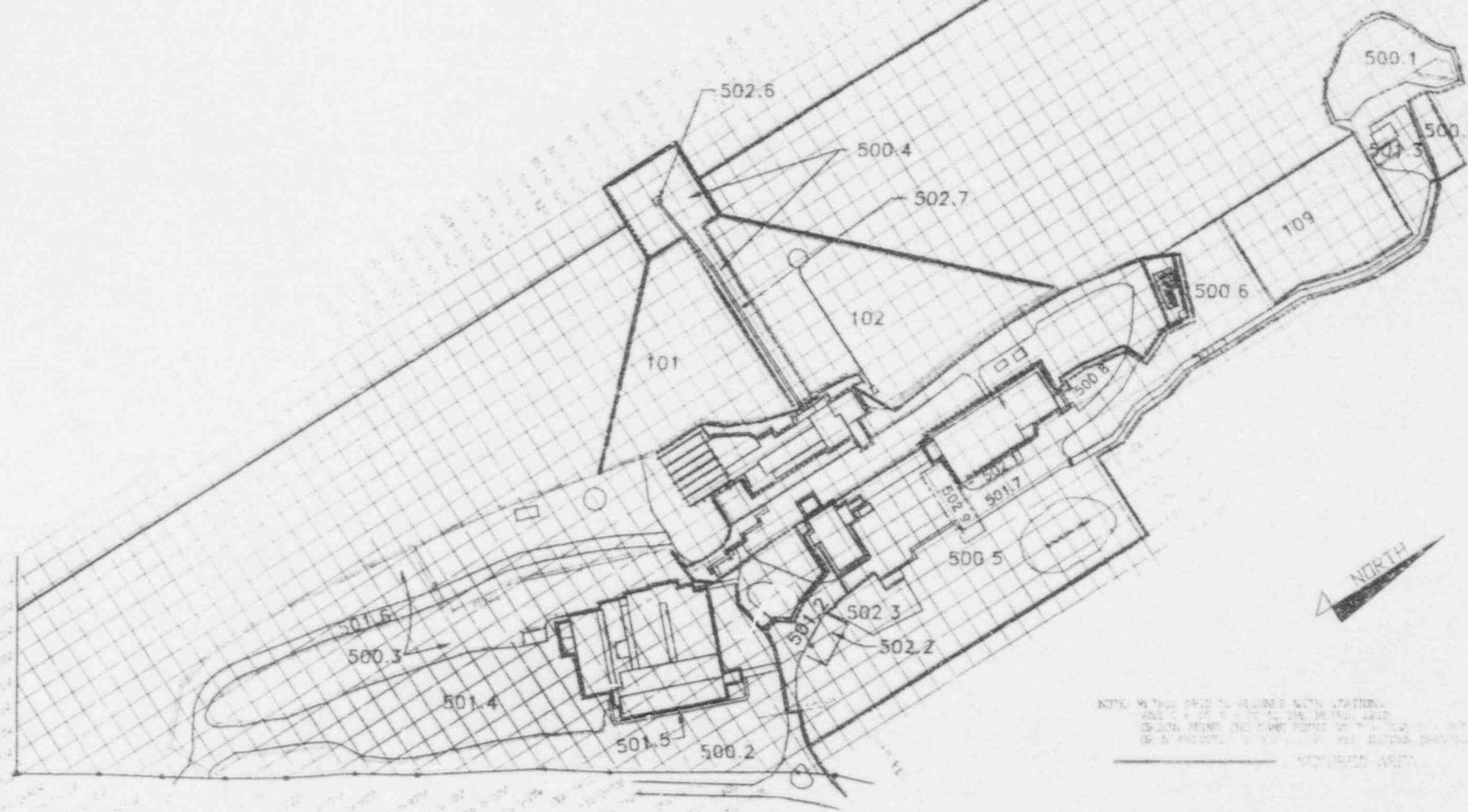


FIGURE 15.2



CINTICHEM, INC.  
P.O. BOX 816, TUXEDO, NEW YORK 10987

6/25/97  
DWGS/3441

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

### 16.0 SUMMARY OF OUTDOOR AREAS OUTSIDE OF THE FORMER RCA FINAL SURVEY RESULTS

Section sixteen of the Cintichem Final Status Survey Plan and Report provides the results of the Outdoor Areas Outside of the Former RCA final survey that was performed between September 1995 and May 1997. Results are provided in 24 sub-sections below, which correspond to the 24 survey areas listed in Table 15.4 of the survey plan. Each sub-section provides a description of the survey area and the survey measurements and/or sampling that was performed for each survey unit within the survey area. Direct survey results and soil/sediment results along with results summary for each survey unit are provided in summary tables within each sub-section of the report.

Soil/sediment sample spreadsheet results include data for the most relevant radionuclides of interest, and not the complete results for all radionuclides for which analysis was performed. Those radionuclides not listed are those for which soil criteria was developed, but which have not been generally found in site soil and/or would not contribute significantly to the sum-of-fractions tally if found. The concentration and sum-of-fractions data shown in the tables have been corrected for background due to fallout at the site background level where surface soil was sampled (1.25 Pci/gm Cs-137 at the 90% confidence level).

The surface of the UCD Land Fill area survey unit 500.1 has been surveyed for NRC licensable material and has been determined to meet the applicable release criteria. However, a portion of the UCD Land Fill may contain radioactive material (natural uranium) that is under the jurisdiction of the New York Department of Labor. This matter is currently under investigation.

Systematic soil sampling, for the affected land areas, was performed by collecting 5 samples from each 10 meter by 10 meter grid box. Each of the 5 samples from each grid box have been separately analyzed for gamma emitting radionuclides. Sr-90 analysis was performed on composite samples made up of equal aliquots of soil from the 5 soil samples collected from each grid box. The result of this analysis represents a mean Sr-90 soil concentration for a grid box. The resulting fraction of criteria for this mean Sr-90 concentration was then summed with the fractions of criteria for the gamma emitting radionuclides found in the 5 individual soil samples. However, strontium analysis was performed on the individual soil samples if either the resulting Sr-90 composite sample concentration exceeded 20% of the Sr-90 soil criteria or, the sum-of-fractions for all radionuclides would exceed one when

calculated using 5 times the composite Sr-90 concentration. By using this method, no single soil sample can exceed the average soil criteria, while keeping the number of required Sr-90 analyses reasonable.

Soil samples with Cs-137 concentrations that exceeded release criteria were found at 2 locations within 2 of the unaffected survey units. These units are 500.3 (at and around location point number 61), and 500.2 (at and around location point number 45). The gross Cs-137 concentrations were 5.4 and 6.0 pCi/gm respectively. These hot spot locations were bounded with additional biased soil samples (see data sheets). In general, these hot spot areas were less than a few square meters in area and were comprised of shallow layers of soil (a few centimeters thick), on top of rock ledge. Soil from these areas had abundant organic matter along with lichen and/or moss growth.

These areas, within the 2 survey units, are especially unlikely to have been affected by site operations. Sample point 45 in survey unit 500.2 is outside of the property fence, east of the Building 4 parking lot. Sample point 61 in survey unit 500.3 is located on a very steep rocky hillside away from the restricted areas. This, and the absence of key site radionuclides that have been typically found in areas of known soil contamination (i.e. Co-60, Ag-108m, Cs-134) leads to the conclusion that these elevated Cs-137 concentrations are due to background (i.e. nuclear weapons fallout).

During the course of performing final survey work at Cintichem, it has been found that the bulk of fallout Cs-137 is found in the top few centimeters of soil. Thus, when shallow soil samples are taken, such as when rock ledge is present, the resulting Cs-137 concentrations are upwardly biased. Had these samples included the full 15 cm sampling depth, the resulting Cs-137 concentrations would have been in line with that expected for natural background. Therefore, the conclusion is that survey units 500.2 and 500.3 are still unaffected areas and that the elevated Cs-137 concentrations are artificially high due to the shallow sampling depth.

Gamma exposure rate measurements were not performed for the 502.6 and 502.7 survey units. These survey units are the concrete foundations for the exhaust stack and duct. The gamma exposure rates from these foundations is covered by the gamma exposure rate measurements that were performed for survey unit 500.4 land survey. Survey unit 500.4 land is where these foundations are situated.

Gamma exposure rate measurements for the 502.5 and 502.8 survey units (Manhole #11 and #8) were performed in accordance with the Cintichem Free Release HP-F-23 procedure. No readings above background were noted during these surveys. Because of the limited size of these manholes only one or two

direct dose rate measurements were taken in each manhole, therefore, no uR/hr spreadsheets will be submitted for these areas.

Gamma exposure rate measurements from survey units 500.3 and 500.6 were found to be at or exceed the maximum exposure rate criterion of 10 Ur/hr. Survey unit 502.3 had two locations in excess of the hot spot criteria at 11 and 13 uR/hr above average site background. Survey unit 502.6 had a single location in excess of the hot spot criteria at 14 uR/hr. In-situ gamma spectral measurements were made at these locations to determine the source of the elevated exposure rates. The results of these determinations indicates that natural thorium and uranium plus daughters is the source.

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.1 survey unit was surveyed on an affected area basis and has a surface area of 3000 m<sup>2</sup>. 246 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 242 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.1 survey unit are provided in 2 attached tables as follows:

Table 500.1-1 UCD - Union Carbide Land Fill  
gamma exposure rate data

Table 500.1-2 UCD - Union Carbide Land Fill  
surface soil contamination data

7/16/6-27-97

## CINTICHEM DECOMMISSIONING PLAN

11/20/96

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

UCD - UNION CARBIDE LAND FILL

AREA 500.1 FOR uR/HK

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE:	09/30/96		
TECHNICIANS:	MANY	MATERIAL CODE	
		1=CONCRETE	5=PLASTIC
AREA:	500.0	2=ROCK	6=SOIL
UNIT:	500.1	3=WOOD	7=ASPHALT
MEDIA TYPE:	SOIL	4=METAL	8=OTHER(SPECIFY):
# of POINTS:	242	NO MATERIAL BACKGROUND USED	

MICRO REM  
 PER HOUR: LIMIT

MAX:	9.00 PASS	10
Avg:	1.82 PASS	5
STD X:	1.99	
MU SUB ALPHA:	2.03 PASS	5

ID #	GRID POINT		INST.	MATER-				
				ID #	BKG	AREA READING	IAL CODE	NET UREM/HR
					UREM/HR	UREM/HR		
N	W							
500.1	372.5	142.5	A	6	7	8	1	
500.1	377.5	142.5	A	6	6	8	0	
500.1	365	145	A	6	6	8	0	
500.1	362.5	142.5	A	6	8	8	2	
500.1	367.5	142.5	A	6	5	8	-1	
500.1	382.5	137.5	A	6	6	8	0	
500.1	387.5	137.5	A	6	8	8	2	
500.1	385	135	A	6	9	8	3	
500.1	382.5	132.5	A	6	6	8	0	
500.1	387.5	132.5	A	6	7	8	1	
500.1	372.5	137.5	A	6	7	8	1	
500.1	377.5	137.5	A	6	9	8	3	
500.1	375	135	A	6	8	8	2	
500.1	372.5	132.5	A	6	9	8	3	
500.1	377.5	132.5	A	6	8	8	2	
500.1	362.5	137.5	A	6	8	8	2	
500.1	367.5	137.5	A	6	8	8	2	
500.1	365	135	A	6	8	8	2	
500.1	362.5	132.5	A	6	7	8	1	
500.1	367.5	132.5	A	6	8	8	2	
500.1	352.5	137.5	A	6	5	8	-1	
500.1	357.5	137.5	A	6	6	8	0	
500.1	355	135	A	6	8	8	2	
500.1	352.5	132.5	A	6	8	8	2	
500.1	392.5	127.5	A	6	10	8	4	
500.1	395	125	A	6	8	8	2	
500.1	392.5	122.5	A	6	10	8	4	
500.1	397.5	122.5	A	6	12	8	6	

TABLE 500.1-1

500.1	382.5	127.5	A	6	7	8	1
500.1	387.5	127.5	A	-	9	8	3
500.1	385	125	A	-	6	8	0
500.1	382.5	122.5	A	-	-	8	1
500.1	387.5	122.5	A	6	9	8	3
500.1	372.5	127.5	A	6	9	8	3
500.1	377.5	127.5	A	6	8	8	2
500.1	375	125	A	6	9	8	3
500.1	372.5	122.5	A	6	8	8	2
500.1	377.5	122.5	A	6	9	8	3
500.1	362.5	127.5	A	6	6	8	0
500.1	367.5	127.5	A	6	9	8	3
500.1	365	125	A	6	7	8	1
500.1	362.5	122.5	A	6	8	8	2
500.1	367.5	122.5	A	6	8	8	2
500.1	352.5	127.5	A	6	8	8	2
500.1	357.5	127.5	A	6	11	8	5
500.1	355	125	A	6	10	8	4
500.1	352.5	122.5	A	6	9	8	3
500.1	357.5	122.5	A	6	9	8	3
500.1	342.5	127.5	A	6	5	8	-1
500.1	347.5	127.5	A	6	7	8	1
500.1	345	125	A	6	5	8	-1
500.1	342.5	122.5	A	6	7	8	1
500.1	347.5	122.5	A	6	7	8	1
500.1	392.5	117.5	A	6	8	8	2
500.1	397.5	117.5	A	6	9	8	3
500.1	395	115	A	6	10	8	4
500.1	392.5	112.5	A	6	11	8	5
500.1	397.5	112.5	A	6	15	8	9
500.1	382.5	117.5	A	6	7	8	1
500.1	387.5	117.5	A	6	7	8	1
500.1	385	115	A	6	5	8	-1
500.1	382.5	112.5	A	6	7	8	1
500.1	387.5	112.5	A	6	9	8	3
500.1	372.5	117.5	A	6	7	8	1
500.1	377.5	117.5	A	6	7	8	1
500.1	375	115	A	6	6	8	0
500.1	372.5	112.5	A	6	5	8	-1
500.1	377.5	112.5	A	6	7	8	1
500.1	362.5	117.5	A	6	8	8	2
500.1	367.5	117.5	A	6	9	8	3
500.1	365	115	A	6	8	8	2
500.1	362.5	112.5	A	6	8	8	2
500.1	367.5	112.5	A	6	8	8	2
500.1	352.5	117.5	A	6	8	8	2
500.1	357.5	117.5	A	6	8	8	2
500.1	355	115	A	6	9	8	3
500.1	352.5	112.5	A	6	6	8	0
500.1	357.5	112.5	A	6	7	8	1
500.1	342.5	117.5	A	6	6	8	0
500.1	347.5	117.5	A	6	8	8	2
500.1	345	115	A	6	10	8	4
500.1	342.5	112.5	A	6	6	8	0
500.1	347.5	112.5	A	6	7	8	1
500.1	332.5	117.5	A	6	5	8	-1
500.1	337.5	117.5	A	6	7	8	1
500.1	335	115	A	6	6	8	0
500.1	332.5	112.5	A	6	5	8	-1

TABLE 500.1-1

500.1	337.5	112.5	A	6	5	8	-1
500.1	405	105	A	6	14	8	8
500.1	402.5	102.5	A	6	15	8	9
500.1	407.5	102.5	A	6	14	8	8
500.1	392.5	107.5	A	6	10	8	4
500.1	397.5	107.5	A	6	15	8	9
500.1	395	105	A	6	9	8	3
500.1	392.5	102.5	A	6	10	8	4
500.1	397.5	102.5	A	6	9	8	3
500.1	382.5	107.5	A	6	7	8	1
500.1	387.5	107.5	A	6	7	8	1
500.1	385	105	A	6	7	8	1
500.1	382.5	102.5	A	6	7	8	1
500.1	387.5	102.5	A	6	8	8	2
500.1	372.5	107.5	A	6	9	8	3
500.1	377.5	107.5	A	6	9	8	3
500.1	375	105	A	6	7	8	1
500.1	372.5	102.5	A	6	6	8	0
500.1	377.5	102.5	A	6	9	8	3
500.1	362.5	107.5	A	6	7	8	1
500.1	367.5	107.5	A	6	8	8	2
500.1	365	105	A	6	6	8	0
500.1	362.5	102.5	A	6	7	8	1
500.1	367.5	102.5	A	6	7	8	1
500.1	352.5	107.5	A	6	8	8	2
500.1	357.5	107.5	A	6	9	8	3
500.1	355	105	A	6	9	8	3
500.1	352.5	102.5	A	6	8	8	2
500.1	357.5	102.5	A	6	9	8	3
500.1	342.5	107.5	A	6	8	8	2
500.1	347.5	107.5	A	6	8	8	2
500.1	345	105	A	6	9	8	3
500.1	342.5	102.5	A	6	7	8	1
500.1	347.5	102.5	A	6	7	8	1
500.1	332.5	107.5	A	6	5	8	-1
500.1	337.5	107.5	A	6	9	8	3
500.1	335	105	A	6	6	8	0
500.1	332.5	102.5	A	6	6	8	0
500.1	337.5	102.5	A	6	9	8	3
500.1	327.5	107.5	A	6	8	8	2
500.1	327.5	102.5	A	6	8	9	2
500.1	402.5	97.5	A	6	9	8	3
500.1	407.5	97.5	A	6	12	8	6
500.1	405	95	A	6	12	8	6
500.1	402.5	92.5	A	6	10	8	4
500.1	407.5	92.5	A	6	10	8	4
500.1	392.5	97.5	A	6	10	8	4
500.1	397.5	97.5	A	6	10	8	4
500.1	395	95	A	6	9	8	3
500.1	392.5	92.5	A	6	10	8	4
500.1	397.5	92.5	A	6	13	8	7
500.1	382.5	97.5	A	6	6	8	0
500.1	387.5	97.5	A	6	10	8	4
500.1	385	95	A	6	8	8	2
500.1	382.5	92.5	A	6	8	8	2
500.1	387.5	92.5	A	6	8	8	2
500.1	372.5	97.5	A	6	7	8	1
500.1	377.5	97.5	A	6	7	8	1
500.1	375	95	A	6	9	8	3

RE  
TABLE 500.1-1

500.1	372.5	92.5	A	6	8	8	2
500.1	377.5	92.5	A	6	8	8	2
500.1	362.5	97.5	A	6	7	8	1
500.1	367.5	97.5	A	6	10	8	4
500.1	365	95	A	6	6	8	0
500.1	362.5	92.5	A	6	8	8	2
500.1	367.5	92.5	A	6	6	8	0
500.1	352.5	97.5	A	6	7	8	1
500.1	357.5	97.5	A	6	9	8	3
500.1	355	95	A	6	7	8	1
500.1	352.5	92.5	A	6	8	8	2
500.1	357.5	92.5	A	6	8	8	2
500.1	342.5	97.5	A	6	9	8	3
500.1	347.5	97.5	A	6	9	8	3
500.1	345	95	A	6	9	8	3
500.1	342.5	92.5	A	6	8	8	2
500.1	347.5	92.5	A	6	9	8	3
500.1	332.5	97.5	A	6	6	8	0
500.1	337.5	97.5	A	6	6	8	0
500.1	335	95	A	6	6	8	0
500.1	332.5	92.5	A	6	8	8	2
500.1	337.5	92.5	A	6	6	8	0
500.1	327.5	97.5	A	6	4	8	-2
500.1	325	95	A	6	7	8	1
500.1	327.5	92.5	A	6	9	8	3
500.1	402.5	87.5	A	6	7	8	1
500.1	407.5	87.5	A	6	11	8	5
500.1	405	85	A	6	11	8	5
500.1	402.5	82.5	A	6	10	8	4
500.1	407.5	82.5	A	6	9	8	3
500.1	392.5	87.5	A	6	10	8	4
500.1	397.5	87.5	A	6	10	8	4
500.1	395	85	A	6	11	8	5
500.1	392.5	82.5	A	6	7	8	1
500.1	397.5	82.5	A	6	8	8	2
500.1	382.5	87.5	A	6	9	8	3
500.1	387.5	87.5	A	6	12	8	6
500.1	385	85	A	6	12	8	6
500.1	382.5	82.5	A	6	11	8	5
500.1	387.5	82.5	A	6	6	8	0
500.1	372.5	87.5	A	6	8	8	2
500.1	377.5	87.5	A	6	5	8	-1
500.1	375	85	A	6	7	8	1
500.1	372.5	82.5	A	6	7	8	1
500.1	377.5	82.5	A	6	6	8	0
500.1	362.5	87.5	A	6	8	8	2
500.1	367.5	87.5	A	6	7	8	1
500.1	365	85	A	6	7	8	1
500.1	362.5	82.5	A	6	7	8	1
500.1	367.5	82.5	A	6	4	8	-2
500.1	352.5	87.5	A	6	9	8	3
500.1	357.5	87	A	6	8	8	2
500.1	355	85	A	6	9	8	3
500.1	357.5	82.5	A	6	8	8	2
500.1	342.5	87.5	A	6	4	8	-2
500.1	347.5	87.5	A	6	9	8	3
500.1	345	85	A	6	5	8	-1
500.1	342.5	82.5	A	6	7	8	1
500.1	347.5	82.5	A	6	7	8	1

TABLE 500.1-1

500.1	332.5	87.5	A	6	8	8	2
500.1	337.5	87.5	A	6	6	8	0
500.1	335	85	A	6	8	8	2
500.1	332.5	82.5	A	6	8	8	2
500.1	337.5	82.5	A	6	6	8	0
500.1	327.5	87.5	A	6	8	8	2
500.1	325	85	A	6	7	8	1
500.1	327.5	82.5	A	6	5	8	-1
500.1	402.5	77.5	A	6	7	8	1
500.1	407.5	77.5	A	6	7	8	1
500.1	405	75	A	6	6	8	0
500.1	402.5	72.5	A	6	7	8	1
500.1	407.5	72.5	A	6	5	8	-1
500.1	392.5	77.5	A	6	4	8	-2
500.1	397.5	77.5	A	6	8	8	2
500.1	395	75	A	6	5	8	-1
500.1	392.5	72.5	A	6	5	8	-1
500.1	397.5	72.5	A	6	7	8	1
500.1	382.5	77.5	A	6	7	8	1
500.1	387.5	77.5	A	6	10	8	4
500.1	385	75	A	6	5	8	-1
500.1	382.5	72.5	A	6	6	8	0
500.1	387.5	72.5	A	6	5	8	-1
500.1	332.5	77.5	A	6	9	8	3
500.1	337.5	77.5	A	6	8	8	2
500.1	402.5	67.5	A	6	5	8	-1
500.1	407.5	67.5	A	6	7	8	1
500.1	405	65	A	6	5	8	-1
500.1	402.5	62.5	A	6	8	8	2
500.1	407.5	62.5	A	6	12	8	6
500.1	392.5	67.5	A	6	5	8	-1
500.1	397.5	67.5	A	6	5	8	-1
500.1	395	65	A	6	6	8	0
500.1	392.5	62.5	A	6	5	8	-1
500.1	397.5	62.5	A	6	5	8	-1
500.1	402.5	57.5	A	6	8	8	2
500.1	407.5	57.5	A	6	7	8	1

## TABLE 500.1-2

CINTICHEM DECOMMISSIONING PLAN 06/19/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

UCD - UNION CARBIDE LAND FILL

AREA 500.1

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 9/96

TECHNICIANS: MANY

AREA: 500.0

UNIT: 500.1

MEDIA TYPE: SOIL

# of POINTS: 246

## SOIL DATA IN

SUM OF FRACTIONS: LIMIT

MAX 1.07 PASS 3

MAX GRID AVG. 0.52 PASS 1

STD X 0.04

MU SUB ALPHA 0.52 PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID # OR OTHER ID	GRID COORDINATES	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)					SOIL CODE
		SR-90	CO-60	AG-108M	CS-134	CS-137	
500.1	372.5	142.5 < 0.10 <	0.20 < 0.06 <	0.11	0.69 < 0.42 <	0.18	1
500.1	377.5	142.5 < 0.10 <	0.04 < 0.03 <	0.06	0.67 < 0.44 <	0.16	1
500.1	365	145 < 0.12 <	0.20 < 0.10 <	0.10	0.60 < 0.20 <	0.30	1
500.1	362.5	142.5 < 0.12 <	0.20 < 0.10 <	0.10	0.50 < 0.20 <	0.40	1
500.1	367.5	142.5 < 0.12 <	0.20 < 0.10 <	0.20	0.20 < 0.30 <	0.60	1
500.1	382.5	137.5 < 0.12 <	0.04 < 0.03 <	0.06	0.70 < 0.35 <	0.17	1
500.1	387.5	137.5 < 0.12 <	0.08 < 0.04 <	0.08	1.44 < 0.16 <	0.09	1
500.1	385	135 < 0.11 <	0.14 < 0.06 <	0.05	0.68 < 0.19 <	0.07	1
500.1	382.5	132.5 < 0.12 <	0.08 < 0.05 <	0.06	0.92 < 0.22 <	0.12	1
500.1	387.5	132.5 < 0.12 <	0.07 < 0.02 <	0.06	0.24 < 0.16 <	0.13	1
500.1	372.5	137.5 < 0.10 <	0.06 < 0.04 <	0.05	0.06 < 0.22 <	0.13	1
500.1	377.5	137.5 < 0.10 <	0.08 < 0.04 <	0.06	0.63 < 0.16 <	0.16	1
500.1	375	135 < 0.10 <	0.12 < 0.04 <	0.06	0.42 < 0.36 <	0.19	1
500.1	372.5	132.5 < 0.11 <	0.09 < 0.05 <	0.15	0.30 < 0.38 <	0.07	1
500.1	377.5	132.5 < 0.10 <	0.06 < 0.07 <	0.07	0.65 < 0.22 <	0.12	1
500.1	362.5	137.5 < 0.11 <	0.20 < 0.10 <	0.10	0.40 < 0.50 <	1.20	1
500.1	367.5	137.5 < 0.11 <	0.10 < 0.10 <	0.10	0.10 < 0.10 <	0.30	1
500.1	365	135 < 0.13 <	0.06 < 0.04 <	0.10	1.43 < 0.28 <	0.15	1
500.1	362.5	132.5 < 0.13 <	0.06 < 0.06 <	0.08	0.22 < 0.28 <	0.10	1
500.1	367.5	132.5 < 0.10 <	0.06 < 0.05 <	0.07	0.32 < 0.13 <	0.16	1
500.1	352.5	137.5 < 0.12 <	0.06 < 0.03 <	0.08	1.44 < 0.26 <	0.10	1
500.1	357.5	137.5 < 0.12 <	0.07 < 0.09 <	0.10	0.10 < 0.29 <	0.27	1
500.1	355	135 < 0.11 <	0.04 < 0.03 <	0.08	0.26 < 0.27 <	0.19	1
500.1	352.5	132.5 < 0.12 <	0.03 < 0.04 <	0.08	0.12 < 0.33 <	0.09	1
500.1	357.5	132.5 < 0.13 <	0.05 < 0.04 <	0.07	0.55 < 0.49 <	0.15	1
500.1	392.5	127.5 0.29 <	0.05 < 0.05 <	0.06	3.37 < 0.30 <	0.20	1

AN6 6-27-97

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

SOTOPES OF CONCERN INDIVIDUAL SAMPLE FRACTION OF HOT SPOT LIMIT  
WITH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

R-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM	GRID BLOCK	Avg. Fraction of Limit
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.002 <	0.074 <	0.018 <	0.020	0.000 <	0.002 <	0.030	0.000		
.002 <	0.015 <	0.009 <	0.011	0.000 <	0.002 <	0.027	0.000		

.002 <	0.074 <	0.030 <	0.019	0.000 <	0.001 <	0.050	0.000		
.002 <	0.074 <	0.030 <	0.019	0.000 <	0.001 <	0.067	0.000		
.002 <	0.074 <	0.030 <	0.037 <	0.000 <	0.002 <	0.100	0.000		

.002 <	0.015 <	0.009 <	0.011	0.000 <	0.002 <	0.028	0.000		
.002 <	0.030 <	0.012 <	0.015	0.017 <	0.001 <	0.015	0.017		
.002 <	0.052 <	0.018 <	0.009	0.000 <	0.001 <	0.012	0.000		
.002 <	0.030 <	0.015 <	0.011	0.000 <	0.001 <	0.020	0.000		
.002 <	0.026 <	0.006 <	0.011	0.000 <	0.001 <	0.022	0.000		

.002 <	0.022 <	0.012 <	0.009 <	0.000 <	0.001 <	0.022	0.000		
.002 <	0.030 <	0.012 <	0.011	0.000 <	0.001 <	0.027	0.000		
.002 <	0.044 <	0.012 <	0.011	0.000 <	0.002 <	0.032	0.000		
.002 <	0.033 <	0.015 <	0.028	0.000 <	0.002 <	0.012	0.000		
.002 <	0.022 <	0.021 <	0.013	0.000 <	0.001 <	0.020	0.000		

.002 <	0.074 <	0.030 <	0.019 <	0.000 <	0.003 <	0.200	0.000		
.002 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.050	0.000		
.003 <	0.022 <	0.012	0.019	0.016 <	0.001 <	0.025	0.034		
.003 <	0.022 <	0.018 <	0.015	0.000 <	0.001 <	0.017	0.000		
.002 <	0.022 <	0.015 <	0.013	0.000 <	0.001 <	0.027	0.000		

.002 <	0.022 <	0.009 <	0.015	0.017 <	0.001 <	0.017	0.017		
.002 <	0.026 <	0.027 <	0.019 <	0.000 <	0.002 <	0.045	0.000		
.002 <	0.015 <	0.009 <	0.015	0.000 <	0.001 <	0.032	0.000		
.002 <	0.011 <	0.012 <	0.015 <	0.000 <	0.002 <	0.015	0.000		
.003 <	0.019 <	0.012 <	0.013	0.000 <	0.003 <	0.025	0.000		

.006 <	0.019 <	0.015 <	0.011	0.186 <	0.002 <	0.033	0.192		
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9707240076-03

TABLE 500.1-2

500.1	395	125	0.29	<	0.01	<	0.10	<	0.10	4.10	<	0.90	<	0.40	1
500.1	392.5	122.5	0.29	<	0.05	<	0.04	<	0.05	0.27	<	0.30	<	0.10	1
500.1	397.5	122.5	0.29	<	0.06	<	0.07	<	0.08	3.93	<	0.50	<	0.20	1
500.1	382.5	127.5	<	0.10	<	0.06	<	0.05	<	0.05	0.19	<	0.22	<	0.06
500.1	387.5	127.5	<	0.10	<	0.04	<	0.07	<	0.08	0.13	<	0.35	<	0.17
500.1	385	125	<	0.10	<	0.05	<	0.04	<	0.04	0.14	<	0.30	<	0.07
500.1	382.5	122.5	<	0.10	<	0.05	<	0.04	<	0.07	0.31	<	0.35	<	0.17
500.1	387.5	122.5	<	0.10	<	0.03	<	0.04	<	0.06	0.09	<	0.34	<	0.09
500.1	372.5	127.5	<	0.10	<	0.05	<	0.03	<	0.05	0.35	<	0.29	<	0.13
500.1	377.5	127.5	<	0.10	<	0.06	<	0.03	<	0.08	0.33	<	0.38	<	0.17
500.1	375	125	<	0.11	<	0.03	<	0.05	<	0.05	0.21	<	0.13	<	0.06
500.1	372.5	122.5	0.14	<	0.12	<	0.07	<	0.07	0.13	<	0.25	<	0.09	1
500.1	377.5	122.5	<	0.10	<	0.05	<	0.02	<	0.05	0.11	<	0.45	<	0.15
500.1	362.5	127.5	<	0.11	<	0.10	<	0.05	<	0.07	0.56	<	0.31	<	0.22
500.1	367.5	127.5	<	0.10	0.34	<	0.03	<	0.17	1.43	<	0.26	<	0.11	1
500.1	365	125	<	0.11	<	0.10	<	0.03	<	0.06	0.55	<	0.20	<	0.19
500.1	362.5	122.5	<	0.13	<	0.06	<	0.06	<	0.06	0.14	<	0.34	<	0.15
500.1	367.5	122.5	<	0.10	<	0.09	<	0.05	<	0.08	0.81	<	0.24	<	0.11
500.1	352.5	127.5	<	0.12	<	0.10	<	0.10	<	0.10	0.20	<	0.10	<	1
500.1	357.5	127.5	<	0.13	<	0.03	<	0.05	<	0.07	0.34	<	0.25	<	0.19
500.1	355	125	<	0.10	<	0.04	<	0.04	<	0.14	0.09	<	0.35	<	0.10
500.1	352.5	122.5	<	0.10	<	0.10	<	0.10	<	0.10	0.20	<	0.20	<	1
500.1	357.5	122.5	<	0.11	<	0.04	<	0.03	<	0.15	0.07	<	0.38	<	0.20
500.1	342.5	127.5	<	0.10	<	0.04	<	0.03	<	0.04	0.05	<	0.20	<	0.10
500.1	347.5	127.5	<	0.10	<	0.03	<	0.03	<	0.04	0.06	<	0.20	<	0.09
500.1	345	125	<	0.10	<	0.02	<	0.02	<	0.03	0.03	<	0.20	<	0.08
500.1	342.5	122.5	<	0.10	<	0.04	<	0.03	<	0.05	0.05	<	0.20	<	0.10
500.1	347.5	122.5	<	0.10	<	0.04	<	0.04	<	0.05	0.05	<	0.40	<	0.10
500.1	392.5	117.5	<	0.10	<	0.07	<	0.05	<	0.07	0.24	<	0.34	<	0.19
500.1	397.5	117.5	<	0.10	<	0.07	<	0.05	<	0.12	2.38	<	0.22	<	0.16
500.1	395	115	<	0.10	<	0.09	<	0.06	<	0.09	0.94	<	0.22	<	0.11
500.1	392.5	112.5	<	0.10	<	0.05	<	0.07	<	0.07	0.13	<	0.16	<	0.12
500.1	397.5	112.5	<	0.10	<	0.09	<	0.09	<	0.09	1.24	<	0.22	<	0.12
500.1	382.5	117.5	<	0.10	<	0.06	<	0.03	<	0.06	0.19	<	0.31	<	0.08
500.1	387.5	117.5	<	0.10	<	0.06	<	0.03	<	0.05	0.15	<	0.26	<	0.08
500.1	385	115	<	0.10	<	0.09	<	0.03	<	0.06	0.16	<	0.38	<	0.12
500.1	382.5	112.5	<	0.10	<	0.03	<	0.04	<	0.05	0.35	<	0.34	<	0.19
500.1	387.5	112.5	<	0.10	<	0.07	<	0.08	<	0.07	0.24	<	0.27	<	0.10
500.1	372.5	117.5	<	0.11	<	0.08	<	0.03	<	0.08	0.61	<	0.32	<	0.16
500.1	377.5	117.5	<	0.11	<	0.03	<	0.03	<	0.04	0.10	<	0.20	<	0.09
500.1	375	115	<	0.11	<	0.04	<	0.02	<	0.07	0.27	<	0.45	<	0.13
500.1	372.5	112.5	<	0.11	<	0.05	<	0.04	<	0.05	0.27	<	0.46	<	0.09
500.1	377.5	112.5	<	0.11	<	0.04	<	0.03	<	0.04	0.18	<	0.20	<	0.09
500.1	362.5	117.5	<	0.11	<	0.08	<	0.07	<	0.17	0.90	<	0.38	<	0.21
500.1	367.5	117.5	<	0.10	<	0.04	<	0.05	<	0.16	0.44	<	0.40	<	0.21
500.1	365	115	<	0.11	<	0.09	<	0.04	<	0.07	0.54	<	0.23	<	0.09
500.1	362.5	112.5	<	0.13	<	0.05	<	0.03	<	0.16	1.05	<	0.39	<	0.12
500.1	367.5	112.5	<	0.10	<	0.04	<	0.05	<	0.15	0.36	<	0.29	<	0.06
500.1	352.5	117.5	<	0.12	<	0.05	<	0.09	<	0.10	0.31	<	0.41	<	0.17
500.1	357.5	117.5	<	0.11	<	0.04	<	0.04	<	0.07	0.25	<	0.14	<	0.17

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

6 <	0.004 <	0.030 <	0.019	0.250 <	0.005 <	0.067	0.256
6 <	0.019 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.006
6 <	0.022 <	0.021 <	0.015	0.235 <	0.003 <	0.033	0.241
							0.520348
2 <	0.022 <	0.015 <	0.009	0.000 <	0.001 <	0.010	0.000
2 <	0.015 <	0.021 <	0.015 <	0.000 <	0.002 <	0.028	0.000
2 <	0.019 <	0.012 <	0.007	0.000 <	0.002 <	0.012	0.000
2 <	0.019 <	0.012 <	0.013	0.000 <	0.002 <	0.028	0.000
2 <	0.011 <	0.012 <	0.011 <	0.000 <	0.002 <	0.015	0.000
							0
2 <	0.019 <	0.009 <	0.009	0.000 <	0.002 <	0.022	0.000
2 <	0.022 <	0.009 <	0.015	0.000 <	0.002 <	0.028	0.000
2 <	0.011 <	0.015 <	0.009	0.000 <	0.001 <	0.010	0.000
3 <	0.044 <	0.021 <	0.013 <	0.000 <	0.001 <	0.015	0.003
2 <	0.019 <	0.006 <	0.009 <	0.000 <	0.002 <	0.025	0.000
							0.001647
2 <	0.037 <	0.015 <	0.013	0.000 <	0.002 <	0.037	0.000
2 <	0.126 <	0.009 <	0.031	0.016 <	0.001 <	0.018	0.142
2 <	0.037 <	0.009 <	0.011	0.000 <	0.001 <	0.032	0.000
3 <	0.022 <	0.018 <	0.011 <	0.000 <	0.002 <	0.025	0.000
2 <	0.033 <	0.015 <	0.015	0.000 <	0.001 <	0.018	0.000
							0.085029
2 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.017	0.000
3 <	0.011 <	0.015 <	0.013	0.000 <	0.001 <	0.032	0.000
2 <	0.015 <	0.012 <	0.026 <	0.000 <	0.002 <	0.017	0.000
2 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.033	0.000
2 <	0.015 <	0.009 <	0.028 <	0.000 <	0.002 <	0.033	0.000
							0
2 <	0.015 <	0.009 <	0.007	0.000 <	0.001 <	0.017	0.000
2 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.000
2 <	0.007 <	0.006 <	0.006 <	0.000 <	0.001 <	0.013	0.000
2 <	0.015 <	0.009 <	0.009 <	0.000 <	0.001 <	0.017	0.000
2 <	0.015 <	0.012 <	0.009 <	0.000 <	0.002 <	0.017	0.000
							0
2 <	0.026 <	0.015 <	0.013	0.000 <	0.002 <	0.032	0.000
2 <	0.026 <	0.015 <	0.022	0.099 <	0.001 <	0.027	0.099
2 <	0.033 <	0.018 <	0.017	0.000 <	0.001 <	0.018	0.000
2 <	0.019 <	0.021 <	0.013 <	0.000 <	0.001 <	0.020	0.000
2 <	0.033 <	0.027 <	0.017	0.000 <	0.001 <	0.020	0.000
							0.059474
2 <	0.022 <	0.009 <	0.011	0.000 <	0.002 <	0.013	0.000
2 <	0.022 <	0.009 <	0.009 <	0.000 <	0.001 <	0.013	0.000
2 <	0.033 <	0.009 <	0.011	0.000 <	0.002 <	0.020	0.000
2 <	0.011 <	0.012 <	0.009	0.000 <	0.002 <	0.032	0.000
2 <	0.026 <	0.024 <	0.013	0.000 <	0.001 <	0.017	0.000
							0
2 <	0.030 <	0.009 <	0.015	0.000 <	0.002 <	0.027	0.000
2 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.000
2 <	0.015 <	0.006 <	0.013	0.000 <	0.002 <	0.022	0.000
2 <	0.019 <	0.012 <	0.009	0.000 <	0.002 <	0.015	0.000
2 <	0.015 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.000
							0
2 <	0.030 <	0.021 <	0.031	0.000 <	0.002 <	0.035	0.000
2 <	0.015 <	0.015 <	0.030	0.000 <	0.002 <	0.035	0.000
2 <	0.033 <	0.012 <	0.013	0.000 <	0.001 <	0.015	0.000
3 <	0.019 <	0.009 <	0.030	0.000 <	0.002 <	0.020	0.000
2 <	0.015 <	0.015 <	0.028	0.000 <	0.002 <	0.010	0.000
							0
2 <	0.019 <	0.027 <	0.019	0.000 <	0.002 <	0.028	0.000
2 <	0.015 <	0.012 <	0.013 <	0.000 <	0.001 <	0.028	0.000

9707240076-04

TABLE 500.1-2

500.1	355	115	< 0.11	<	0.03	< 0.05	< 0.07	0.57	< 0.13	< 0.17	1	<
500.1	352.5	112.5	< 0.10	<	0.06	< 0.04	< 0.04	0.21	< 0.34	< 0.07	1	<
500.1	357.5	112.5	< 0.13	<	0.06	< 0.07	< 0.07	0.55	< 0.27	< 0.20	1	<
500.1	342.5	117.5	< 0.10	<	0.04	< 0.03	< 0.05	0.13	< 0.20	< 0.10	1	<
500.1	347.5	117.5	< 0.10	<	0.04	< 0.03	< 0.05	0.17	< 0.20	< 0.10	1	<
500.1	345	115	< 0.11	<	0.04	< 0.05	< 0.14	0.08	< 0.17	< 0.06	1	<
500.1	342.5	112.5	< 0.10	<	0.03	< 0.03	< 0.05	0.14	< 0.20	< 0.10	1	<
500.1	347.5	112.5	0.11	<	0.05	< 0.03	< 0.05	0.18	< 0.37	< 0.09	1	<
500.1	332.5	117.5	< 0.12	<	0.06	< 0.06	< 0.07	1.43	< 0.40	< 0.20	1	<
500.1	337.5	117.5	< 0.12	<	0.05	< 0.05	< 0.06	0.07	< 0.40	< 0.20	1	<
500.1	335	115	< 0.12	<	0.04	< 0.04	< 0.05	0.17	< 0.30	< 0.10	1	<
500.1	332.5	112.5	< 0.12	<	0.05	< 0.04	< 0.06	0.06	< 0.30	< 0.10	1	<
500.1	337.5	112.5	< 0.12	<	0.04	< 0.05	< 0.06	0.85	< 0.30	< 0.10	1	<
500.1	405	105	0.30	<	0.20	< 0.10	< 0.10	0.20	< 0.30	< 0.50	1	<
500.1	402.5	102.5	0.30	<	0.10	< 0.10	< 0.10	1.10	< 0.20	< 0.60	1	<
500.1	407.5	102.5	0.30	<	0.50	< 0.10	< 0.60	1.40	< 0.80	< 0.80	1	<
500.1	392.5	107.5	< 0.12	<	0.09	< 0.04	< 0.15	0.55	< 0.35	< 0.27	1	<
500.1	397.5	107.5	< 0.12	<	0.07	< 0.08	< 0.10	2.52	< 0.48	< 0.16	1	<
500.1	395	105	< 0.12	<	0.04	< 0.04	< 0.04	0.09	< 0.51	< 0.11	1	<
500.1	392.5	102.5	< 0.12	<	0.05	< 0.05	< 0.07	1.29	< 0.41	< 0.14	1	<
500.1	397.5	102.5	< 0.12	<	0.06	< 0.04	< 0.11	2.48	< 0.58	< 0.13	1	<
500.1	382.5	107.5	< 0.10	<	0.03	< 0.03	< 0.05	0.13	< 0.32	< 0.06	1	<
500.1	387.5	107.5	< 0.10	<	0.04	< 0.05	< 0.05	0.36	< 0.31	< 0.14	1	<
500.1	385	105	< 0.10	<	0.05	< 0.04	< 0.06	0.16	< 0.26	< 0.21	1	<
500.1	382.5	102.5	< 0.10	<	0.04	< 0.05	< 0.07	0.23	< 0.24	< 0.09	1	<
500.1	387.5	102.5	< 0.10	<	0.04	< 0.02	< 0.06	0.26	< 0.54	< 0.14	1	<
500.1	372.5	107.5	< 0.10	<	0.03	< 0.05	< 0.05	0.09	< 0.15	< 0.07	1	<
500.1	377.5	107.5	< 0.10	<	0.07	< 0.02	< 0.05	0.22	< 0.14	< 0.06	1	<
500.1	375	105	< 0.11	<	0.07	< 0.05	< 0.09	0.62	< 0.23	< 0.10	1	<
500.1	372.5	102.5	< 0.11	<	0.07	< 0.03	< 0.18	0.53	< 0.41	< 0.12	1	<
500.1	377.5	102.5	< 0.10	<	0.04	< 0.06	< 0.06	0.29	< 0.56	< 0.07	1	<
500.1	362.5	107.5	< 0.10	<	0.10	< 0.05	< 0.06	0.36	< 0.26	< 0.12	1	<
500.1	367.5	107.5	< 0.11	<	0.05	< 0.04	< 0.04	0.09	< 0.26	< 0.08	1	<
500.1	365	105	< 0.11	<	0.04	< 0.03	< 0.06	0.30	< 0.15	< 0.18	1	<
500.1	362.5	102.5	< 0.10	<	0.08	< 0.04	< 0.17	0.15	< 0.25	< 0.09	1	<
500.1	367.5	102.5	< 0.11	<	0.03	< 0.05	< 0.06	0.10	< 0.13	< 0.16	1	<
500.1	352.5	107.5	< 0.10	<	0.05	< 0.04	< 0.15	0.08	< 0.41	< 0.18	1	<
500.1	357.5	107.5	< 0.13	<	0.07	< 0.06	< 0.16	0.55	< 0.43	< 0.10	1	<
500.1	355	105	< 0.10	<	0.03	< 0.06	< 0.07	0.14	< 0.25	< 0.16	1	<
500.1	352.5	102.5	< 0.10	<	0.05	< 0.04	< 0.06	0.16	< 0.22	< 0.10	1	<
500.1	357.5	102.5	< 0.13	<	0.03	< 0.08	< 0.06	0.19	< 0.24	< 0.16	1	<
500.1	342.5	107.5	< 0.10	<	0.05	< 0.05	< 0.06	0.69	< 0.30	< 0.20	1	<
500.1	347.5	107.5	< 0.13	<	0.02	< 0.03	< 0.05	0.05	< 0.25	< 0.13	1	<
500.1	345	105	< 0.13	<	0.05	< 0.02	< 0.04	0.14	< 0.21	< 0.07	1	<
500.1	342.5	102.5	< 0.10	<	0.05	< 0.05	< 0.06	0.46	< 0.30	< 0.10	1	<
500.1	347.5	102.5	< 0.13	<	0.03	< 0.05	< 0.05	0.06	< 0.17	< 0.13	1	<
500.1	332.5	107.5	< 0.11	<	0.04	< 0.05	< 0.08	0.23	< 0.30	< 0.11	1	<
500.1	337.5	107.5	< 0.11	<	0.07	< 0.09	< 0.09	1.15	< 0.30	< 0.11	1	<
500.1	335	105	< 0.11	<	0.04	< 0.06	< 0.08	0.77	< 0.17	< 0.16	1	<
500.1	332.5	102.5	< 0.11	<	0.06	< 0.06	< 0.08	0.27	< 0.21	< 0.10	1	<

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

02 < 0.011 < 0.015 < 0.013	0.000 < 0.001 < 0.028	0.000
02 < 0.022 < 0.012 < 0.007	0.000 < 0.002 < 0.012	0.000
03 < 0.022 < 0.021 < 0.013	0.000 < 0.001 < 0.033	0.000
02 < 0.015 < 0.009 < 0.009	0.000 < 0.001 < 0.017	0.000
02 < 0.015 < 0.009 < 0.009	0.000 < 0.001 < 0.017	0.000
02 < 0.015 < 0.015 < 0.026 < 0.000	< 0.001 < 0.010	0.000
02 < 0.011 < 0.009 < 0.009	0.000 < 0.001 < 0.017	0.000
02 < 0.019 < 0.009 < 0.009	0.000 < 0.002 < 0.015	0.002
		0.001294
02 < 0.022 < 0.018 < 0.013	0.016 < 0.002 < 0.033	0.016
02 < 0.019 < 0.015 < 0.011 < 0.000	< 0.002 < 0.033	0.000
02 < 0.015 < 0.012 < 0.009	0.000 < 0.002 < 0.017	0.000
02 < 0.019 < 0.012 < 0.011 < 0.000	< 0.002 < 0.017	0.000
02 < 0.015 < 0.015 < 0.011	0.000 < 0.002 < 0.017	0.000
		0.009474
06 < 0.074 < 0.030 < 0.019 < 0.000	< 0.002 < 0.083	0.006
06 < 0.037 < 0.030 < 0.019	0.000 < 0.001 < 0.100	0.006
06 < 0.185 < 0.030 < 0.111	0.013 < 0.004 < 0.133	0.019
		0.030805
02 < 0.033 < 0.012 < 0.028	0.000 < 0.002 < 0.045	0.000
02 < 0.026 < 0.024 < 0.019	0.111 < 0.003 < 0.027	0.111
02 < 0.015 < 0.012 < 0.007 < 0.000	< 0.003 < 0.018	0.000
02 < 0.019 < 0.015 < 0.013	0.004 < 0.002 < 0.023	0.004
02 < 0.022 < 0.012 < 0.020	0.108 < 0.003 < 0.022	0.108
		0.133684
02 < 0.011 < 0.009 < 0.009	0.000 < 0.002 < 0.010	0.000
02 < 0.015 < 0.015 < 0.009	0.000 < 0.002 < 0.023	0.000
02 < 0.019 < 0.012 < 0.011	0.000 < 0.001 < 0.035	0.000
02 < 0.015 < 0.015 < 0.013	0.000 < 0.001 < 0.015	0.000
02 < 0.015 < 0.006 < 0.011	0.000 < 0.003 < 0.023	0.000
02 < 0.011 < 0.015 < 0.009 < 0.000	< 0.001 < 0.012	0.000
02 < 0.026 < 0.006 < 0.009	0.000 < 0.001 < 0.010	0.000
02 < 0.026 < 0.015 < 0.017	0.000 < 0.001 < 0.017	0.000
02 < 0.026 < 0.009 < 0.033	0.000 < 0.002 < 0.020	0.000
02 < 0.015 < 0.018 < 0.011	0.000 < 0.003 < 0.012	0.000
02 < 0.037 < 0.015 < 0.011	0.000 < 0.001 < 0.020	0.000
02 < 0.019 < 0.012 < 0.007 < 0.000	< 0.001 < 0.013	0.000
02 < 0.015 < 0.009 < 0.011	0.000 < 0.001 < 0.030	0.000
02 < 0.030 < 0.012 < 0.031 < 0.000	< 0.001 < 0.015	0.000
02 < 0.011 < 0.015 < 0.011 < 0.000	< 0.001 < 0.027	0.000
02 < 0.019 < 0.012 < 0.028 < 0.000	< 0.002 < 0.030	0.000
03 < 0.026 < 0.018 < 0.030	0.000 < 0.002 < 0.017	0.000
02 < 0.011 < 0.018 < 0.013 < 0.000	< 0.001 < 0.027	0.000
02 < 0.019 < 0.012 < 0.011	0.000 < 0.001 < 0.017	0.000
03 < 0.011 < 0.024 < 0.011	0.000 < 0.001 < 0.027	0.000
02 < 0.019 < 0.015 < 0.011	0.000 < 0.002 < 0.033	0.000
03 < 0.007 < 0.009 < 0.009 < 0.000	< 0.001 < 0.022	0.000
03 < 0.019 < 0.006 < 0.007	0.000 < 0.001 < 0.012	0.000
02 < 0.019 < 0.015 < 0.011	0.000 < 0.002 < 0.017	0.000
03 < 0.011 < 0.015 < 0.009 < 0.000	< 0.001 < 0.022	0.000
02 < 0.015 < 0.015 < 0.015	0.000 < 0.002 < 0.018	0.000
02 < 0.026 < 0.027 < 0.017	0.000 < 0.002 < 0.018	0.000
02 < 0.015 < 0.018 < 0.015	0.000 < 0.001 < 0.027	0.000
02 < 0.022 < 0.018 < 0.015	0.000 < 0.001 < 0.017	0.000

9707240076-05

TABLE 500.1-2

500.1	337.5	102.5	< 0.11	< 0.05	< 0.03	< 0.06	0.24	< 0.37	< 0.09	1	<
500.1	327.5	107.5	< 0.10	< 0.06	< 0.03	< 0.08	0.11	< 0.37	< 0.21	1	<
500.1	327.5	102.5	< 0.10	< 0.04	< 0.03	< 0.06	0.32	< 0.16	< 0.10	1	<
500.1	402.5	97.5	< 0.12	< 0.04	< 0.06	< 0.07	0.42	< 0.43	< 0.09	1	<
500.1	407.5	97.5	< 0.12	< 0.14	< 0.12	< 0.17	2.94	< 0.59	< 0.51	1	<
500.1	405	95	< 0.12	< 0.04	< 0.06	< 0.06	0.56	< 0.45	< 0.12	1	<
500.1	402.5	92.5	< 0.12	< 0.04	< 0.06	< 0.07	0.89	< 0.21	< 0.08	1	<
500.1	407.5	92.5	< 0.12	< 0.23	< 0.16	< 0.27	2.03	< 0.63	< 0.58	1	<
500.1	392.5	97.5	0.21	< 0.05	< 0.02	< 0.06	< 0.08	< 0.32	< 0.11	1	<
500.1	397.5	97.5	0.21	< 0.05	< 0.06	< 0.07	0.29	< 0.15	< 0.13	1	<
500.1	395	95	0.21	< 0.07	< 0.03	< 0.08	0.31	< 0.33	< 0.10	1	<
500.1	392.5	92.5	0.21	< 0.06	< 0.03	< 0.08	0.93	< 0.49	< 0.14	1	<
500.1	397.5	92.5	0.21	< 0.08	< 0.09	< 0.12	2.10	< 0.57	< 0.21	1	<
500.1	382.5	97.5	< 0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.10	< 0.40	1	<
500.1	387.5	97.5	< 0.12	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.30	1	<
500.1	385	95	< 0.12	< 0.10	< 0.10	< 0.20	0.10	< 0.10	< 0.60	1	<
500.1	382.5	92.5	< 0.12	< 0.10	< 0.10	< 0.10	0.80	< 0.20	< 0.70	1	<
500.1	387.5	92.5	< 0.12	< 0.20	< 0.10	< 0.10	1.20	< 0.30	< 0.50	1	<
500.1	372.5	97.5	< 0.11	< 0.05	< 0.03	< 0.13	0.31	< 0.25	< 0.07	1	<
500.1	377.5	97.5	< 0.10	< 0.06	< 0.03	< 0.05	0.23	< 0.33	< 0.07	1	<
500.1	375	95	< 0.11	< 0.06	< 0.03	< 0.06	0.39	< 0.42	< 0.20	1	<
500.1	372.5	92.5	< 0.11	< 0.06	< 0.02	< 0.07	0.60	< 0.18	< 0.13	1	<
500.1	377.5	92.5	< 0.10	< 0.04	< 0.02	< 0.05	0.58	< 0.56	< 0.17	1	<
500.1	362.5	97.5	0.10	< 0.20	< 0.07	< 0.11	1.62	< 0.50	< 0.24	1	<
500.1	367.5	97.5	< 0.11	< 0.08	< 0.04	< 0.06	1.40	< 0.16	< 0.08	1	<
500.1	365	95	< 0.11	< 0.07	< 0.04	< 0.06	0.57	< 0.23	< 0.09	1	<
500.1	362.5	92.5	< 0.11	< 0.03	< 0.05	< 0.06	0.31	< 0.26	< 0.20	1	<
500.1	367.5	92.5	< 0.11	< 0.03	< 0.02	< 0.04	0.33	< 0.39	< 0.13	1	<
500.1	352.5	97.5	< 0.10	< 0.04	< 0.04	< 0.07	0.17	< 0.32	< 0.14	1	<
500.1	357.5	97.5	< 0.10	< 0.04	< 0.04	< 0.04	0.06	< 0.15	< 0.07	1	<
500.1	355	95	< 0.10	< 0.08	< 0.03	< 0.06	0.46	< 0.38	< 0.18	1	<
500.1	352.5	92.5	< 0.10	< 0.07	< 0.07	< 0.18	0.96	< 0.19	< 0.17	1	<
500.1	357.5	92.5	< 0.11	< 0.03	< 0.05	< 0.15	0.42	< 0.32	< 0.16	1	<
500.1	342.5	97.5	< 0.12	< 0.10	< 0.05	< 0.07	0.19	< 0.15	< 0.08	1	<
500.1	347.5	97.5	< 0.12	< 0.05	< 0.03	< 0.07	0.34	< 0.31	< 0.23	1	<
500.1	345	95	< 0.11	< 0.04	< 0.04	< 0.07	0.05	< 0.22	< 0.08	1	<
500.1	342.5	92.5	< 0.12	< 0.07	< 0.05	< 0.08	1.06	< 0.38	< 0.14	1	<
500.1	347.5	92.5	< 0.11	< 0.09	< 0.05	< 0.07	0.24	< 0.19	< 0.17	1	<
500.1	332.5	97.5	< 0.10	< 0.06	< 0.05	< 0.06	1.17	< 0.30	< 0.20	1	<
500.1	337.5	97.5	< 0.11	< 0.05	< 0.04	< 0.06	0.30	< 0.30	< 0.10	1	<
500.1	335	95	< 0.10	< 0.03	< 0.03	< 0.03	0.84	< 0.20	< 0.09	1	<
500.1	332.5	92.5	< 0.10	< 0.05	< 0.04	< 0.06	0.15	< 0.20	< 0.10	1	<
500.1	337.5	92.5	< 0.10	< 0.04	< 0.04	< 0.05	0.59	< 0.30	< 0.10	1	<
500.1	327.5	97.5	< 0.12	< 0.10	< 0.05	< 0.08	0.31	< 0.26	< 0.16	1	<
500.1	325	95	< 0.12	< 0.09	< 0.05	< 0.09	0.13	< 0.20	< 0.23	1	<
500.1	327.5	92.5	< 0.12	< 0.06	< 0.05	< 0.06	0.12	< 0.37	< 0.19	1	<
500.1	402.5	87.5	< 0.12	< 0.12	< 0.05	< 0.08	0.21	< 0.26	< 0.16	1	<
500.1	407.5	87.5	< 0.12	< 0.06	< 0.04	< 0.07	0.54	< 0.30	< 0.17	1	<
500.1	405	85	< 0.12	< 0.19	< 0.23	< 0.26	1.79	< 1.38	< 0.42	1	<

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

.002 < 0.019 < 0.009 < 0.011	0.000 < 0.002 < 0.015	0.000	0
.002 < 0.022 < 0.009 < 0.015 <	0.000 < 0.002 < 0.035	0.000	
.002 < 0.015 < 0.009 < 0.011	0.000 < 0.001 < 0.017	0.000	0
.002 < 0.015 < 0.018 < 0.013	0.000 < 0.002 < 0.015	0.000	
.002 < 0.052 < 0.036 < 0.031	0.148 < 0.003 < 0.085	0.148	
.002 < 0.015 < 0.018 < 0.011	0.000 < 0.002 < 0.020	0.000	
.002 < 0.015 < 0.018 < 0.013	0.000 < 0.001 < 0.013	0.000	
.002 < 0.085 < 0.048 < 0.050	0.058 < 0.003 < 0.097	0.068	0.13
.004 < 0.019 < 0.006 < 0.011 <	0.000 < 0.002 < 0.018	0.004	
.004 < 0.019 < 0.018 < 0.013	0.000 < 0.001 < 0.022	0.004	
.004 < 0.026 < 0.009 < 0.015	0.000 < 0.002 < 0.017	0.004	
.004 < 0.022 < 0.009 < 0.015	0.000 < 0.003 < 0.023	0.004	
.004 < 0.030 < 0.027 < 0.022	0.075 < 0.003 < 0.035	0.079	
		0.05709	
.002 < 0.037 < 0.030 < 0.019 <	0.000 < 0.001 < 0.067	0.000	
.002 < 0.037 < 0.030 < 0.019 <	0.000 < 0.001 < 0.050	0.000	
.002 < 0.037 < 0.030 < 0.037 <	0.000 < 0.001 < 0.100	0.000	
.002 < 0.037 < 0.030 < 0.019	0.000 < 0.001 < 0.117	0.000	
.002 < 0.074 < 0.030 < 0.019	0.000 < 0.002 < 0.083	0.000	
		0	
.002 < 0.019 < 0.009 < 0.024	0.000 < 0.001 < 0.012	0.000	
.002 < 0.022 < 0.009 < 0.009	0.000 < 0.002 < 0.012	0.000	
.002 < 0.022 < 0.009 < 0.011	0.000 < 0.002 < 0.033	0.000	
.002 < 0.022 < 0.006 < 0.013	0.000 < 0.001 < 0.022	0.000	
.002 < 0.015 < 0.006 < 0.009	0.000 < 0.003 < 0.028	0.000	
		0	
.002 < 0.074 < 0.021 < 0.020	0.032 < 0.003 < 0.040	0.034	
.002 < 0.030 < 0.012 < 0.011	0.013 < 0.001 < 0.013	0.013	
.002 < 0.026 < 0.012 < 0.011	0.000 < 0.001 < 0.015	0.000	
.002 < 0.011 < 0.015 < 0.011	0.000 < 0.001 < 0.033	0.000	
.002 < 0.011 < 0.006 < 0.007	0.000 < 0.002 < 0.022	0.000	
		0.028545	
.002 < 0.015 < 0.012 < 0.013	0.000 < 0.002 < 0.023	0.000	
.002 < 0.015 < 0.012 < 0.007 <	0.000 < 0.001 < 0.012	0.000	
.002 < 0.030 < 0.009 < 0.011	0.000 < 0.002 < 0.030	0.000	
.002 < 0.026 < 0.021 < 0.033	0.000 < 0.001 < 0.028	0.000	
.002 < 0.011 < 0.015 < 0.021	0.000 < 0.002 < 0.027	0.000	
		0	
.002 < 0.037 < 0.015 < 0.03	0.000 < 0.001 < 0.013	0.000	
.002 < 0.019 < 0.009 < 0.03	0.000 < 0.002 < 0.038	0.000	
.002 < 0.015 < 0.012 < 0.013 <	0.000 < 0.001 < 0.013	0.000	
.002 < 0.026 < 0.018 < 0.015	0.000 < 0.002 < 0.023	0.000	
.002 < 0.033 < 0.015 < 0.013	0.000 < 0.001 < 0.028	0.000	
		0	
.002 < 0.022 < 0.015 < 0.011	0.000 < 0.002 < 0.033	0.000	
.002 < 0.019 < 0.012 < 0.011	0.000 < 0.002 < 0.017	0.000	
.002 < 0.011 < 0.009 < 0.006	0.000 < 0.001 < 0.015	0.000	
.002 < 0.019 < 0.012 < 0.011	0.000 < 0.001 < 0.017	0.000	
.002 < 0.015 < 0.012 < 0.009	0.000 < 0.002 < 0.017	0.000	
		0	
.002 < 0.037 < 0.015 < 0.015	0.000 < 0.001 < 0.027	0.000	
.002 < 0.033 < 0.015 < 0.017 <	0.000 < 0.001 < 0.038	0.000	
.002 < 0.022 < 0.015 < 0.011 <	0.000 < 0.002 < 0.032	0.000	
		0	
.002 < 0.044 < 0.015 < 0.015	0.000 < 0.001 < 0.027	0.000	
.002 < 0.022 < 0.012 < 0.013	0.000 < 0.002 < 0.028	0.000	
.002 < 0.070 < 0.070 < 0.048	0.047 < 0.007 < 0.070	0.047	

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TABLE 500.1-2

500.1	402.5	82.5	< 0.12	<	0.10	< 0.11	< 0.12	1.29	< 0.60	< 0.15	1	<
500.1	407.5	82.5	< 0.12	<	0.09	< 0.06	< 0.12	1.74	< 0.44	< 0.34	1	<
500.1	392.5	87.5	0.17	<	0.03	< 0.03	< 0.04	0.35	< 0.20	< 0.09	1	<
500.1	397.5	87.5	0.17	<	0.03	< 0.03	< 0.04	0.28	< 0.20	< 0.08	1	<
500.1	395	85	0.17	<	0.05	< 0.05	< 0.07	0.54	< 0.50	< 0.20	1	<
500.1	392.5	82.5	0.17	<	0.05	< 0.04	< 0.06	0.80	< 0.30	< 0.10	1	<
500.1	397.5	82.5	0.17	<	0.02	< 0.02	< 0.03	0.09	< 0.20	< 0.07	1	<
500.1	382.5	87.5	< 0.12	<	0.10	< 0.10	< 0.10	0.80	< 0.30	< 0.60	1	<
500.1	387.5	87.5	< 0.12	<	0.20	< 0.10	< 0.10	0.60	< 0.20	< 0.30	1	<
500.1	385	85	< 0.11	<	0.09	< 0.05	< 0.09	0.70	< 0.46	< 0.17	1	<
500.1	382.5	82.5	< 0.12	<	1.90	< 0.10	< 0.30	1.50	< 0.40	< 0.40	1	<
500.1	387.5	82.5	< 0.12	<	0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.20	1	<
500.1	372.5	87.5	< 0.10	<	0.03	< 0.04	< 0.06	0.57	< 0.51	< 0.07	1	<
500.1	377.5	87.5	< 0.10	<	0.06	< 0.04	< 0.06	0.28	< 0.28	< 0.07	1	<
500.1	375	85	< 0.10	<	0.06	< 0.02	< 0.06	0.78	< 0.47	< 0.09	1	<
500.1	372.5	82.5	< 0.10	<	0.04	< 0.04	< 0.06	0.07	< 0.22	< 0.18	1	<
500.1	377.5	82.5	< 0.10	<	0.04	< 0.04	< 0.08	1.34	< 0.44	< 0.15	1	<
500.1	362.5	87	< 0.10	<	0.07	< 0.08	< 0.17	0.80	< 0.22	< 0.08	1	<
500.1	367.5	87.5	< 0.11	<	0.04	< 0.03	< 0.05	0.29	< 0.31	< 0.07	1	<
500.1	365	85	< 0.11	<	0.04	< 0.06	< 0.07	1.68	< 0.31	< 0.16	1	<
500.1	362.5	82.5	< 0.11	<	0.04	< 0.03	< 0.06	1.16	< 0.29	< 0.14	1	<
500.1	367.5	82.5	< 0.11	<	0.04	< 0.05	< 0.05	0.37	< 0.28	< 0.08	1	<
500.1	352.5	87.5	0.12	<	0.07	< 0.07	< 0.23	1.25	< 0.43	< 0.15	1	<
500.1	357.5	87	0.17	<	0.05	< 0.04	< 0.08	2.06	< 0.31	< 0.10	1	<
500.1	355	85	0.12	<	0.07	< 0.04	< 0.18	1.08	< 0.40	< 0.08	1	<
500.1	357.5	82.5	0.22	<	0.13	< 0.06	< 0.10	1.93	< 0.39	< 0.19	1	<
500.1	342.5	87.5	< 0.10	<	0.07	< 0.04	< 0.10	1.50	< 0.39	< 0.12	1	<
500.1	347.5	87.5	< 0.11	<	0.09	< 0.12	< 0.11	2.38	< 0.23	< 0.26	1	<
500.1	345	85	< 0.11	<	0.07	< 0.06	< 0.07	0.75	< 0.49	< 0.08	1	<
500.1	342.5	82.5	< 0.10	<	0.06	< 0.03	< 0.07	0.43	< 0.30	< 0.09	1	<
500.1	347.5	82.5	< 0.10	<	0.05	< 0.04	< 0.07	0.88	< 0.46	< 0.18	1	<
500.1	332.5	87.5	< 0.09	<	0.03	< 0.02	< 0.04	0.06	< 0.20	< 0.08	1	<
500.1	337.5	87.5	< 0.09	<	0.04	< 0.04	< 0.06	0.36	< 0.30	< 0.10	1	<
500.1	335	85	< 0.09	<	0.04	< 0.04	< 0.05	0.10	< 0.20	< 0.70	1	<
500.1	332.5	82.5	< 0.09	<	0.04	< 0.03	< 0.05	0.06	< 0.30	< 0.10	1	<
500.1	337.5	82.5	< 0.09	<	0.03	< 0.03	< 0.04	0.12	< 0.20	< 0.09	1	<
500.1	327.5	87.5	< 0.11	<	0.04	< 0.03	< 0.05	0.12	< 0.20	< 0.10	1	<
500.1	325	85	< 0.11	<	0.04	< 0.04	< 0.05	0.71	< 0.30	< 0.10	1	<
500.1	327.5	82.5	< 0.11	<	0.03	< 0.03	< 0.04	0.51	< 0.20	< 0.10	1	<
500.1	402.5	77.5	< 0.11	<	0.03	< 0.03	< 0.04	0.08	< 0.20	< 0.08	1	<
500.1	407.5	77.5	< 0.11	<	0.04	< 0.04	< 0.05	0.21	< 0.40	< 0.10	1	<
500.1	405	75	< 0.11	<	0.03	< 0.03	< 0.04	0.08	< 0.20	< 0.09	1	<
500.1	402.5	72.5	< 0.11	<	0.03	< 0.03	< 0.04	0.05	< 0.20	< 0.08	1	<
500.1	407.5	72.5	< 0.11	<	0.03	< 0.03	< 0.04	0.05	< 0.20	< 0.09	1	<
500.1	392.5	77.5	< 0.12	<	0.04	< 0.02	< 0.07	0.67	< 0.25	< 0.11	1	<
500.1	397.5	77.5	< 0.12	<	0.04	< 0.03	< 0.07	0.11	< 0.29	< 0.19	1	<
500.1	395	75	< 0.12	<	0.05	< 0.05	< 0.07	0.50	< 0.42	< 0.19	1	<
500.1	392.5	72.5	< 0.12	<	0.03	< 0.02	< 0.05	0.13	< 0.30	< 0.06	1	<
500.1	397.5	72.5	< 0.12	<	0.04	< 0.02	< 0.06	0.09	< 0.18	< 0.07	1	<

**ANSTEC  
APERTURE  
CARD**

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Aperture Card

2 < 0.037 < 0.033 < 0.022	0.004 < 0.003 < 0.025	0.004
2 < 0.033 < 0.018 < 0.022	0.043 < 0.002 < 0.057	0.043
		0.056316
3 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.015	0.003
3 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.013	0.003
3 < 0.019 < 0.015 < 0.013	0.000 < 0.003 < 0.033	0.003
3 < 0.019 < 0.012 < 0.011	0.000 < 0.002 < 0.017	0.003
3 < 0.007 < 0.006 < 0.006	0.000 < 0.001 < 0.012	0.003
		0.01
2 < 0.037 < 0.033 < 0.019	0.000 < 0.002 < 0.100	0.000
2 < 0.074 < 0.030 < 0.019	0.000 < 0.001 < 0.050	0.000
2 < 0.033 < 0.015 < 0.017	0.000 < 0.002 < 0.028	0.000
2 < 0.704 < 0.030 < 0.056	0.022 < 0.002 < 0.067	0.022
2 < 0.037 < 0.030 < 0.019	0.000 < 0.001 < 0.033	0.000
		0.013158
2 < 0.011 < 0.012 < 0.011	0.000 < 0.003 < 0.012	0.000
2 < 0.022 < 0.012 < 0.011	0.000 < 0.001 < 0.012	0.000
2 < 0.022 < 0.006 < 0.011	0.000 < 0.002 < 0.015	0.000
2 < 0.015 < 0.012 < 0.011 < 0.000	< 0.001 < 0.030	0.000
2 < 0.015 < 0.012 < 0.015	0.008 < 0.002 < 0.025	0.008
		0.004737
2 < 0.026 < 0.024 < 0.031	0.000 < 0.001 < 0.013	0.000
2 < 0.015 < 0.009 < 0.009	0.000 < 0.002 < 0.012	0.000
2 < 0.015 < 0.018 < 0.013	0.038 < 0.002 < 0.027	0.038
2 < 0.015 < 0.009 < 0.011	0.000 < 0.002 < 0.023	0.000
2 < 0.015 < 0.015 < 0.009	0.000 < 0.001 < 0.013	0.000
		0.022632
2 < 0.026 < 0.021 < 0.043	0.000 < 0.002 < 0.025	0.002
3 < 0.019 < 0.012 < 0.015	0.071 < 0.002 < 0.017	0.074
2 < 0.026 < 0.012 < 0.033	0.000 < 0.002 < 0.013	0.002
4 < 0.048 < 0.018 < 0.019	0.060 < 0.002 < 0.032	0.064
		0.107291
2 < 0.026 < 0.012 < 0.019	0.022 < 0.002 < 0.020	0.022
2 < 0.033 < 0.036 < 0.020	0.099 < 0.001 < 0.043	0.099
2 < 0.026 < 0.018 < 0.013	0.000 < 0.003 < 0.013	0.000
2 < 0.022 < 0.009 < 0.013	0.000 < 0.002 < 0.015	0.000
2 < 0.019 < 0.012 < 0.013	0.000 < 0.002 < 0.030	0.000
		0.072632
2 < 0.011 < 0.006 < 0.007	0.000 < 0.001 < 0.013	0.000
2 < 0.015 < 0.012 < 0.011	0.000 < 0.002 < 0.017	0.000
2 < 0.015 < 0.012 < 0.019	0.000 < 0.001 < 0.117	0.000
2 < 0.015 < 0.009 < 0.005	0.000 < 0.002 < 0.017	0.000
2 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.015	0.000
		0
2 < 0.015 < 0.009 < 0.009	0.000 < 0.001 < 0.017	0.000
2 < 0.015 < 0.012 < 0.009	0.000 < 0.002 < 0.017	0.000
2 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.017	0.000
		0
2 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.013	0.000
2 < 0.015 < 0.012 < 0.009	0.000 < 0.002 < 0.017	0.000
2 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.015	0.000
2 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.015	0.000
		0
2 < 0.015 < 0.006 < 0.013	0.000 < 0.001 < 0.018	0.000
2 < 0.015 < 0.009 < 0.013 < 0.000	< 0.002 < 0.032	0.000
2 < 0.019 < 0.015 < 0.013	0.000 < 0.002 < 0.032	0.000
2 < 0.011 < 0.006 < 0.009 < 0.000	< 0.002 < 0.010	0.000
2 < 0.015 < 0.006 < 0.011 < 0.000	< 0.001 < 0.012	0.000

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TABLE 500.1-2

500.1	382.5	77.5 < 0.10 <	0.06 < 0.04 < 0.05 < 0.10 < 0.26 < 0.19	1 <
500.1	387.5	77.5 < 0.10 <	0.03 < 0.02 < 0.04 0.20 < 0.12 < 0.11	1 <
500.1	385	75 < 0.10 <	0.04 < 0.04 < 0.07 0.65 < 0.38 < 0.09	1 <
500.1	382.5	72.5 < 0.10 <	0.03 < 0.04 < 0.06 0.25 < 0.32 < 0.07	1 <
500.1	387.5	72.5 < 0.10 <	0.04 < 0.06 < 0.06 0.44 < 0.33 < 0.12	1 <
500.1	332.5	77.5 < 0.10 <	0.04 < 0.04 < 0.05 0.25 < 0.30 < 0.10	1 <
500.1	337.5	77.5 < 0.10 <	0.06 < 0.06 < 0.07 0.73 < 0.40 < 0.20	1 <
500.1	402.5	67.5 < 0.12 <	0.20 < 0.10 < 0.10 < 0.10 < 0.30 < 0.30	1 <
500.1	407.5	67.5 < 0.12 <	0.40 < 0.20 < 0.30 1.30 < 0.80 < 1.20	1 <
500.1	405	65 < 0.12 <	0.10 < 0.10 < 0.10 < 0.10 < 0.20 < 0.30	1 <
500.1	402.5	62.5 < 0.12 <	0.10 < 0.30 < 0.10 < 0.10 < 0.40 < 0.30	1 <
500.1	407.5	62.5 < 0.12 <	0.30 < 0.10 < 0.40 5.30 < 0.30 < 0.50	1 <
500.1	392.5	67.5 < 0.10 <	0.10 < 0.10 < 0.10 < 0.10 < 0.20 < 0.30	1 <
500.1	397.5	67.5 < 0.10 <	0.10 < 0.10 < 0.10 < 0.10 < 0.30 < 0.20	1 <
500.1	395	65 < 0.10 <	0.10 < 0.10 < 0.10 < 0.10 < 0.20 < 0.30	1 <
500.1	392.5	62.5 < 0.10 <	0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10	1 <
500.1	397.5	62.5 < 0.10 <	0.10 < 0.10 < 0.10 < 0.10 < 0.30 < 0.30	1 <
500.1	402.5	57.5 < 0.10 <	0.12 < 0.05 < 0.10 0.70 < 0.22 < 0.08	1 <
500.1	407.5	57.5 < 0.10 <	0.04 < 0.03 < 0.05 < 0.08 < 0.16 < 0.19	1 <
<b>BIAS SAMPLES</b>				
500.1 BIAS 395W 65W		< 0.70 < 0.33 < 0.43 < 0.49 < 0.49 < 3.93 < 0.70	1 <	
500.1 BIAS 395W 65W SAMPLE 1		0.25 < 0.17 < 0.18 < 0.25 < 0.38 < 1.17 < 0.70	1	
500.1 BIAS 395W 65W SAMPLE 2		< 0.12 < 0.05 < 0.02 < 0.05 1.14 < 0.47 < 0.15	1 <	

02 <	0.022 <	0.012 <	0.009 <	0.000 <	0.001 <	0.032	0.000
02 <	0.011 <	0.006 <	0.007	0.000 <	0.001 <	0.018	0.000
02 <	0.015 <	0.012 <	0.013	0.000 <	0.002 <	0.015	0.000
02 <	0.011 <	0.012 <	0.011	0.000 <	0.002 <	0.012	0.000
02 <	0.015 <	0.018 <	0.011	0.000 <	0.002 <	0.020	0.000
						0	
02 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000
02 <	0.022 <	0.018 <	0.013	0.000 <	0.002 <	0.033	0.000
						0	
02 <	0.074 <	0.030 <	0.019 <	0.000 <	0.002 <	0.050	0.000
02 <	0.148 <	0.061 <	0.056	0.004 <	0.004 <	0.200	0.004
02 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.050	0.000
02 <	0.037 <	0.091 <	0.019 <	0.000 <	0.002 <	0.050	0.000
02 <	0.111 <	0.030 <	0.074	0.355 <	0.002 <	0.083	0.355
						0.215789	
02 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.050	0.000
02 <	0.037 <	0.030 <	0.019 <	0.000 <	0.002 <	0.033	0.000
02 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.050	0.000
02 <	0.037 <	0.030 <	0.019	0.000 <	0.001 <	0.017	0.000
02 <	0.037 <	0.030 <	0.019 <	0.000 <	0.002 <	0.050	0.000
						0	
02 <	0.044 <	0.015 <	0.019	0.000 <	0.001 <	0.013	0.000
02 <	0.015 <	0.009 <	0.009 <	0.000 <	0.001 <	0.032	0.000
						0	
14 <	0.122 <	0.150 <	0.091 <	0.000 <	0.021 <	0.117	0.000
05 <	0.063 <	0.055 <	0.046 <	0.000 <	0.006 <	0.117	0.005
02 <	0.019 <	0.006 <	0.009	0.000 <	0.002 <	0.025	0.000

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## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.2 survey unit was surveyed on an unaffected area basis and has a surface area of 6200 m<sup>2</sup>. 34 surface soil contamination measurement locations were taken in this area at random. 30 gamma exposure rate measurement locations were taken in this area. In addition a 10% scan was performed in this location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.2 survey unit are provided in 2 attached tables as follows:

Table 500.2-1 Soil Area Between B-4 and Long Meadow Road  
gamma exposure rate data

Table 500.2-2 Soil Area Between B-4 and Long Meadow Road  
surface soil contamination data

11462797

CINTICHEM DECOMMISSIONING PLAN 11/14/96

FINAL SURVEY DATA SHEET

DATA FOR UNAFFECTED AREA DESCRIPTION:  
SOIL AREA BETWEEN B4 AND LONG MEADOW ROAD  
AREA 500.2 FOR UR/HRRADIATION TYPE: GAMMA SURVEY IN UREM/HR  
COMPLETION

DATE: 10/96

TECHNICIANS:	MANY	MATERIAL CODE
AREA:	500.0	1:CONCRETE 5:PLASTIC
UNIT:	500.2	2:ROCK 6:SOIL
MEDIA TYPE:	SOIL	3:WOOD 7:ASPHALT
# of POINTS:	30	4:METAL 8:OTHER(SPECIFY): NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX:	4.00 PASS	10
AVG:	0.83 PASS	5
STD X:	1.53	
HU SUB ALPHA:	1.31 PASS	5

ID #	GRID POINT	INST.	MATER-			
			ID #	BKG	AREA	IAL
			UREM/HR	UREM/HR	UREM/HR	
500.2	26	A	6	5	8	-1
500.2	34	A	6	7	8	1
500.2	41	A	6	6	8	0
500.2	42	A	6	6	8	0
500.2	60	A	6	5	8	-1
500.2	58	A	6	5	8	-1
500.2	57	A	6	5	8	-1
500.2	70	A	6	6	8	0
500.2	68	A	6	4	8	-2
500.2	54	A	6	6	8	0
500.2	45	A	6	6	8	0
500.2	44	A	6	6	8	0
500.2	27	A	6	8	8	2
500.2	28	A	6	9	8	3
500.2	22	A	6	9	8	3
500.2	17	A	6	7	8	1
500.2	13	A	6	9	8	3
500.2	10	A	6	8	8	2
500.2	7	A	6	6	8	0
500.2	6	A	6	9	8	3
500.2	5	A	6	10	8	4
500.2	3	A	6	5	8	-1
500.2	4	A	6	8	8	2
500.2	18	A	6	7	8	1
500.2	20	A	6	6	8	0
500.2	25	A	6	7	8	1
500.2	30	A	6	9	8	3
500.2	31	A	6	7	8	1
500.2	39	A	6	7	8	1
500.2	47	A	6	7	8	1

## TABLE 500.2-2

CINTICHEM DECOMMISSIONING PLAN 11/08/96

FINAL SURVEY DATA SHEET

DATA FOR UNAFFECTED AREA DESCRIPTION:

SOIL AREA BETWEEN B4 AND LONG MEADOW ROAD

AREA 500.2

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 10/96

TECHNICIANS: MANY

AREA: 500.0

UNIT: 500.2

MEDIA TYPE: SOIL

# OF POINTS: 34

## SOIL DATA IN

SUM OF FRACTIONS: LIMIT

	MAX	FAIL	LIMIT
AVG	0.14	PASS	1
STD X	0.35		
MU SUB ALPHA	0.24	PASS	1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID # OR OTHER ID	GRID COORDINATES	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)						
		SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152
		LIMIT	LIMIT	LIMIT	LIMIT	LIMIT	LIMIT	SOIL CODE
		17	0.9	1.1	1.8	3.8	63	2
500.2	3	< 0.10	< 0.25	< 0.16	0.06	< 0.17	< 0.90	< 0.42
500.2	4	< 0.10	< 0.21	< 0.19	< 0.18	2.15	< 1.23	< 0.54
500.2	5	< 0.10	< 0.12	< 0.12	< 0.21	0.37	< 0.94	< 0.51
500.2	6	< 0.10	< 0.17	< 0.10	< 0.10	0.28	< 0.69	< 0.33
500.2	7	< 0.10	< 0.14	< 0.10	< 0.09	< 0.11	< 0.81	< 0.29
500.2	10	< 0.11	< 0.05	< 0.06	< 0.07	< 0.15	< 0.17	< 0.10
500.2	13	< 0.12	< 0.05	< 0.04	< 0.07	0.37	< 0.33	< 0.20
500.2	17	< 0.12	< 0.19	< 0.13	< 0.19	1.03	< 1.18	< 0.53
500.2	18	< 0.10	< 0.20	< 0.19	< 0.18	1.62	< 0.77	< 0.57
500.2	20	< 0.12	< 0.15	< 0.14	< 0.14	0.39	< 0.90	< 0.38
500.2	22	< 0.12	< 0.21	< 0.17	< 0.23	1.21	< 1.09	< 0.52
500.2	25	< 0.12	< 0.18	< 0.13	< 0.13	0.46	< 0.66	< 0.34
500.2	26	0.14	< 0.09	< 0.04	< 0.08	0.40	< 0.46	< 0.13
500.2	27	< 0.12	< 0.22	< 0.21	< 0.18	0.36	< 0.88	< 0.51
500.2	28	< 0.12	< 0.15	< 0.15	< 0.13	0.99	< 1.33	< 0.58
500.2	30	< 0.10	< 0.17	< 0.14	< 0.12	1.45	< 1.15	< 0.58
500.2	31	< 0.10	< 0.04	< 0.04	< 0.07	0.22	< 0.18	< 0.07
500.2	34	< 0.12	< 0.05	< 0.03	< 0.07	0.73	< 0.27	< 0.17
500.2	39	< 0.12	< 0.11	< 0.05	< 0.08	0.23	< 0.44	< 0.16
500.2	41	0.18	< 0.05	< 0.06	< 0.09	1.09	< 0.43	< 0.12
500.2	42	0.19	< 0.08	< 0.04	< 0.13	0.98	< 0.56	< 0.13
500.2	44	< 0.12	< 0.08	< 0.05	< 0.10	2.06	< 0.24	< 0.35
500.2	45	0.14	< 0.10	< 0.11	< 0.15	6.01	< 0.37	< 0.35
500.2 1' SW OF 45		< 0.12	< 0.10	< 0.19	< 0.10	7.01	< 0.65	< 0.40
500.2 1' N OF 45		< 0.12	< 0.09	< 0.10	< 0.13	4.29	< 0.38	< 0.27
500.2 1' SE OF 45		< 0.10	< 0.06	< 0.04	< 0.10	2.67	< 0.22	< 0.26
500.2 1' NE OF 45		< 0.10	< 0.06	< 0.04	< 0.12	1.03	< 0.35	< 0.16
500.2	47	< 0.12	< 0.05	< 0.06	< 0.07	0.41	< 0.38	< 0.09
500.2	54	< 0.11	< 0.06	< 0.07	< 0.08	1.28	< 0.44	< 0.22
500.2	57	< 0.12	< 0.07	< 0.03	< 0.07	0.56	< 0.15	< 0.16

1966-27-97

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**ISOTOPES OF CONCERN IN FRACTION OF LIMIT (WITH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)**

R-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM
------	-------	---------	--------	--------	--------	--------	-----

0.005882 <	0.278 <	0.145	0.033 <	0.000 <	0.014 <	0.210	0.033
0.005882 <	0.233 <	0.173 <	0.100	0.237 <	0.020 <	0.270	0.237
0.005882 <	0.133 <	0.109 <	0.117	0.000 <	0.015 <	0.255	0.000
0.005882 <	0.189 <	0.091 <	0.056	0.000 <	0.011 <	0.165	0.000
0.005882 <	0.156 <	0.091 <	0.050 <	0.000 <	0.013 <	0.145	0.000
0.006471 <	0.056 <	0.055 <	0.039 <	0.000 <	0.003 <	0.050	0.000
0.007059 <	0.056 <	0.036 <	0.039	0.000 <	0.005 <	0.100	0.000
0.007059 <	0.211 <	0.118 <	0.106	0.000 <	0.019 <	0.265	0.000
0.005882 <	0.222 <	0.173 <	0.100	0.097 <	0.012 <	0.285	0.097
0.007059 <	0.167 <	0.127 <	0.078	0.000 <	0.014 <	0.190	0.000
0.007059 <	0.233 <	0.155 <	0.128	0.000 <	0.017 <	0.260	0.000
0.007059 <	0.200 <	0.118 <	0.072	0.000 <	0.010 <	0.170	0.000
0.008235 <	0.100 <	0.036 <	0.044	0.000 <	0.007 <	0.065	0.008
0.007059 <	0.244 <	0.191 <	0.100	0.000 <	0.014 <	0.255	0.000
0.007059 <	0.167 <	0.136 <	0.072	0.000 <	0.021 <	0.290	0.000
0.005882 <	0.189 <	0.127 <	0.067	0.053 <	0.018 <	0.290	0.053
0.005882 <	0.044 <	0.036 <	0.039	0.000 <	0.003 <	0.035	0.000
0.007059 <	0.056 <	0.027 <	0.039	0.000 <	0.004 <	0.085	0.000
0.007059 <	0.122 <	0.045 <	0.044	0.000 <	0.007 <	0.080	0.000
0.010588 <	0.056 <	0.055 <	0.050	0.000 <	0.007 <	0.060	0.011
0.011176 <	0.089 <	0.036 <	0.072	0.000 <	0.009 <	0.065	0.011
0.007059 <	0.089 <	0.045 <	0.056	0.213 <	0.004 <	0.175	0.213
0.008235 <	0.111 <	0.100 <	0.083	1.253 <	0.006 <	0.175	1.261
0.007059 <	0.111 <	0.173 <	0.056	1.516 <	0.010 <	0.200	1.516
0.007059 <	0.100 <	0.091 <	0.072	0.800 <	0.006 <	0.135	0.800
0.005882 <	0.067 <	0.036 <	0.056	0.374 <	0.003 <	0.130	0.374
0.005882 <	0.067 <	0.036 <	0.067	0.000 <	0.006 <	0.000	0.000
0.007059 <	0.056 <	0.055 <	0.039	0.000 <	0.006 <	0.045	0.000
0.006471 <	0.067 <	0.064 <	0.044	0.008 <	0.007 <	0.110	0.008
0.007059 <	0.078 <	0.027 <	0.039	0.000 <	0.002 <	0.080	0.000

9707240076-09

TABLE 500.2-2

500.2	58	< 0.12	< 0.06	< 0.04	< 0.08	1.51	< 0.49	< 0.20	1	< 0
500.2	60	< 0.11	< 0.06	< 0.07	< 0.07	0.69	< 0.16	< 0.14	1	< 0
500.2	68	< 0.12	< 0.08	< 0.05	< 0.07	0.59	< 0.20	< 0.13	1	< 0
500.2	70	< 0.12	< 0.12	< 0.05	< 0.09	1.05	< 0.38	< 0.22	1	< 0

TEN 14.7/8 x 11

22"

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7059 <	0.067 <	0.036 <	0.044	0.068 <	0.008 <	0.100	0.068
6471 <	0.067 <	0.064 <	0.039	0.000 <	0.003 <	0.070	0.000
7059 <	0.089 <	0.045 <	0.039	0.000 <	0.003 <	0.065	0.000
7059 <	0.133 <	0.045 <	0.050	0.000 <	0.006 <	0.110	0.000

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**9707240076-10**

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.3 survey unit was surveyed on an unaffected area basis and has a surface area of 8600 m<sup>2</sup>. 46 surface soil contamination measurement locations were taken in this area at random. 33 gamma exposure rate measurement locations were taken in this area. In addition a 10% scan was performed in this location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.3 survey unit are provided in 2 attached tables as follows:

Table 500.3-1 Land Area Between B-4 Parking Lot and S. Roadway  
gamma exposure rate data

Table 500.3-2 Land Area Between B-4 Parking Lot and S. Roadway  
surface soil contamination data

Table 500.3-3 Land Area Between B-4 Parking Lot and S. Roadway  
in-situ gamma spectroscopy results



TABLE 500.3-1

500.3	107	A	6	8	8	2
500.3	106	A	6	16	8	10
500.3	110	A	6	10	8	4

\* Gamma isotopic analysis of grid yeilded a significant contribution from naturally occurring radioactive materials. See Table 500.3-3 for isotopic breakdown.

Table 500.3-2

AA66-27-01

CINTICHEM DECOMMISSIONING PLAN 11/21/96  
 FINAL SURVEY DATA SHEET  
 DATA FOR Affected AREA DESCRIPTION:  
 LAND AREA BETWEEN BLD 4 PARKING LOT AND S. ROADWAY  
 AREA 500.3

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS  
 COMPLETION

DATE: 10/30/96  
 TECHNICIANS: MANY  
 AREA: 500.0  
 UNIT: 500.3  
 MEDIA TYPE: SOIL  
 # of POINTS: 46

SOIL DATA IN  
 SUM OF FRACTIONS: LIMIT  
 MAX 2.66 FAIL 1  
 AVG 0.37 PASS 1  
 STD X 0.73  
 MU SUB ALPHA 0.55 PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	GRID COORDINATES OR OTHER ID	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)						SOIL CODE
		SR-90 LIMIT 17	CO-60 LIMIT 0.9	AG-108M LIMIT 1.1	CS-134 LIMIT 1.8	CS-137 LIMIT 3.8	CE-144 LIMIT 63	
500.3	1	< 0.13	< 0.04	< 0.04	< 0.05	0.49	< 0.20	< 0.10
500.3	2	< 0.10	< 0.03	< 0.03	< 0.04	0.85	< 0.20	< 0.10
500.3	3	< 0.11	< 0.03	< 0.03	< 0.03	0.51	< 0.20	< 0.80
500.3	4	< 0.13	< 0.03	< 0.03	< 0.05	0.50	< 0.30	< 0.10
500.3	5	< 0.12	< 0.03	< 0.03	< 0.04	0.71	< 0.20	< 0.10
500.3	7	< 0.13	< 0.07	< 0.07	< 0.08	2.02	< 0.40	< 0.20
500.3	8	< 0.11	< 0.03	< 0.03	< 0.05	1.20	< 0.20	< 0.10
500.3	10	< 0.12	< 0.04	< 0.04	< 0.06	0.52	< 0.30	< 0.10
500.3	25	< 0.11	< 0.04	< 0.04	< 0.05	0.89	< 0.30	< 0.10
500.3	31	< 0.11	< 0.03	< 0.03	< 0.04	0.59	< 0.20	< 0.09
500.3	47	< 0.11	< 0.03	< 0.02	< 0.03	0.73	< 0.20	< 0.07
500.3	49	< 0.11	< 0.04	< 0.03	< 0.05	0.54	< 0.30	< 0.10
500.3	50	< 0.11	< 0.03	< 0.03	< 0.04	0.40	< 0.20	< 0.09
500.3	51	< 0.11	< 0.03	< 0.03	< 0.04	0.26	< 0.20	< 0.09
500.3	52	< 0.13	< 0.08	< 0.08	< 0.08	0.29	< 0.60	< 0.20
500.3	57	< 0.13	< 0.06	< 0.05	< 0.07	0.86	< 0.40	< 0.20
500.3	61	0.44	< 0.07	< 0.08	< 0.08	5.40	< 0.40	< 0.20
500.3	1' NW	0.17	< 0.13	< 0.10	< 0.15	9.30	< 0.58	< 0.25
500.3	1' SE	0.33	< 0.12	< 0.05	< 0.11	1.61	< 0.46	< 0.22
500.3	2' SW	0.61	< 0.10	< 0.13	< 0.18	11.23	< 0.62	< 0.32
500.3	2' NE	0.97	< 0.20	< 0.13	< 0.17	7.53	< 0.52	< 0.40
500.3	4' SW	0.20	< 0.24	< 0.16	< 0.17	10.28	< 0.89	< 0.65
500.3	4' NW	0.33	< 0.17	< 0.19	< 0.17	7.73	< 0.34	< 0.24
500.3	5' NE	0.32	< 0.08	< 0.20	< 0.16	8.47	< 0.50	< 0.23
500.3	15' E	0.22	< 0.08	< 0.07	< 0.08	0.60	< 0.58	< 0.19
500.3	25' SW	0.16	< 0.14	< 0.12	< 0.18	4.51	< 0.36	< 0.22
500.3	25' SE	0.15	< 0.06	< 0.05	< 0.07	0.87	< 0.34	< 0.13
500.3	25' NE	0.19	< 0.08	< 0.10	< 0.13	3.36	< 0.24	< 0.31
500.3	30' NW	< 0.10	< 0.06	< 0.04	< 0.05	1.34	< 0.23	< 0.29
500.3	35' W	< 0.10	< 0.03	< 0.02	< 0.05	0.14	< 0.17	< 0.13

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TOPES OF CONCERN IN FRACTION OF LIMIT (WITH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

TO	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM
07647 <	0.044 <	0.036 <	0.028	0.000 <	0.003 <	0.050	0.000
05882 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.050	0.000
06471 <	0.033 <	0.027 <	0.017	0.000 <	0.003 <	0.400	0.000
07647 <	0.033 <	0.027 <	0.028	0.000 <	0.005 <	0.050	0.000
07059 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.050	0.000
07647 <	0.078 <	0.064 <	0.044	0.203 <	0.006 <	0.100	0.203
06471 <	0.033 <	0.027 <	0.028	0.000 <	0.003 <	0.050	0.000
07059 <	0.044 <	0.036 <	0.033	0.000 <	0.005 <	0.050	0.000
06471 <	0.044 <	0.036 <	0.028	0.000 <	0.005 <	0.050	0.000
06471 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
06471 <	0.033 <	0.018 <	0.017	0.000 <	0.003 <	0.035	0.000
06471 <	0.044 <	0.027 <	0.028	0.000 <	0.005 <	0.050	0.000
06471 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
06471 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
07647 <	0.089 <	0.073 <	0.044	0.000 <	0.010 <	0.100	0.008
07647 <	0.067 <	0.045 <	0.039	0.000 <	0.006 <	0.100	0.000
25882 <	0.078 <	0.073 <	0.044	1.092 <	0.006 <	0.100	1.118
10000 <	0.144 <	0.091 <	0.083	2.118 <	0.009 <	0.125	2.128
19412 <	0.133 <	0.045 <	0.061	0.095 <	0.007 <	0.110	0.114
35882 <	0.111 <	0.118 <	0.100	2.626 <	0.010 <	0.160	2.662
57059 <	0.222 <	0.118 <	0.094	1.653 <	0.008 <	0.200	1.710
11765 <	0.267 <	0.145 <	0.094	2.376 <	0.014 <	0.325	2.388
19412 <	0.189 <	0.173 <	0.094	1.705 <	0.005 <	0.120	1.725
18824 <	0.089 <	0.182 <	0.089	1.900 <	0.008 <	0.115	1.919
12941 <	0.089 <	0.064 <	0.044	0.000 <	0.009 <	0.095	0.013
09412 <	0.156 <	0.109 <	0.100	0.858 <	0.006 <	0.110	0.867
08824 <	0.067 <	0.045 <	0.039	0.000 <	0.005 <	0.065	0.009
11176 <	0.089 <	0.091 <	0.072	0.555 <	0.004 <	0.155	0.566
05882 <	0.067 <	0.036 <	0.028	0.024 <	0.004 <	0.145	0.024
05882 <	0.033 <	0.018 <	0.028	0.000 <	0.003 <	0.065	0.000

9707240076-11

Table 500.3-2

500.3	65	0.13 < 0.04 < 0.04 < 0.05	1.18 < 0.30 < 0.10	1
500.3	68	< 0.11 < 0.03 < 0.03 < 0.04	0.26 < 0.20 < 0.09	1
500.3	69	< 0.10 < 0.03 < 0.02 < 0.03	0.25 < 0.20 < 0.07	1
500.3	72	< 0.11 < 0.02 < 0.02 < 0.03	0.46 < 0.10 < 0.07	1
500.3	74	< 0.11 < 0.04 < 0.03 < 0.04	0.52 < 0.20 < 0.10	1
500.3	75	0.11 < 0.04 < 0.03 < 0.05	1.02 < 0.20 < 0.10	1
500.3	78	< 0.11 < 0.07 < 0.07 < 0.09	1.78 < 0.60 < 0.20	1
500.3	88	< 0.10 < 0.04 < 0.03 < 0.03	0.28 < 0.20 < 0.10	1
500.3	99	< 0.11 < 0.04 < 0.03 < 0.04	0.41 < 0.20 < 0.09	1
500.3	101	< 0.13 < 0.08 < 0.07 < 0.08	2.70 < 0.40 < 0.20	1
500.3	106	0.22 < 0.05 < 0.08 < 0.07	4.28 < 0.50 < 0.20	1
500.3	107	< 0.11 < 0.05 < 0.04 < 0.06	0.97 < 0.30 < 0.10	1
500.3	110	< 0.11 < 0.03 < 0.03 < 0.04	0.25 < 0.20 < 0.09	1
500.3	112	< 0.11 < 0.04 < 0.05 < 0.06	1.94 < 0.30 < 0.20	1
500.3	114	< 0.11 < 0.03 < 0.02 < 0.04	0.53 < 0.20 < 0.08	1
500.3	115	< 0.12 < 0.04 < 0.03 < 0.04	0.61 < 0.20 < 0.10	1

0.007647 <	0.044 <	0.036 <	0.028	0.000 <	0.005 <	0.050	0.008
0.006471 <	0.033 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
0.005882 <	0.033 <	0.018 <	0.017	0.000 <	0.003 <	0.035	0.000
0.006471 <	0.022 <	0.018 <	0.017	0.000 <	0.002 <	0.035	0.000
0.006471 <	0.044 <	0.027 <	0.022	0.000 <	0.003 <	0.050	0.000
0.006471 <	0.044 <	0.027 <	0.028	0.000 <	0.003 <	0.050	0.006
0.006471 <	0.078 <	0.064 <	0.050	0.139 <	0.010 <	0.100	0.139
0.005882 <	0.044 <	0.027 <	0.017	0.000 <	0.003 <	0.050	0.000
0.006471 <	0.044 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
0.007647 <	0.089 <	0.064 <	0.044	0.382 <	0.006 <	0.100	0.382
0.012941 <	0.056 <	0.073 <	0.039	0.797 <	0.008 <	0.100	0.810
0.006471 <	0.056 <	0.036 <	0.033	0.000 <	0.005 <	0.050	0.000
0.006471 <	0.075 <	0.027 <	0.022	0.000 <	0.003 <	0.045	0.000
0.006471 <	0.044 <	0.045 <	0.033	0.182 <	0.005 <	0.100	0.182
0.006471 <	0.033 <	0.018 <	0.022	0.000 <	0.003 <	0.040	0.000
0.007059 <	0.044 <	0.027 <	0.022	0.000 <	0.003 <	0.050	0.000

**ANSTEC  
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**9707240076-12 -**

MB 6-27-94

PER

Table 500.3-3

21-Nov

## GAMMA SPECTRUM ANALYSIS

ITEM: 500.3 #21 DATE: 11-12-96 FILENAME:  
 ID #: 96-111201 TECH: RW 961112.WK3  
 MICROREM PER HOUR: 19 DESIGNATION:  
 COUNT TIME IN SECONDS: 600 OUTSIDE RCA

DETECTOR LOCATION: AT ONE METER FROM POINT 21 GRID 52

ROI #	CENTROID ENERGY KeV	NET COUNTS/ SECOND	ISOTOPE	NET CPS	FLUX TO	CPS	FRACT. OF DOSE	UREM/HR
				CS-137 EQUIV	DOSE CONV.	* CONV.	PER ENERGY	DOSE RANGE
1	238.11	0.275	PB-212	0.13	4.77E-04	6.27E-05	1.79E-02	0.3400
2	294.55	0.128	PB-214	0.07	5.91E-04	4.16E-05	1.19E-02	0.2264
3	351.5	0.325	PB-214	0.20	7.07E-04	1.42E-04	4.07E-02	0.7740
4	582.95	0.152	TL-208	0.14	1.18E-03	1.62E-04	4.65E-02	0.8831
5	608.84	0.262	BI-214	0.25	1.23E-03	3.03E-04	8.68E-02	1.6492
6	1459.02	0.450	K-40	0.93	2.99E-03	2.78E-03	7.96E-01	15.1263
TOTALS				7.18E-03	3.49E-03	1.00E+00	19.00	

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.4 survey unit was surveyed on an affected area basis and has a surface area of 2600 m<sup>2</sup>. 150 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 130 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.4 survey unit are provided in 2 attached tables as follows:

Table 500.4-1 Land Area Around Exhaust Stack and Duct  
gamma exposure rate data

Table 500.4-2 Land Area Around Exhaust Stack and Duct  
surface soil contamination data

1A66-27-97

## CINTICHEM DECOMMISSIONING PLAN

10/25/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

## LAND AREA AROUND EXHAUST STACK AND DUCT

AREA 500.4

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 09/19/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 500.0 1=CONCRETE 5=PLASTIC

UNIT: 500.4 2=ROCK 6=SOIL

MEDIA TYPE: SOIL 3=WOOD 7=ASPHALT

# of POINTS: 130 4=METAL 8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR: LIMIT

MAX: 3.00 PASS 10

AVG: 0.04 PASS 5

STD X: 1.06

MU SUB ALPHA: 0.19 PASS 5

GRID POINT	INST.	ID #	MATER-			
			AREA SKG	AREA READING	IAL CODE	NET UREM/HR
			UREM/HR	UREM/HR		

N	W/E	A	6	5	8	-1
500.4	62.5	237.5	A	6	5	8
500.4	67.5	237.5	A	6	6	8
500.4	65	235	A	6	6	8
500.4	62.5	232.5	A	6	5	8
500.4	67.5	232.5	A	6	6	8
500.4	52.5	237.5	A	6	5	8
500.4	57.5	237.5	A	6	5	8
500.4	55	235	A	6	5	8
500.4	52.5	232.5	A	6	5	8
500.4	57.5	232.5	A	6	5	8
500.4	42.5	237.5	A	6	7	8
500.4	47.5	237.5	A	6	9	8
500.4	45	235	A	6	8	8
500.4	42.5	232.5	A	6	6	8
500.4	47.5	232.5	A	6	5	8
500.4	32.5	237.5	A	6	6	8
500.4	37.5	237.5	A	6	8	8
500.4	35	235	A	6	7	8
500.4	32.5	232.5	A	6	5	8
500.4	37.5	232.5	A	6	6	8
500.4	62.5	227.5	A	6	7	8
500.4	67.5	227.5	A	6	6	8
500.4	65	225	A	6	5	8
500.4	62.5	222.5	A	6	6	8
500.4	67.5	222.5	A	6	5	8
500.4	52.5	227.5	A	6	6	8
500.4	57.5	227.5	A	6	5	8
500.4	55	225	A	6	6	8

500.4	52.5	222.5	A	6	5	8	-1
500.4	57.5	222.5	A	6	5	8	-1
500.4	42.5	227.5	A	6	6	8	0
500.4	47.5	227.5	A	6	5	8	-1
500.4	45	225	A	6	6	8	0
500.4	42.5	222.5	A	6	5	8	-1
500.4	47.5	222.5	A	6	6	8	0
500.4	32.5	227.5	A	6	5	8	-1
500.4	37.5	227.5	A	6	5	8	-1
500.4	35	225	A	6	7	8	1
500.4	32.5	222.5	A	6	6	8	0
500.4	37.5	222.5	A	6	5	8	-1
500.4	62.5	217.5	A	6	6	8	0
500.4	67.5	217.5	A	6	6	8	0
500.4	65	215	A	6	6	8	0
500.4	62.5	212.5	A	6	5	8	-1
500.4	67.5	212.5	A	6	6	8	0
500.4	52.5	217.5	A	6	7	8	1
500.4	57.5	217.5	A	6	6	8	0
500.4	55	215	A	6	6	8	0
500.4	52.5	212.5	A	6	5	8	-1
500.4	57.5	212.5	A	6	5	8	-1
500.4	42.5	217.5	A	6	5	8	-1
500.4	47.5	217.5	A	6	5	8	-1
500.4	45	215	A	6	6	8	0
500.4	42.5	212.5	A	6	5	8	-1
500.4	47.5	212.5	A	6	6	8	0
500.4	32.5	217.5	A	6	6	8	0
500.4	37.5	217.5	A	6	6	8	0
500.4	35	215	A	6	5	8	-1
500.4	32.5	212.5	A	6	5	8	-1
500.4	37.5	212.5	A	6	6	8	0
500.4	62.5	207.5	A	6	5	8	-1
500.4	67.5	207.5	A	6	5	8	-1
500.4	65	205	A	6	5	8	-1
500.4	62.5	202.5	A	6	6	8	0
500.4	67.5	202.5	A	6	5	8	-1
500.4	52.5	207.5	A	6	6	8	0
500.4	57.5	207.5	A	6	6	8	0
500.4	55	205	A	6	5	8	-1
500.4	52.5	202.5	A	6	5	8	-1
500.4	57.5	202.5	A	6	5	8	-1
500.4	42.5	207.5	A	6	5	8	-1
500.4	47.5	207.5	A	6	6	8	0
500.4	45	205	A	6	6	8	0
500.4	42.5	202.5	A	6	6	8	0
500.4	47.5	202.5	A	6	5	8	-1
500.4	32.5	207.5	A	6	5	8	-1
500.4	37.5	207.5	A	6	7	8	1
500.4	35	205	A	6	6	8	0
500.4	32.5	202.5	A	6	6	8	0
500.4	37.5	202.5	A	6	6	8	0
500.4	52.5	197.5	A	6	8	8	2
500.4	57.5	197.5	A	6	8	8	2
500.4	55	195	A	6	6	8	0
500.4	52.5	192.5	A	6	9	8	3
500.4	57.5	192.5	A	6	8	8	2
500.4	52.5	187.5	A	6	5	8	-1
500.4	57.5	187.5	A	6	5	8	-1

RE  
TABLE 500.4-1

500.4	55	185	A	6	6	8	0
500.4	52.5	182.5	A	6	6	8	0
500.4	57.5	182.5	A	6	5	8	-1
500.4	52.5	177.5	A	6	9	8	3
500.4	57.5	177.5	A	6	8	8	2
500.4	55	175	A	6	5	8	-1
500.4	52.5	172.5	A	6	5	8	-1
500.4	57.5	172.5	A	6	6	8	0
500.4	52.5	167.5	A	6	9	8	3
500.4	57.5	167.5	A	6	8	8	2
500.4	55	165	A	6	6	8	0
500.4	52.5	162.5	A	6	7	8	1
500.4	57.5	162.5	A	6	8	8	2
500.4	52.5	157.5	A	6	7	8	1
500.4	57.5	157.5	A	6	7	8	1
500.4	55	155	A	6	6	8	0
500.4	52.5	152.5	A	6	7	8	1
500.4	57.5	152.5	A	6	7	8	1
500.4	52.5	147.5	A	6	6	8	0
500.4	57.5	147.5	A	6	5	8	-1
500.4	55	145	A	6	5	8	-1
500.4	52.5	142.5	A	6	6	8	0
500.4	57.5	142.5	A	6	6	8	0
500.4	52.5	137.5	A	6	5	8	-1
500.4	57.5	137.5	A	6	7	8	1
500.4	55	135	A	6	7	8	1
500.4	52.5	132.5	A	6	6	8	0
500.4	57.5	132.5	A	6	5	8	-1
500.4	52.5	127.5	A	6	7	8	1
500.4	57.5	127.5	A	6	7	8	1
500.4	55	125	A	6	6	8	0
500.4	52.5	122.5	A	6	5	8	-1
500.4	57.5	122.5	A	6	8	8	2
500.4	52.5	117.5	A	6	8	8	2
500.4	57.5	117.5	A	6	7	8	1
500.4	55	115	A	6	7	8	1
500.4	52.5	112.5	A	6	6	8	0
500.4	57.5	112.5	A	6	5	8	-1
500.4	52.5	107.5	A	6	7	8	1
500.4	57.5	107.5	A	6	7	8	1
500.4	55	105	A	6	7	8	1
500.4	52.5	102.5	A	6	6	8	0
500.4	57.5	102.5	A	6	7	8	1

## REF TABLE 500.4-2

CINTICHEM DECOMMISSIONING PLAN 06/20/97  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 LAND AREA AROUND EXHAUST STACK AND DUCT  
 AREA 500.4

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS  
 COMPLETION

DATE: 09/19/96  
 TECHNICIANS: MANY  
 AREA: 500.0  
 UNIT: 500.4  
 MEDIA TYPE: SOIL  
 # of POINTS: 150

SOIL DATA IN		
SUM OF FRACTIONS: LIMIT		
MAX	0.95	PASS 3
MAX GRID AVG.	0.55	PASS 1
STD X	0.06	
MU SUB ALPHA	0.56	PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	GRID COORDINATES OR OTHER ID	SR-90	CD-60	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)				SOIL CODE
				AG-108M	CS-134	CS-137	CE-144	

N	W/E	SR-90	CD-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SOIL CODE
500.4	62.5	237.5 < 0.11 <	0.06 < 0.06 < 0.10	2.96 < 0.48 < 0.21	1	<			
500.4	67.5	237.5 < 0.11 <	0.08 < 0.05 < 0.09	0.72 < 0.34 < 0.10	1	<			
500.4	65	235 < 0.11 <	0.09 < 0.06 < 0.08	2.49 < 0.41 < 0.07	1	<			
500.4	62.5	232.5 < 0.11 <	0.05 < 0.05 < 0.07	1.74 < 0.45 < 0.13	1	<			
500.4	67.5	232.5 < 0.11 <	0.05 < 0.05 < 0.08	0.67 < 0.22 < 0.19	1	<			
500.4	52.5	237.5 0.13 <	0.05 < 0.06 < 0.08	1.23 < 0.27 < 0.25	1	<			
500.4	57.5	237.5 0.13 <	0.07 < 0.04 < 0.06	1.24 < 0.32 < 0.16	1	<			
500.4	55	235 < 0.11 <	0.10 < 0.13 < 0.08	4.20 < 0.24 < 0.25	1	<			
500.4	52.5	232.5 0.13 <	0.12 < 0.06 < 0.12	2.56 < 0.64 < 0.20	1	<			
500.4	57.5	232.5 0.13 <	0.08 < 0.13 < 0.10	2.02 < 0.35 < 0.14	1	<			
500.4	42.5	237.5 < 0.12 <	0.10 < 0.08 < 0.10	2.48 < 0.43 < 0.22	1	<			
500.4	47.5	237.5 < 0.12 <	0.13 < 0.12 < 0.12	1.25 < 0.24 < 0.22	1	<			
500.4	45	235 0.37 <	0.20 < 0.22 < 0.12	3.32 < 0.30 < 0.27	1	<			
500.4	42.5	232.5 < 0.11 <	0.14 < 0.04 < 0.12	1.64 < 0.39 < 0.30	1	<			
500.4	47.5	232.5 0.29 <	0.11 < 0.10 < 0.16	2.39 < 0.39 < 0.49	1	<			
500.4	32.5	237.5 0.30 <	0.21 < 0.09 < 0.24	4.35 < 0.76 < 0.30	1	<			
500.4	37.5	237.5 0.40 <	0.35 < 0.32 < 0.33	2.97 < 1.08 < 0.50	1	<			
500.4	35	235 0.40 <	0.08 < 0.10 < 0.11	1.79 < 0.42 < 0.25	1	<			
500.4	32.5	232.5 0.40 <	0.12 < 0.06 < 0.12	2.35 < 0.55 < 0.24	1	<			
500.4	37.5	232.5 0.38 <	0.31 < 0.44 < 0.43	4.79 < 0.79 < 0.54	1	<			
500.4	62.5	227.5 0.23 <	0.07 < 0.10 < 0.10	2.04 < 0.44 < 0.20	1	<			
500.4	67.5	227.5 0.23 <	0.08 < 0.07 < 0.12	1.61 < 0.22 < 0.13	1	<			
500.4	65	225 0.23 <	0.08 < 0.07 < 0.12	2.02 < 0.20 < 0.17	1	<			
500.4	62.5	222.5 0.23 <	0.11 < 0.13 < 0.13	1.90 < 0.50 < 0.19	1	<			
500.4	67.5	222.5 0.23 <	0.12 < 0.12 < 0.12	1.50 < 0.37 < 0.30	1	<			
500.4	52.5	227.5 < 0.11 <	0.06 < 0.09 < 0.07	1.01 < 0.33 < 0.08	1	<			
500.4	57.5	227.5 < 0.11 <	0.06 < 0.03 < 0.09	1.14 < 0.41 < 0.11	1	<			

AA66-27-97

ANSTEC  
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TOPES OF CONCERN INDIVIDUAL SAMPLE FRACTION OF HOT SPOT LIMIT

TH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM	GRID BLOC	Avg. FRAC OF LIMIT
02 <	0.022 <	0.018 <	0.019	0.150 <	0.003 <	0.035	0.150		
02 <	0.030 <	0.015 <	0.017	0.000 <	0.002 <	0.017	0.000		
02 <	0.033 <	0.018 <	0.015	0.109 <	0.002 <	0.012	0.109		
02 <	0.019 <	0.015 <	0.013	0.043 <	0.002 <	0.022	0.043		
02 <	0.019 <	0.015 <	0.015	0.000 <	0.001 <	0.032	0.000		
								0.181053	
03 <	0.019 <	0.018 <	0.015	0.000 <	0.001 <	0.042	0.003		
03 <	0.026 <	0.012 <	0.011	0.000 <	0.002 <	0.027	0.003		
02 <	0.037 <	0.039 <	0.015	0.259 <	0.001 <	0.042	0.259		
03 <	0.044 <	0.018 <	0.022	0.115 <	0.003 <	0.033	0.117		
03 <	0.030 <	0.039 <	0.019	0.068 <	0.002 <	0.023	0.070		
								0.270854	
02 <	0.037 <	0.024 <	0.019	0.108 <	0.002 <	0.037	0.108		
02 <	0.048 <	0.036 <	0.022	0.000 <	0.001 <	0.037	0.000		
07 <	0.074 <	0.067 <	0.022	0.182 <	0.002 <	0.045	0.189		
02 <	0.052 <	0.012 <	0.022	0.034 <	0.002 <	0.050	0.034		
06 <	0.041 <	0.030 <	0.030	0.100 <	0.002 <	0.082	0.106		
								0.261973	
06 <	0.078 <	0.027 <	0.044	0.272 <	0.004 <	0.050	0.278		
08 <	0.130 <	0.097 <	0.061	0.151 <	0.006 <	0.083	0.159		
08 <	0.030 <	0.030 <	0.020	0.047 <	0.002 <	0.042	0.055		
08 <	0.044 <	0.018 <	0.022	0.096 <	0.003 <	0.040	0.104		
07 <	0.115 <	0.133 <	0.080	0.311 <	0.004 <	0.090	0.318		
								0.548433	
05 <	0.026 <	0.030 <	0.019	0.069 <	0.002 <	0.033	0.074		
05 <	0.030 <	0.021 <	0.022	0.032 <	0.001 <	0.022	0.036		
05 <	0.030 <	0.021 <	0.022	0.068 <	0.001 <	0.028	0.072		
05 <	0.041 <	0.039 <	0.024	0.057 <	0.003 <	0.032	0.062		
05 <	0.044 <	0.036 <	0.022	0.022 <	0.002 <	0.050	0.026		
								0.16195	
02 <	0.022 <	0.027 <	0.013	0.000 <	0.002 <	0.013	0.000		
02 <	0.022 <	0.009 <	0.017	0.000 <	0.002 <	0.018	0.000		

9707240076 -13

TABLE 500.4-2

500.4	55	225	< 0.11	< 0.06	< 0.06	< 0.07	1.10	< 0.16	< 0.16	1	<
500.4	52.5	222.5	< 0.11	< 0.04	< 0.02	< 0.06	0.61	< 0.29	< 0.10	1	<
500.4	57.5	222.5	< 0.11	< 0.09	< 0.04	< 0.08	0.97	< 0.22	< 0.22	1	<
500.4	42.5	227.5	< 0.11	< 0.06	< 0.08	< 0.08	1.29	< 0.34	< 0.14	1	<
500.4	47.5	227.5	< 0.11	< 0.10	< 0.17	< 0.15	1.75	< 0.45	< 0.31	1	<
500.4	45	225	< 0.11	< 0.05	< 0.03	< 0.05	0.57	< 0.36	< 0.08	1	<
500.4	42.5	222.5	< 0.11	< 0.05	< 0.03	< 0.07	0.78	< 0.47	< 0.19	1	<
500.4	47.5	222.5	< 0.11	< 0.05	< 0.03	< 0.07	0.70	< 0.27	< 0.16	1	<
500.4	32.5	227.5	< 0.12	< 0.19	< 0.09	< 0.17	2.78	< 0.37	< 0.39	1	<
500.4	37.5	227.5	< 0.12	< 0.10	< 0.04	< 0.09	0.92	< 0.19	< 0.15	1	<
500.4	35	225	< 0.12	< 0.19	< 0.22	< 0.25	1.08	< 1.06	< 0.59	1	<
500.4	32.5	222.5	< 0.12	< 0.07	< 0.05	< 0.06	1.72	< 0.37	< 0.08	1	<
500.4	37.5	222.5	< 0.12	< 0.04	< 0.03	< 0.08	0.91	< 0.35	< 0.10	1	<
500.4	62.5	227.5	0.23	< 0.07	< 0.10	< 0.10	2.04	< 0.44	< 0.20	1	<
500.4	67.5	227.5	0.23	< 0.08	< 0.07	< 0.12	1.61	< 0.22	< 0.13	1	<
500.4	65	225	0.23	< 0.08	< 0.07	< 0.12	2.02	< 0.20	< 0.17	1	<
500.4	62.5	222.5	0.23	< 0.11	< 0.13	< 0.13	1.90	< 0.50	< 0.19	1	<
500.4	67.5	222.5	0.23	< 0.12	< 0.12	< 0.12	1.50	< 0.37	< 0.30	1	<
500.4	52.5	227.5	< 0.11	< 0.06	< 0.09	< 0.07	1.01	< 0.33	< 0.08	1	<
500.4	57.5	227.5	< 0.11	< 0.06	< 0.03	< 0.09	1.14	< 0.41	< 0.11	1	<
500.4	55	225	< 0.11	< 0.06	< 0.06	< 0.07	1.10	< 0.16	< 0.16	1	<
500.4	52.5	222.5	< 0.11	< 0.04	< 0.02	< 0.06	0.61	< 0.29	< 0.10	1	<
500.4	57.5	222.5	< 0.11	< 0.09	< 0.04	< 0.08	0.97	< 0.22	< 0.22	1	<
500.4	42.5	227.5	< 0.11	< 0.06	< 0.08	< 0.08	1.29	< 0.34	< 0.14	1	<
500.4	47.5	227.5	< 0.11	< 0.10	< 0.17	< 0.15	1.75	< 0.45	< 0.31	1	<
500.4	45	225	< 0.11	< 0.05	< 0.03	< 0.05	0.57	< 0.36	< 0.08	1	<
500.4	42.5	222.5	< 0.11	< 0.05	< 0.03	< 0.07	0.78	< 0.47	< 0.19	1	<
500.4	47.5	222.5	< 0.11	< 0.05	< 0.03	< 0.07	0.70	< 0.27	< 0.16	1	<
500.4	32.5	227.5	< 0.12	< 0.19	< 0.09	< 0.17	2.78	< 0.37	< 0.39	1	<
500.4	37.5	227.5	< 0.12	< 0.10	< 0.04	< 0.09	0.92	< 0.19	< 0.15	1	<
500.4	35	225	< 0.12	< 0.19	< 0.22	< 0.25	1.08	< 1.06	< 0.59	1	<
500.4	32.5	222.5	< 0.12	< 0.07	< 0.05	< 0.06	1.72	< 0.37	< 0.08	1	<
500.4	37.5	222.5	< 0.12	< 0.04	< 0.03	< 0.08	0.91	< 0.35	< 0.10	1	<
500.4	62.5	217.5	0.12	< 0.06	< 0.08	< 0.06	0.62	< 0.34	< 0.14	1	<
500.4	67.5	217.5	0.12	< 0.15	< 0.11	< 0.10	1.72	< 0.26	< 0.18	1	<
500.4	65	215	0.12	< 0.09	< 0.10	< 0.09	1.52	< 0.25	< 0.10	1	<
500.4	62.5	212.5	0.12	< 0.05	< 0.04	< 0.07	0.93	< 0.25	< 0.10	1	<
500.4	67.5	212.5	0.12	< 0.13	< 0.08	< 0.09	0.76	< 0.30	< 0.12	1	<
500.4	52.5	217.5	0.12	< 0.09	< 0.15	< 0.07	0.58	< 0.18	< 0.13	1	<
500.4	57.5	217.5	0.12	< 0.11	< 0.05	< 0.13	1.44	< 0.29	< 0.22	1	<
500.4	55	215	0.12	< 0.05	< 0.10	< 0.08	1.37	< 0.28	< 0.17	1	<
500.4	52.5	212.5	0.12	< 0.10	< 0.06	< 0.06	0.59	< 0.20	< 0.13	1	<
500.4	57.5	212.5	0.12	< 0.11	< 0.14	< 0.11	2.69	< 0.20	< 0.30	1	<
500.4	42.5	217.5	0.12	< 0.05	< 0.05	< 0.07	1.11	< 0.19	< 0.13	1	<
500.4	47.5	217.5	0.12	< 0.06	< 0.06	< 0.08	1.53	< 0.18	< 0.14	1	<
500.4	45	215	0.12	< 0.18	< 0.17	< 0.19	2.81	< 0.68	< 0.25	1	<
500.4	42.5	212.5	0.12	< 0.06	< 0.04	< 0.07	0.52	< 0.38	< 0.14	1	<
500.4	47.5	212.5	0.12	< 0.05	< 0.05	< 0.07	0.83	< 0.42	< 0.12	1	<
500.4	32.5	217.5	< 0.11	< 0.05	< 0.03	< 0.08	0.77	< 0.27	< 0.26	1	<
500.4	37.5	217.5	< 0.11	< 0.05	< 0.03	< 0.06	1.00	< 0.14	< 0.18	1	<

**ANSTEC  
APERTURE  
CARD**

*Also Available on  
Aperture Card*

< 0.022 < 0.018 < 0.013	0.000 < 0.001 < 0.027	0.000
< 0.015 < 0.006 < 0.011	0.000 < 0.002 < 0.017	0.000
< 0.033 < 0.012 < 0.015	0.000 < 0.001 < 0.037	0.000
< 0.022 < 0.024 < 0.015	0.004 < 0.002 < 0.023	0.004
< 0.037 < 0.052 < 0.028	0.044 < 0.002 < 0.052	0.044
< 0.019 < 0.009 < 0.009	0.000 < 0.002 < 0.013	0.000
< 0.019 < 0.009 < 0.013	0.000 < 0.002 < 0.032	0.000
< 0.019 < 0.009 < 0.013	0.000 < 0.001 < 0.027	0.000
		0.028421
< 0.070 < 0.027 < 0.031	0.134 < 0.002 < 0.065	0.134
< 0.037 < 0.012 < 0.017	0.000 < 0.001 < 0.025	0.000
< 0.070 < 0.067 < 0.046	0.000 < 0.006 < 0.098	0.000
< 0.026 < 0.015 < 0.011	0.041 < 0.002 < 0.013	0.041
< 0.015 < 0.009 < 0.015	0.000 < 0.002 < 0.017	0.000
		0.105263
< 0.026 < 0.030 < 0.019	0.069 < 0.002 < 0.033	0.074
< 0.030 < 0.021 < 0.022	0.032 < 0.001 < 0.022	0.036
< 0.030 < 0.021 < 0.022	0.068 < 0.001 < 0.028	0.072
< 0.041 < 0.039 < 0.024	0.057 < 0.003 < 0.032	0.062
< 0.044 < 0.036 < 0.022	0.022 < 0.002 < 0.050	0.026
		0.16195
< 0.022 < 0.027 < 0.013	0.000 < 0.002 < 0.013	0.000
< 0.022 < 0.009 < 0.017	0.000 < 0.002 < 0.018	0.000
< 0.022 < 0.018 < 0.013	0.000 < 0.001 < 0.027	0.000
< 0.015 < 0.006 < 0.011	0.000 < 0.002 < 0.017	0.000
< 0.033 < 0.012 < 0.015	0.000 < 0.001 < 0.037	0.000
		0
< 0.022 < 0.024 < 0.015	0.004 < 0.002 < 0.023	0.004
< 0.037 < 0.052 < 0.028	0.044 < 0.002 < 0.052	0.044
< 0.019 < 0.009 < 0.009	0.000 < 0.002 < 0.013	0.000
< 0.019 < 0.009 < 0.013	0.000 < 0.002 < 0.032	0.000
< 0.019 < 0.009 < 0.013	0.000 < 0.001 < 0.027	0.000
		0.028421
< 0.070 < 0.027 < 0.031	0.134 < 0.002 < 0.065	0.134
< 0.037 < 0.012 < 0.017	0.000 < 0.001 < 0.025	0.000
< 0.070 < 0.067 < 0.046	0.000 < 0.006 < 0.098	0.000
< 0.026 < 0.015 < 0.011	0.041 < 0.002 < 0.013	0.041
< 0.015 < 0.009 < 0.015	0.000 < 0.002 < 0.017	0.000
		0.105263
< 0.022 < 0.024 < 0.011	0.000 < 0.002 < 0.023	0.002
< 0.056 < 0.033 < 0.019	0.041 < 0.001 < 0.030	0.044
< 0.033 < 0.030 < 0.017	0.024 < 0.001 < 0.017	0.026
< 0.019 < 0.012 < 0.013	0.000 < 0.001 < 0.017	0.002
< 0.048 < 0.024 < 0.017	0.000 < 0.002 < 0.020	0.002
		0.046006
< 0.033 < 0.045 < 0.013	0.000 < 0.001 < 0.022	0.048
< 0.041 < 0.015 < 0.024	0.017 < 0.002 < 0.037	0.019
< 0.019 < 0.030 < 0.015	0.011 < 0.001 < 0.028	0.013
< 0.037 < 0.018 < 0.011	0.000 < 0.001 < 0.022	0.002
< 0.041 < 0.042 < 0.020	0.126 < 0.001 < 0.050	0.129
		0.126437
< 0.019 < 0.015 < 0.013	0.000 < 0.001 < 0.022	0.002
< 0.022 < 0.018 < 0.015	0.025 < 0.001 < 0.023	0.027
< 0.067 < 0.052 < 0.035	0.137 < 0.004 < 0.042	0.139
< 0.022 < 0.012 < 0.013	0.000 < 0.002 < 0.023	0.002
< 0.019 < 0.015 < 0.013	0.000 < 0.002 < 0.020	0.002
		0.103901
< 0.019 < 0.009 < 0.015	0.000 < 0.001 < 0.043	0.000
< 0.019 < 0.009 < 0.011	0.000 < 0.001 < 0.030	0.000

9707240076-14

TABLE 500.4-2

500.4	35	215	< 0.11	<	0.04	< 0.06	< 0.07	1.49	< 0.21	< 0.15	1	<
500.4	32.5	212.5	< 0.11	<	0.18	< 0.19	< 0.16	2.68	< 0.44	< 0.33	1	<
500.4	37.5	212.5	< 0.11	<	0.04	< 0.06	< 0.07	1.39	< 0.15	< 0.12	1	<
500.4	62.5	207.5	0.28	<	0.07	< 0.08	< 0.13	0.81	< 0.64	< 0.26	1	<
500.4	67.5	207.5	0.28	<	0.07	< 0.11	< 0.09	0.96	< 0.22	< 0.32	1	<
500.4	65	205	0.28	<	0.10	< 0.05	< 0.09	1.72	< 0.48	< 0.31	1	<
500.4	62.5	202.5	0.28	<	0.08	< 0.07	< 0.11	0.62	< 0.45	< 0.13	1	<
500.4	67.5	202.5	0.28	<	0.12	< 0.15	< 0.15	1.93	< 0.30	< 0.21	1	<
500.4	52.5	207.5	< 0.11	<	0.04	< 0.05	< 0.07	3.79	< 0.37	< 0.18	1	<
500.4	57.5	207.5	< 0.11	<	0.05	< 0.06	< 0.08	0.40	< 0.23	< 0.09	1	<
500.4	55	205	< 0.11	<	0.07	< 0.04	< 0.09	0.78	< 0.30	< 0.16	1	<
500.4	52.5	202.5	< 0.11	<	0.05	< 0.10	< 0.08	0.91	< 0.30	< 0.12	1	<
500.4	57.5	202.5	< 0.11	<	0.11	< 0.10	< 0.11	1.02	< 0.44	< 0.19	1	<
500.4	42.5	207.5	< 0.11	<	0.06	< 0.04	< 0.07	0.88	< 0.32	< 0.19	1	<
500.4	47.5	207.5	< 0.11	<	0.05	< 0.08	< 0.09	1.52	< 0.44	< 0.12	1	<
500.4	45	205	< 0.11	<	0.06	< 0.05	< 0.06	0.81	< 0.35	< 0.22	1	<
500.4	42.5	202.5	< 0.11	<	0.10	< 0.12	< 0.13	2.56	< 0.40	< 0.14	1	<
500.4	47.5	202.5	< 0.11	<	0.04	< 0.03	< 0.07	0.34	< 0.22	< 0.11	1	<
500.4	32.5	207.5	0.32	<	0.11	< 0.12	< 0.14	2.34	< 0.56	< 0.30	1	<
500.4	37.5	207.5	0.32	<	0.19	< 0.26	< 0.32	0.61	< 0.65	< 0.63	1	<
500.4	35	205	0.32	<	0.07	< 0.11	< 0.10	1.15	< 0.54	< 0.39	1	<
500.4	32.5	202.5	0.32	<	0.19	< 0.17	< 0.16	1.31	< 0.48	< 0.29	1	<
500.4	37.5	202.5	0.32	<	0.06	< 0.10	< 0.09	1.42	< 0.45	< 0.21	1	<
500.4	52.5	197.5	0.12	<	0.05	< 0.03	< 0.09	0.66	< 0.49	< 0.15	1	<
500.4	57.5	197.5	0.12	<	0.08	< 0.08	< 0.10	1.80	< 0.43	< 0.22	1	<
500.4	55	195	0.12	<	0.08	< 0.06	< 0.07	1.27	< 0.20	< 0.21	1	<
500.4	52.5	192.5	0.12	<	0.07	< 0.07	< 0.10	2.02	< 0.33	< 0.19	1	<
500.4	57.5	192.5	0.12	<	0.04	< 0.02	< 0.06	0.83	< 0.27	< 0.12	1	<
500.4	52.5	187.5	< 0.11	<	0.10	< 0.04	< 0.10	0.86	< 0.19	< 0.20	1	<
500.4	57.5	187.5	< 0.11	<	0.11	< 0.04	< 0.11	1.40	< 0.63	< 0.21	1	<
500.4	55	185	< 0.11	<	0.21	< 0.16	< 0.23	1.23	< 0.75	< 0.30	1	<
500.4	52.5	182.5	< 0.11	<	0.15	< 0.05	< 0.17	1.72	< 0.23	< 0.34	1	<
500.4	57.5	182.5	< 0.11	<	0.14	< 0.15	< 0.12	1.82	< 0.23	< 0.26	1	<
500.4	52.5	177.5	< 0.11	<	0.10	< 0.08	< 0.07	2.64	< 0.50	< 0.12	1	<
500.4	57.5	177.5	< 0.11	<	0.07	< 0.09	< 0.10	1.22	< 0.40	< 0.14	1	<
500.4	55	175	< 0.11	<	0.08	< 0.03	< 0.08	2.27	< 0.24	< 0.10	1	<
500.4	52.5	172.5	< 0.11	<	0.05	< 0.07	< 0.05	0.89	< 0.15	< 0.14	1	<
500.4	57.5	172.5	< 0.11	<	0.04	< 0.03	< 0.06	0.66	< 0.30	< 0.10	1	<
500.4	52.5	167.5	< 0.11	<	0.03	< 0.03	< 0.07	1.12	< 0.43	< 0.12	1	<
500.4	57.5	167.5	< 0.11	<	0.09	< 0.06	< 0.07	0.90	< 0.23	< 0.13	1	<
500.4	55	165	< 0.11	<	0.08	< 0.05	< 0.08	1.83	< 0.40	< 0.18	1	<
500.4	52.5	162.5	< 0.11	<	0.05	< 0.05	< 0.07	1.50	< 0.34	< 0.14	1	<
500.4	57.5	162.5	< 0.11	<	0.07	< 0.07	< 0.09	1.70	< 0.17	< 0.22	1	<
500.4	52.5	157.5	< 0.11	<	0.04	< 0.05	< 0.06	1.28	< 0.38	< 0.19	1	<
500.4	57.5	157.5	< 0.11	<	0.05	< 0.04	< 0.07	0.91	< 0.19	< 0.17	1	<
500.4	55	155	< 0.11	<	0.07	< 0.03	< 0.08	0.89	< 0.19	< 0.17	1	<
500.4	52.5	152.5	< 0.11	<	0.05	< 0.04	< 0.10	1.34	< 0.19	< 0.19	1	<
500.4	57.5	152.5	< 0.11	<	0.08	< 0.03	< 0.07	1.30	< 0.32	< 0.08	1	<
500.4	52.5	147.5	< 0.12	<	0.05	< 0.03	< 0.07	0.11	< 0.38	< 0.13	1	<
500.4	57.5	147.5	< 0.12	<	0.09	< 0.06	< 0.07	1.11	< 0.28	< 0.26	1	<

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

< 0.015 < 0.018 < 0.013	0.021 < 0.001 < 0.025	0.021
< 0.067 < 0.058 < 0.030	0.125 < 0.002 < 0.055	0.125
< 0.015 < 0.018 < 0.013	0.012 < 0.001 < 0.020	0.012
		0.095263
< 0.026 < 0.024 < 0.024	0.000 < 0.003 < 0.043	0.005
< 0.026 < 0.033 < 0.017	0.000 < 0.001 < 0.053	0.005
< 0.037 < 0.015 < 0.017	0.041 < 0.003 < 0.052	0.047
< 0.030 < 0.021 < 0.020	0.000 < 0.002 < 0.022	0.005
< 0.044 < 0.045 < 0.028	0.060 < 0.002 < 0.035	0.065
		0.076997
2 < 0.015 < 0.015 < 0.013	0.223 < 0.002 < 0.030	0.223
2 < 0.019 < 0.018 < 0.015	0.000 < 0.001 < 0.015	0.000
2 < 0.026 < 0.012 < 0.017	0.000 < 0.002 < 0.027	0.000
2 < 0.019 < 0.030 < 0.015	0.000 < 0.002 < 0.020	0.000
2 < 0.041 < 0.030 < 0.020	0.000 < 0.002 < 0.032	0.000
		0.133684
2 < 0.022 < 0.012 < 0.013	0.000 < 0.002 < 0.032	0.000
2 < 0.019 < 0.024 < 0.017	0.024 < 0.002 < 0.020	0.024
2 < 0.022 < 0.015 < 0.011	0.000 < 0.002 < 0.037	0.000
2 < 0.037 < 0.036 < 0.024	0.115 < 0.002 < 0.023	0.115
2 < 0.015 < 0.009 < 0.013	0.000 < 0.001 < 0.018	0.000
		0.083158
6 < 0.041 < 0.036 < 0.026	0.096 < 0.003 < 0.050	0.102
6 < 0.070 < 0.079 < 0.059	0.000 < 0.003 < 0.105	0.006
6 < 0.026 < 0.033 < 0.019	0.000 < 0.003 < 0.065	0.006
6 < 0.070 < 0.052 < 0.030	0.005 < 0.003 < 0.048	0.012
6 < 0.022 < 0.030 < 0.017	0.015 < 0.002 < 0.035	0.021
		0.088297
2 < 0.019 < 0.009 < 0.017	0.000 < 0.003 < 0.025	0.002
2 < 0.030 < 0.024 < 0.019	0.048 < 0.002 < 0.037	0.051
2 < 0.030 < 0.018 < 0.013	0.002 < 0.001 < 0.035	0.004
2 < 0.026 < 0.021 < 0.019	0.068 < 0.002 < 0.032	0.070
2 < 0.015 < 0.006 < 0.011	0.000 < 0.001 < 0.020	0.002
		0.077585
2 < 0.037 < 0.012 < 0.019	0.000 < 0.001 < 0.033	0.000
2 < 0.041 < 0.012 < 0.020	0.013 < 0.003 < 0.035	0.013
2 < 0.078 < 0.048 < 0.043	0.000 < 0.004 < 0.050	0.000
2 < 0.056 < 0.015 < 0.031	0.041 < 0.001 < 0.057	0.041
2 < 0.052 < 0.045 < 0.022	0.050 < 0.001 < 0.043	0.050
		0.062632
2 < 0.037 < 0.024 < 0.013	0.122 < 0.003 < 0.020	0.122
2 < 0.026 < 0.027 < 0.019	0.000 < 0.002 < 0.023	0.000
2 < 0.030 < 0.009 < 0.015	0.089 < 0.001 < 0.017	0.089
2 < 0.019 < 0.021 < 0.009	0.000 < 0.001 < 0.023	0.000
2 < 0.015 < 0.009 < 0.011	0.000 < 0.002 < 0.017	0.000
		0.126842
2 < 0.011 < 0.009 < 0.013	0.000 < 0.002 < 0.020	0.000
2 < 0.033 < 0.018 < 0.013	0.000 < 0.001 < 0.022	0.000
2 < 0.030 < 0.015 < 0.015	0.051 < 0.002 < 0.030	0.051
2 < 0.019 < 0.015 < 0.013	0.022 < 0.002 < 0.023	0.022
2 < 0.026 < 0.021 < 0.017	0.039 < 0.001 < 0.037	0.039
		0.067368
2 < 0.015 < 0.015 < 0.011	0.003 < 0.002 < 0.032	0.003
2 < 0.019 < 0.012 < 0.013	0.000 < 0.001 < 0.028	0.000
2 < 0.026 < 0.009 < 0.015	0.000 < 0.001 < 0.028	0.000
2 < 0.019 < 0.012 < 0.019	0.008 < 0.001 < 0.032	0.008
2 < 0.030 < 0.009 < 0.013	0.004 < 0.002 < 0.013	0.004
		0.008947
2 < 0.019 < 0.009 < 0.013	0.000 < 0.002 < 0.022	0.000
2 < 0.033 < 0.018 < 0.013	0.000 < 0.001 < 0.043	0.000

9707240076-15-

TABLE 500.4-2

500.4	55	145	< 0.12	< 0.03	< 0.04	< 0.05	0.13	< 0.51	< 0.10	1
500.4	52.5	142.5	< 0.12	< 0.09	< 0.03	< 0.08	2.96	< 0.44	< 0.13	1
500.4	57.5	142.5	< 0.12	< 0.04	< 0.08	< 0.07	0.83	< 0.34	< 0.21	1
500.4	52.5	137.5	< 0.11	< 0.13	< 0.08	< 0.09	2.57	< 0.27	< 0.24	1
500.4	57.5	137.5	< 0.11	< 0.09	< 0.04	< 0.08	4.12	< 0.31	< 0.12	1
500.4	55	135	< 0.11	< 0.05	< 0.04	< 0.07	2.00	< 0.38	< 0.12	1
500.4	52.5	132.5	< 0.11	< 0.09	< 0.14	< 0.13	2.87	< 0.43	< 0.37	1
500.4	57.5	132.5	< 0.11	< 0.09	< 0.06	< 0.06	0.64	< 0.22	< 0.17	1
500.4	52.5	127.5	< 0.12	< 0.08	< 0.05	< 0.08	2.40	< 0.33	< 0.09	1
500.4	57.5	127.5	< 0.12	< 0.09	< 0.07	< 0.08	1.28	< 0.42	< 0.13	1
500.4	55	125	0.38	< 0.09	< 0.13	< 0.13	4.36	< 0.50	< 0.16	1
500.4	52.5	122.5	0.16	< 0.06	< 0.05	< 0.07	0.04	< 0.35	< 0.10	1
500.4	57.5	122.5	0.16	< 0.10	< 0.07	< 0.09	2.56	< 0.35	< 0.27	1
500.4	52.5	117.5	0.19	< 0.04	< 0.05	< 0.07	1.08	< 0.34	< 0.09	1
500.4	57.5	117.5	0.19	< 0.06	< 0.03	< 0.08	0.54	< 0.14	< 0.10	1
500.4	55	115	0.19	< 0.04	< 0.03	< 0.07	0.17	< 0.17	< 0.12	1
500.4	52.5	112.5	0.19	< 0.06	< 0.05	< 0.08	1.60	< 0.52	< 0.21	1
500.4	57.5	112.5	0.19	< 0.13	< 0.04	< 0.10	1.06	< 0.40	< 0.29	1
500.4	52.5	107.5	0.10	< 0.05	< 0.07	< 0.07	1.59	< 0.21	< 0.15	1
500.4	57.5	107.5	0.10	< 0.07	< 0.03	< 0.06	1.30	< 0.16	< 0.21	1
500.4	55	105	0.10	< 0.10	< 0.04	< 0.07	1.13	< 0.37	< 0.19	1
500.4	52.5	102.5	0.10	< 0.05	< 0.04	< 0.08	0.83	< 0.29	< 0.11	1
500.4	57.5	102.5	0.10	< 0.08	< 0.08	< 0.09	1.33	< 0.70	< 0.18	1

0.002 < 0.011 < 0.012 < 0.009	0.000 < 0.003 < 0.017	0.000
0.002 < 0.033 < 0.009 < 0.015	0.150 < 0.002 < 0.022	0.150
0.002 < 0.015 < 0.024 < 0.013	0.000 < 0.002 < 0.035	0.000
		0.09
0.002 < 0.048 < 0.024 < 0.017	0.116 < 0.001 < 0.040	0.116
0.002 < 0.033 < 0.012 < 0.015	0.252 < 0.002 < 0.020	0.252
0.002 < 0.019 < 0.012 < 0.013	0.066 < 0.002 < 0.020	0.066
0.002 < 0.033 < 0.042 < 0.024	0.142 < 0.002 < 0.062	0.142
0.002 < 0.033 < 0.018 < 0.011	0.000 < 0.001 < 0.028	0.000
		0.345263
0.002 < 0.030 < 0.015 < 0.015	0.101 < 0.002 < 0.015	0.101
0.002 < 0.033 < 0.021 < 0.015	0.003 < 0.002 < 0.022	0.003
0.007 < 0.033 < 0.039 < 0.024	0.273 < 0.003 < 0.027	0.280
0.003 < 0.022 < 0.015 < 0.013 < 0.000 < 0.002 < 0.017		0.003
0.003 < 0.037 < 0.021 < 0.017	0.115 < 0.002 < 0.045	0.118
		0.302972
0.004 < 0.015 < 0.015 < 0.013	0.000 < 0.002 < 0.015	0.004
0.004 < 0.022 < 0.009 < 0.015	0.000 < 0.001 < 0.017	0.004
0.004 < 0.015 < 0.009 < 0.013	0.000 < 0.001 < 0.020	0.004
0.004 < 0.022 < 0.015 < 0.015	0.031 < 0.003 < 0.035	0.034
0.004 < 0.048 < 0.012 < 0.019	0.000 < 0.002 < 0.048	0.004
		0.029598
0.002 < 0.019 < 0.021 < 0.013	0.030 < 0.001 < 0.025	0.032
0.002 < 0.026 < 0.009 < 0.011	0.004 < 0.001 < 0.035	0.006
0.002 < 0.037 < 0.012 < 0.013	0.000 < 0.002 < 0.032	0.002
0.002 < 0.019 < 0.012 < 0.015	0.000 < 0.002 < 0.018	0.002
0.002 < 0.030 < 0.024 < 0.017	0.007 < 0.004 < 0.030	0.009
		0.030619

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9707240076-16

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.5 survey unit was surveyed on an affected area basis and has a surface area of 12,600 m<sup>2</sup>. 491 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 495 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.5 survey unit are provided in 2 attached tables as follows:

Table 500.5-1 Land From S-12 to S-7  
gamma exposure rate data

Table 500.5-2 Land From S-12 to S-7  
surface soil contamination data

MIG 6-27-94

CINTICHEM DECOMMISSIONING PLAN  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 LAND FROM S-12 TO S-7  
 AREA 500.5 FOR UR/HR  
 RADIATION TYPE: GAMMA SURVEY IN UREM/HR  
 COMPLETION

06/13/97

DATE:	3/97		
TECHNICIANS:	MANY	MATERIAL CODE	
AREA:	500.0	1=CONCRETE	5=PLASTIC
UNIT:	500.5	2=ROCK	6=SOIL
MEDIA TYPE:	SOIL	3=WOOD	7=ASPHALT
# OF POINTS:	495	4=METAL	8=OTHER(SPECIFY): NO MATERIAL BACKGROUND USED

MICRO REM  
 PER HOUR:

		LIMIT
MAX:	9.00 PASS	10
AVG:	1.61 PASS	5
STD X:	1.98	
MU SUB ALPHA:	1.76 PASS	5

ID #	GRID POINT	INST.	ID #	MATER-			
				AREA BKG	AREA READING	IAL CODE	NET UREM/HR
N	W/E			UREM/HR	UREM/HR		
500.5	152.5	7.5 W	A	6	6	8	0
500.5	157.5	7.5 W	A	6	6	8	0
500.5	155	5 W	A	6	6	8	0
500.5	152.5	2.5 W	A	6	7	8	0
500.5	157.5	2.5 W	A	6	7	8	1
500.5	142.5	7.5 W	A	6	5	8	-1
500.5	147.5	7.5 W	A	6	4	8	-2
500.5	145	5 W	A	6	5	8	-1
500.5	142.5	2.5 W	A	6	7	8	1
500.5	147.5	2.5 W	A	6	5	8	-1
500.5	132.5	7.5 W	A	6	6	8	0
500.5	137.5	7.5 W	A	6	11	8	5
500.5	135	5 W	A	6	9	8	3
500.5	132.5	2.5 W	A	6	10	8	4
500.5	137.5	2.5 W	A	6	10	8	4
500.5	152.5	2.5	A	6	12	8	6
500.5	157.5	2.5	A	6	6	8	0
500.5	155	5	A	6	4	8	-2
500.5	152.5	7.5	A	6	7	8	1
500.5	157.5	7.5	A	6	5	8	-1
500.5	142.5	2.5	A	6	8	8	2
500.5	147.5	2.5	A	6	7	8	1
500.5	145	5	A	6	5	8	-1
500.5	142.5	7.5	A	6	6	8	0
500.5	147.5	7.5	A	6	5	8	-1
500.5	132.5	2.5	A	6	8	8	2
500.5	137.5	2.5	A	6	15	8	9
500.5	135	5	A	6	12	8	6
500.5	132.5	7.5	A	6	11	8	5
500.5	137.5	7.5	A	6	12	8	6

TABLE 500.5-1

500.5	12.5	2.5	A	6	12	8	6
500.5	17.5	2.5	A	6	11	8	5
500.5	15	5	A	6	7	8	1
500.5	12.5	7.5	A	6	6	8	0
500.5	17.5	7.5	A	6	9	8	3
500.5	7.5 S	2.5	A	6	10	8	4
500.5	2.5 S	2.5	A	6	8	8	2
500.5	5 S	5	A	6	6	8	0
500.5	7.5 S	7.5	A	6	9	8	3
500.5	2.5 S	7.5	A	6	8	8	2
500.5	12.5 S	7.5	A	6	7	8	1
500.5	152.5	12.5	A	6	6	8	0
500.5	157.5	12.5	A	6	6	8	0
500.5	155	15	A	6	5	8	-1
500.5	152.5	17.5	A	6	4	8	-2
500.5	157.5	17.5	A	6	8	8	2
500.5	42.5	12.5	A	6	7	8	1
500.5	47.5	12.5	A	6	7	8	1
500.5	45	15	A	6	6	8	0
500.5	42.5	17.5	A	6	9	8	3
500.5	47.5	17.5	A	6	7	8	1
500.5	32.5	12.5	A	6	12	8	6
500.5	37.5	12.5	A	6	10	8	4
500.5	35	15	A	6	11	8	5
500.5	32.5	17.5	A	6	14	8	8
500.5	37.5	17.5	A	6	13	8	7
500.5	22.5	12.5	A	6	7	8	7
500.5	27.5	12.5	A	6	7	8	1
500.5	25	15	A	6	5	8	-1
500.5	22.5	17.5	A	6	4	8	-2
500.5	27.5	17.5	A	6	7	8	1
500.5	12.5	12.5	A	6	9	8	3
500.5	17.5	12.5	A	6	9	8	3
500.5	15	15	A	6	7	8	3
500.5	12.5	17.5	A	6	7	8	1
500.5	17.5	17.5	A	6	6	8	0
500.5	2.5	12.5	A	6	6	8	0
500.5	7.5	12.5	A	6	11	8	5
500.5	5	15	A	6	8	8	2
500.5	2.5	17.5	A	6	11	8	5
500.5	7.5	17.5	A	6	10	8	4
500.5	2.5 S	12.5	A	6	9	8	3
500.5	7.5 S	12.5	A	6	12	8	6
500.5	5 S	15	A	6	10	8	4
500.5	2.5 S	17.5	A	6	10	8	4
500.5	7.5 S	17.5	A	6	11	8	5
500.5	12.5 S	12.5	A	6	9	8	3
500.5	17.5 S	12.5	A	6	9	8	3
500.5	155	15	A	6	8	8	2
500.5	12.5 S	17.5	A	6	9	8	3
500.5	17.5 S	17.5	A	6	10	8	4
500.5	152.5	22.5	A	6	8	8	2
500.5	157.5	22.5	A	6	8	8	1
500.5	155	25	A	6	10	8	2
500.5	152.5	27.5	A	6	10	8	4
500.5	157.5	27.5	A	6	8	8	2
500.5	42.5	22.5	A	6	6	8	0
500.5	47.5	22.5	A	6	9	8	3
500.5	45	25	A	6	9	8	3
500.5	42.5	27.5	A	6	7	8	1

TABLE 500.5-1

500.5	47.5	27.5	A	6	7	8	1
500.5	32.5	22.5	A	6	9	8	3
500.5	37.5	22.5	A	6	10	8	4
500.5	35	25	A	6	7	8	1
500.5	32.5	27.5	A	6	9	8	3
500.5	37.5	27.5	A	6	8	8	2
500.5	22.5	22.5	A	6	6	8	0
500.5	25	25	A	6	5	8	-1
500.5	22.5	27.5	A	6	5	8	-1
500.5	27.5	27.5	A	6	8	8	2
500.5	12.5	22.5	A	6	8	8	2
500.5	17.5	22.5	A	6	8	8	2
500.5	15	25	A	6	6	8	0
500.5	12.5	27.5	A	6	6	8	0
500.5	17.5	27.5	A	6	6	8	0
500.5	2.5	22.5	A	6	7	8	1
500.5	7.5	22.5	A	6	11	8	5
500.5	5	25	A	6	5	8	-1
500.5	2.5	27.5	A	6	8	8	2
500.5	7.5	27.5	A	6	7	8	1
500.5	2.5 S	22.5	A	6	12	8	6
500.5	7.5 S	22.5	A	6	12	8	6
500.5	5 S	25	A	6	13	8	7
500.5	2.5 S	27.5	A	6	11	8	5
500.5	7.5 S	27.5	A	6	12	8	6
500.5	12.5 S	22.5	A	6	8	8	2
500.5	15 S	25	A	6	10	8	4
500.5	12.5 S	27.5	A	6	15	8	9
500.5	17.5 S	27.5	A	6	14	8	8
500.5	22.5 S	22.5	A	6	6	8	0
500.5	22.5 S	27.5	A	6	7	8	1
500.5	152.5	32.5	A	6	6	8	0
500.5	157.5	32.5	A	6	5	8	-1
500.5	155	35	A	6	6	8	0
500.5	152.5	37.5	A	6	6	8	0
500.5	157.5	37.5	A	6	7	8	1
500.5	142.5	32.5	A	6	7	8	1
500.5	147.5	32.5	A	6	5	8	-1
500.5	145	35	A	6	3	8	-3
500.5	142.5	37.5	A	6	6	8	0
500.5	147.5	37.5	A	6	4	8	-2
500.5	132.5	32.5	A	6	4	8	-2
500.5	137.5	32.5	A	6	4	8	-2
500.5	135	35	A	6	6	8	0
500.5	132.5	37.5	A	6	7	8	1
500.5	137.5	37.5	A	6	7	8	1
500.5	42.5	32.5	A	6	6	8	0
500.5	47.5	32.5	A	6	6	8	0
500.5	45	35	A	6	5	8	-1
500.5	42.5	37.5	A	6	10	8	4
500.5	47.5	37.5	A	6	4	8	-2
500.5	32.5	32.5	A	6	6	8	0
500.5	37.5	32.5	A	6	7	8	1
500.5	35	35	A	6	6	8	0
500.5	32.5	37.5	A	6	5	8	-1
500.5	37.5	37.5	A	6	5	8	-1
500.5	22.5	32.5	A	6	6	8	0
500.5	27.5	32.5	A	6	7	8	1
500.5	25	35	A	6	9	8	3
500.5	22.5	37.5	A	6	8	8	2

TABLE 500.5-1

500.5	27.5	37.5	A	6	9	8	3
500.5	12.5	32.5	A	6	6	8	0
500.5	17.5	32.5	A	6	7	8	1
500.5	15	35	A	6	6	8	0
500.5	12.5	37.5	A	6	7	8	1
500.5	17.5	37.5	A	6	5	8	-1
500.5	2.5	32.5	A	6	8	8	2
500.5	7.5	32.5	A	6	8	8	2
500.5	5	35	A	6	7	8	1
500.5	2.5	37.5	A	6	6	8	0
500.5	7.5	37.5	A	6	8	8	2
500.5	2.5 S	32.5	A	6	5	8	-1
500.5	7.5 S	32.5	A	6	9	8	3
500.5	5.5	35	A	6	8	8	2
500.5	2.5 S	37.5	A	6	7	8	1
500.5	7.5 S	37.5	A	6	8	8	2
500.5	12.5 S	32.5	A	6	10	8	4
500.5	17.5 S	32.5	A	6	11	8	5
500.5	15 S	35	A	6	8	8	2
500.5	12.5 S	37.5	A	6	11	8	5
500.5	17.5 S	37.5	A	6	10	8	4
500.5	22.5 S	32.5	A	6	7	8	1
500.5	25 S	35	A	6	6	8	0
500.5	27.5 S	37.5	A	6	9	8	3
500.5	22.5 S	37.5	A	6	10	8	4
500.5	152.5	42.5	A	6	7	8	1
500.5	157.5	42.5	A	6	5	8	-1
500.5	155	45	A	6	6	8	0
500.5	152.5	47.5	A	6	8	8	2
500.5	157.5	47.5	A	6	7	8	1
500.5	142.5	42.5	A	6	9	8	2
500.5	147.5	42.5	A	6	1	8	1
500.5	145	45	A	6	8	8	2
500.5	142.5	47.5	A	6	7	8	1
500.5	147.5	47.5	A	6	5	8	-1
500.5	132.5	42.5	A	6	7	8	1
500.5	137.5	42.5	A	6	5	8	-1
500.5	135	45	A	6	6	8	0
500.5	137.5	47.5	A	6	7	8	1
500.5	137.5	47.5	A	6	5	8	-1
500.5	122.5	42.5	A	6	6	8	0
500.5	127.5	42.5	A	6	6	8	0
500.5	125	45	A	6	4	8	-2
500.5	122.5	47.5	A	6	5	8	-1
500.5	127.5	47.5	A	6	5	8	-1
500.5	112.5	42.5	A	6	5	8	-1
500.5	117.5	42.5	A	6	7	8	1
500.5	115	45	A	6	8	8	2
500.5	112.5	47.5	A	6	8	8	2
500.5	117.5	47.5	A	6	6	8	0
500.5	102.5	42.5	A	6	7	8	1
500.5	107.5	42.5	A	6	6	8	0
500.5	105	45	A	6	6	8	0
500.5	102.5	47.5	A	6	6	8	0
500.5	107.5	47.5	A	6	7	8	1
500.5	92.5	42.5	A	6	5	8	-1
500.5	97.5	42.5	A	6	6	8	0
500.5	95	45	A	6	5	8	-1
500.5	92.5	47.5	A	6	6	8	0
500.5	97.5	47.5	A	6	6	8	0

TABLE 500.5-1

500.5	82.5	42.5	A	6	9	8	3
500.5	87.5	42.5	A	6	6	8	0
500.5	85	45	A	6	8	8	2
500.5	82.5	47.5	A	6	5	8	-1
500.5	87.5	47.5	A	6	6	8	0
500.5	72.5	42.5	A	6	5	8	-1
500.5	77.5	42.5	A	6	4	8	-2
500.5	75	45	A	6	7	8	1
500.5	72.5	47.5	A	6	8	8	2
500.5	77.5	47.5	A	6	7	8	1
500.5	62.5	42.5	A	6	6	8	0
500.5	67.5	42.5	A	6	7	8	1
500.5	65	45	A	6	5	8	-1
500.5	62.5	47.5	A	6	7	8	1
500.5	67.5	47.5	A	6	5	8	-1
500.5	52.5	42.5	A	6	7	8	1
500.5	57.5	42.5	A	6	9	8	2
500.5	55	45	A	6	3	8	-3
500.5	52.5	47.5	A	6	6	8	0
500.5	57.5	47.5	A	6	8	8	2
500.5	42.5	42.5	A	6	8	8	2
500.5	47.5	42.5	A	6	6	8	0
500.5	45	45	A	6	7	8	1
500.5	42.5	47.5	A	6	4	8	-2
500.5	47.5	47.5	A	6	4	8	-2
500.5	32.5	42.5	A	6	6	8	0
500.5	37.5	42.5	A	6	7	8	1
500.5	35	45	A	6	5	8	-1
500.5	32.5	47.5	A	6	5	8	-1
500.5	37.5	47.5	A	6	6	8	0
500.5	22.5	42.5	A	6	6	8	0
500.5	27.5	42.5	A	6	8	8	2
500.5	25	45	A	6	11	8	5
500.5	22.5	47.5	A	6	7	8	1
500.5	27.5	47.5	A	6	9	8	3
500.5	12.5	42.5	A	6	8	8	2
500.5	17.5	42.5	A	6	9	8	3
500.5	15	45	A	6	7	8	1
500.5	12.5	47.5	A	6	10	8	4
500.5	17.5	47.5	A	6	10	8	4
500.5	2.5	42.5	A	6	5	8	-1
500.5	7.5	42.5	A	6	6	8	0
500.5	5	45	A	6	5	8	-1
500.5	2.5	47.5	A	6	7	8	1
500.5	7.5	47.5	A	6	5	8	-1
500.5	2.5 S	42.5	A	6	6	8	0
500.5	7.5 S	42.5	A	6	9	8	3
500.5	5 S	45	A	6	6	8	0
500.5	7.5 S	47.5	A	6	6	8	0
500.5	2.5 S	47.5	A	6	10	8	4
500.5	17.5 S	42.5	A	6	6	8	0
500.5	12.5 S	42.5	A	6	9	8	3
500.5	15 S	45	A	6	8	8	2
500.5	17.5 S	47.5	A	6	9	8	3
600.5	12.5 S	47.5	A	6	9	8	3
500.5	22.5 S	42.5	A	6	10	8	4
500.5	27.5 S	42.5	A	6	10	8	4
500.5	25 S	45	A	6	6	8	0
500.5	27.5 S	47.5	A	6	9	8	3
500.5	22.5 S	47.5	A	6	10	8	4

TABLE 500.5-1

N	E	N	E
142.5	12.5	142.5	22.5
147.5	12.5	147.5	22.5
145	15	145	25
142.5	17.5	142.5	27.5
147.5	17.5	147.5	27.5
132.5	12.5	132.5	22.5
137.5	12.5	137.5	22.5
135	15	135	25
132.5	17.5	132.5	27.5
137.5	17.5	137.5	27.5

THESE AREAS NOT ACCESSIBLE  
DUE TO WATER IN THE  
RETENTION POND

ABOVE DATA SUBMITTED 11/21/96; DATA BELOW IS NEW DATA FOR AREA

N	E	A	6	8	0
500.5	52.5	7.5W	A	6	8
500.5	57.5	7.5W	A	6	8
500.5	55	5W	A	6	8
500.5	52.5	2.5W	A	6	8
500.5	57.5	2.5W	A	6	8
500.5	62.5	7.5W	A	6	8
500.5	67.5	7.5W	A	6	8
500.5	65	5W	A	6	8
500.5	62.5	2.5W	A	6	8
500.5	67.5	2.5W	A	6	8
500.5	72.5	7.5W	A	6	8
500.5	77.5	7.5W	A	6	8
500.5	75	5W	A	6	8
500.5	72.5	2.5W	A	6	8
500.5	77.5	2.5W	A	6	8
500.5	82.5	7.5W	A	6	8
500.5	87.5	7.5W	A	6	8
500.5	85	5W	A	6	8
500.5	82.5	2.5W	A	6	8
500.5	87.5	2.5W	A	6	8
500.5	92.5	7.5W	A	6	8
500.5	97.5	7.5W	A	6	8
500.5	95	5W	A	6	8
500.5	92.5	2.5W	A	6	8
500.5	97.5	2.5W	A	6	8
500.5	102.5	7.5W	A	6	8
500.5	107.5	7.5W	A	6	8
500.5	105	5W	A	6	8
500.5	102.5	2.5W	A	6	8
500.5	107.5	2.5W	A	6	8
500.5	112.5	7.5W	A	6	8
500.5	117.5	7.5W	A	6	8
500.5	115	5W	A	6	8
500.5	112.5	2.5W	A	6	8
500.5	117.5	2.5W	A	6	8
500.5	122.5	7.5W	A	6	8
500.5	127.5	7.5W	A	6	8
500.5	125	5W	A	6	8
500.5	122.5	2.5W	A	6	8
500.5	127.5	2.5W	A	6	8
500.5	132.5	7.5W	A	6	8
500.5	137.5	7.5W	A	6	8
500.5	135	5W	A	6	8

QA OK  
P. Omer  
6/13/97

TABLE 500.5-1

500.5	132.5	2.5W	A	6	9	8	3
500.5	137.5	2.5W	A	6	11	8	5
500.5	52.5	2.5	A	6	7	8	1
500.5	57.5	2.5	A	6	8	8	2
500.5	55	5	A	6	7	8	1
500.5	52.5	7.5	A	6	9	8	3
500.5	57.5	7.5	A	6	7	8	1
500.5	62.5	2.5	A	6	8	8	2
500.5	67.5	2.5	A	6	9	8	3
500.5	65	5	A	6	10	8	4
500.5	62.5	7.5	A	6	7	8	1
500.5	67.5	7.5	A	6	9	8	3
500.5	72.5	2.5	A	6	7	8	1
500.5	77.5	2.5	A	6	7	8	1
500.5	75	5	A	6	6	8	0
500.5	72.5	7.5	A	6	7	8	1
500.5	77.5	7.5	A	6	6	8	0
500.5	82.5	2.5	A	6	6	8	0
500.5	87.5	2.5	A	6	9	8	3
500.5	85	5	A	6	8	8	2
500.5	82.5	7.5	A	6	8	8	2
500.5	87.5	7.5	A	6	8	8	2
500.5	92.5	2.5	A	6	6	8	0
500.5	97.5	2.5	A	6	7	8	1
500.5	95	5	A	6	6	8	0
500.5	92.5	7.5	A	6	10	8	4
500.5	97.5	7.5	A	6	9	8	3
500.5	102.5	2.5	A	6	9	8	3
500.5	107.5	2.5	A	6	9	8	3
500.5	105	5	A	6	8	8	2
500.5	102.5	7.5	A	6	10	8	4
500.5	107.5	7.5	A	6	9	8	3
500.5	112.5	2.5	A	6	10	8	4
500.5	117.5	2.5	A	6	9	8	3
500.5	115	5	A	6	8	8	2
500.5	112.5	7.5	A	6	10	8	4
500.5	117.5	7.5	A	6	10	8	4
500.5	122.5	2.5	A	6	8	8	2
500.5	127.5	2.5	A	6	9	8	3
500.5	125	5	A	6	9	8	3
500.5	122.5	7.5	A	6	8	8	2
500.5	127.5	7.5	A	6	10	8	4
500.5	132.5	2.5	A	6	10	8	4
500.5	137.5	2.5	A	6	11	8	5
500.5	135	5	A	6	9	8	3
500.5	132.5	7.5	A	6	8	8	2
500.5	137.5	7.5	A	6	8	8	2
500.5	52.5	12.5	A	6	10	8	4
500.5	57.5	12.5	A	6	8	8	2
500.5	55	15	A	6	7	8	1
500.5	52.5	17.5	A	6	7	8	1
500.5	57.5	17.5	A	6	9	8	3
500.5	62.5	12.5	A	6	7	8	1
500.5	67.5	12.5	A	6	8	8	2
500.5	65	15	A	6	9	8	3
500.5	62.5	17.5	A	6	9	8	3
500.5	67.5	17.5	A	6	7	8	1
500.5	72.5	12.5	A	6	8	8	2
500.5	77.5	12.5	A	6	8	8	2
500.5	75	15	A	6	7	8	1

TABLE 500.5-1

500.5	72.5	17.5	A	6	8	8	2
500.5	77.5	17.5	A	6	6	8	0
500.5	82.5	12.5	A	6	8	8	2
500.5	87.5	12.5	A	6	11	8	5
500.5	85	15	A	6	7	8	1
500.5	82.5	17.5	A	6	8	8	2
500.5	87.5	17.5	A	6	8	8	2
500.5	92.5	12.5	A	6	7	8	1
500.5	97.5	12.5	A	6	7	8	1
500.5	95	15	A	6	6	8	0
500.5	92.5	17.5	A	6	10	8	4
500.5	97.5	17.5	A	6	8	8	2
500.5	102.5	12.5	A	6	8	8	2
500.5	107.5	12.5	A	6	10	8	4
500.5	105	15	A	6	7	8	1
500.5	102.5	17.5	A	6	9	8	3
500.5	107.5	17.5	A	6	7	8	1
500.5	112.5	12.5	A	6	5	8	-1
500.5	117.5	12.5	A	6	8	8	2
500.5	115	15	A	6	10	8	4
500.5	112.5	17.5	A	6	9	8	3
500.5	117.5	17.5	A	6	10	8	4
500.5	122.5	12.5	A	6	11	8	5
500.5	127.5	12.5	A	6	9	8	3
500.5	125	15	A	6	7	8	1
500.5	122.5	17.5	A	6	6	8	0
500.5	127.5	17.5	A	6	7	8	1
500.5	132.5	12.5	A	6	9	8	3
500.5	137.5	12.5	A	6	9	8	3
500.5	135	15	A	6	8	8	2
500.5	132.5	17.5	A	6	7	8	1
500.5	137.5	17.5	A	6	6	8	0
500.5	52.5	22.5	A	6	8	8	2
500.5	57.5	22.5	A	6	8	8	2
500.5	55	25	A	6	7	8	1
500.5	52.5	27.5	A	6	8	8	2
500.5	57.5	27.5	A	6	6	8	0
500.5	62.5	22.5	A	6	7	8	1
500.5	67.5	22.5	A	6	10	8	4
500.5	65	25	A	6	8	8	2
500.5	62.5	27.5	A	6	6	8	0
500.5	67.5	27.5	A	6	7	8	1
500.5	72.5	22.5	A	6	10	8	4
500.5	77.5	22.5	A	6	6	8	0
500.5	75	25	A	6	8	8	2
500.5	72.5	27.5	A	6	7	8	1
500.5	77.5	27.5	A	6	7	8	1
500.5	82.5	22.5	A	6	9	8	3
500.5	87.5	22.5	A	6	8	8	2
500.5	85	25	A	6	7	8	1
500.5	82.5	27.5	A	6	8	8	2
500.5	87.5	27.5	A	6	7	8	1
500.5	92.5	22.5	A	6	8	8	2
500.5	97.5	22.5	A	6	11	8	5
500.5	95	25	A	6	9	8	3
500.5	92.5	27.5	A	6	9	8	3
500.5	97.5	27.5	A	6	8	8	2
500.5	102.5	22.5	A	6	8	8	2
500.5	107.5	22.5	A	6	7	8	1
500.5	105	25	A	6	8	8	2

TABLE 500.5-1

500.5	102.5	27.5	A	6	11	8	5
500.5	107.5	27.5	A	6	7	8	1
500.5	112.5	22.5	A	6	7	8	1
500.5	117.5	22.5	A	6	6	8	0
500.5	115	25	A	6	8	8	2
500.5	112.5	27.5	A	6	8	8	2
500.5	117.5	27.5	A	6	6	8	0
500.5	122.5	22.5	A	6	8	8	2
500.5	127.5	22.5	A	6	9	8	3
500.5	125	25	A	6	7	8	1
500.5	122.5	27.5	A	6	7	8	1
500.5	127.5	27.5	A	6	7	8	1
500.5	132.5	22.5	A	6	8	8	2
500.5	137.5	22.5	A	6	6	8	0
500.5	135	25	A	6	8	8	2
500.5	132.5	27.5	A	6	9	8	3
500.5	137.5	27.5	A	6	6	8	0
500.5	52.5	32.5	A	6	5	8	-1
500.5	57.5	32.5	A	6	8	8	2
500.5	55	35	A	6	7	8	1
500.5	52.5	37.5	A	6	4	8	-2
500.5	57.5	37.5	A	6	6	8	0
500.5	62.5	32.5	A	6	6	8	0
500.5	67.5	32.5	A	6	6	8	0
500.5	65	35	A	6	5	8	-1
500.5	62.5	37.5	A	6	5	8	-1
500.5	67.5	37.5	A	6	6	8	0
500.5	72.5	32.5	A	6	5	8	-1
500.5	77.5	32.5	A	6	4	8	-2
500.5	75	35	A	6	4	8	-2
500.5	72.5	37.5	A	6	6	8	0
500.5	77.5	37.5	A	6	7	8	1
500.5	82.5	32.5	A	6	9	8	3
500.5	87.5	32.5	A	6	6	8	0
500.5	92.5	32.5	A	6	10	8	4
500.5	97.5	32.5	A	6	10	8	4
500.5	95	35	A	6	9	8	3
500.5	92.5	37.5	A	6	9	8	3
500.5	97.5	37.5	A	6	7	8	1
500.5	102.5	32.5	A	6	6	8	0
500.5	107.5	32.5	A	6	9	8	3
500.5	105	35	A	6	9	8	3
500.5	102.5	37.5	A	6	7	8	1
500.5	107.5	37.5	A	6	9	8	3
500.5	112.5	32.5	A	6	6	8	0
500.5	117.5	32.5	A	6	7	8	1
500.5	115	35	A	6	6	8	0
500.5	112.5	37.5	A	6	7	8	1
500.5	117.5	37.5	A	6	8	8	2
500.5	122.5	32.5	A	6	6	8	0
500.5	127.5	32.5	A	6	6	8	0
500.5	125	35	A	6	6	8	0
500.5	122.5	37.5	A	6	6	8	0
500.5	127.5	37.5	A	6	7	8	1
500.5	132.5	32.5	A	6	5	8	-1
500.5	137.5	32.5	A	6	5	8	-1
500.5	135	35	A	6	7	8	1

TABLE 500.5-1

500.5	132.5	37.5	A	6	7	8	1
500.5	137.5	37.5	A	6	7	8	1

CINTICHEM DECOMMISSIONING PLAN 06/25/97  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 LAND FROM S-12 TO S-7

AREA 500.5  
 RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

## COMPLETION

DATE: 3/97  
 TECHNICIANS: MANY  
 AREA: 500.0  
 UNIT: 500.5  
 MEDIA TYPE: SOIL  
 # OF POINTS: 491 PLUS 10 BIAS SAMPLES

SOIL DATA IN  
 SUM OF FRACTIONS: LIMIT

	MAX	2.61	PASS	3
MAX GRID AVG.	1.63		FAIL	1
STD X	0.12			
MU SUB ALPHA	1.64		FAIL	1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	GRID COORDINATES OR OTHER ID	SR-90	CD-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SOIL CODE
------	------------------------------	-------	-------	---------	--------	--------	--------	--------	-----------

	N	E							
500.5	152.5	7.5W	0.11 <	0.04 <	0.07 <	0.05 <	0.66 <	0.50 <	0.13 < 1
500.5	157.5	7.5W	0.11 <	0.07 <	0.04 <	0.07 <	0.50 <	0.26 <	0.12 < 1
500.5	155	5W	0.11 <	0.05 <	0.03 <	0.10 <	1.10 <	0.32 <	0.15 < 1
500.5	152.5	2.5W	0.11 <	0.04 <	0.02 <	0.09 <	0.14 <	0.36 <	0.09 < 1
500.5	157.5	2.5W	0.11 <	0.05 <	0.03 <	0.06 <	0.80 <	0.34 <	0.12 < 1
500.5	142.5	7.5W	< 0.09 <	0.27 <	0.13 <	0.13 <	0.13 <	0.84 <	0.51 < 1
500.5	147.5	7.5W	< 0.09 <	0.10 <	0.09 <	0.11 <	0.11 <	0.63 <	0.37 < 1
500.5	145	5W	< 0.09 <	0.16 <	0.15 <	0.22 <	0.58 <	0.93 <	0.43 < 1
500.5	142.5	2.5W	< 0.09 <	0.11 <	0.08 <	0.11 <	0.12 <	0.50 <	0.35 < 1
500.5	147.5	2.5W	< 0.09 <	0.22 <	0.12 <	0.14 <	0.45 <	0.90 <	0.34 < 1
500.5	152.5	2.5	< 0.09 <	0.19 <	0.16 <	0.19 <	0.90 <	0.98 <	0.53 < 1
500.5	157.5	2.5	< 0.09 <	0.14 <	0.08 <	0.10 <	0.61 <	0.61 <	0.33 < 1
500.5	155	5	< 0.09 <	0.14 <	0.14 <	0.12 <	1.08 <	1.24 <	0.54 < 1
500.5	152.5	7.5	< 0.09 <	0.16 <	0.17 <	0.05 <	0.31 <	0.98 <	0.40 < 1
500.5	157.5	7.5	< 0.09 <	0.24 <	0.14 <	0.12 <	0.83 <	1.21 <	0.54 < 1
500.5	142.5	2.5	< 0.09 <	0.16 <	0.12 <	0.12 <	0.16 <	0.18 <	0.32 < 1
500.5	147.5	2.5	< 0.09 <	0.15 <	0.09 <	0.12 <	0.14 <	0.65 <	0.43 < 1
500.5	145	5	< 0.09 <	0.22 <	0.11 <	0.11 <	0.12 <	0.67 <	0.37 < 1
500.5	142.5	7.5	< 0.09 <	0.11 <	0.11 <	0.09 <	0.25 <	0.73 <	0.40 < 1
500.5	147.5	7.5	< 0.09 <	0.13 <	0.11 <	0.08 <	0.21 <	0.59 <	0.32 < 1
500.5	12.5	2.5	< 0.12 <	0.12 <	0.11 <	0.11 <	2.06 <	0.61 <	0.32 < 1
500.5	17.5	2.5	< 0.12 <	0.10 <	0.10 <	0.12 <	0.49 <	0.68 <	0.34 < 1
500.5	15	5	< 0.12 <	0.23 <	0.12 <	0.13 <	0.17 <	0.89 <	0.43 < 1
500.5	12.5	7.5	< 0.12 <	0.22 <	0.23 <	0.15 <	1.28 <	1.35 <	0.82 < 1
500.5	17.5	7.5	< 0.12 <	0.19 <	0.08 <	0.16 <	0.70 <	0.66 <	0.41 < 1
500.5	7.5S	2.5	< 0.11 <	0.26 <	0.17 <	0.19 <	0.28 <	1.20 <	0.58 < 1
500.5	5S	5	< 0.11 <	0.26 <	0.20 <	0.19 <	0.46 <	1.31 <	0.71 < 1

116 6-25-97

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

9707240076-16/01

ISOTOPES OF CONCERN INDIVIDUAL SAMPLE FRACTION OF HOT SPOT LIMIT  
WITH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

					SUM	GRID BLOCK	
							AVG. FRACTION OF LIMIT
002 <	0.015 <	0.021 <	0.009	0.000 < 0.003 < 0.022	0.002		
002 <	0.026 <	0.012 <	0.013	0.000 < 0.001 < 0.020	0.002		
002 <	0.019 <	0.009 <	0.019	0.000 < 0.002 < 0.025	0.002		
002 <	0.015 <	0.006 <	0.017 <	0.000 < 0.002 < 0.015	0.002		
002 <	0.019 <	0.009 <	0.011	0.000 < 0.002 < 0.020	0.002		
						0.006471	
002 <	0.100 <	0.039 <	0.024	0.000 < 0.004 < 0.085	0.000		
002 <	0.037 <	0.027 <	0.020 <	0.000 < 0.003 < 0.062	0.000		
002 <	0.059 <	0.045 <	0.041	0.000 < 0.005 < 0.072	0.000		
002 <	0.041 <	0.024 <	0.020 <	0.000 < 0.003 < 0.058	0.000		
002 <	0.081 <	0.036 <	0.026	0.000 < 0.005 < 0.057	0.000		
						0	
002 <	0.070 <	0.048 <	0.035	0.000 < 0.005 < 0.088	0.000		
002 <	0.052 <	0.024 <	0.019	0.000 < 0.003 < 0.055	0.000		
002 <	0.052 <	0.042 <	0.022	0.000 < 0.007 < 0.090	0.000		
002 <	0.059 <	0.052	0.009	0.000 < 0.005 < 0.067	0.009		
002 <	0.089 <	0.042 <	0.022	0.000 < 0.006 < 0.090	0.000		
						0	
002 <	0.059 <	0.036 <	0.022 <	0.000 < 0.001 < 0.053	0.000		
002 <	0.056 <	0.027 <	0.022 <	0.000 < 0.003 < 0.072	0.000		
002 <	0.081 <	0.033 <	0.020	0.000 < 0.004 < 0.062	0.000		
002 <	0.041 <	0.033 <	0.017	0.000 < 0.004 < 0.067	0.000		
002 <	0.048 <	0.033 <	0.015	0.000 < 0.003 < 0.053	0.000		
						0	
002 <	0.044 <	0.033 <	0.020	0.071 < 0.003 < 0.053	0.071		
002 <	0.037 <	0.030 <	0.022	0.000 < 0.004 < 0.057	0.000		
002 <	0.085 <	0.036 <	0.024	0.000 < 0.005 < 0.072	0.000		
002 <	0.081 <	0.070 <	0.028	0.003 < 0.007 < 0.137	0.003		
002 <	0.070 <	0.024 <	0.030	0.000 < 0.003 < 0.068	0.000		
						0.044211	
002 <	0.096 <	0.052 <	0.035	0.000 < 0.006 < 0.097	0.000		
002 <	0.096 <	0.061 <	0.035	0.000 < 0.007 < 0.118	0.000		

TABLE 500.5-2

500.5	7.55	7.5 < 0.11 <	0.22 < 0.24 < 0.21	0.54 < 1.38 < 0.66	1 <
500.5	2.55	7.5 < 0.11 <	0.24 < 0.17 < 0.17	0.20 < 0.86 < 0.61	1 <
500.5	12.55	7.5 < 0.12 <	0.17 < 0.14 < 0.18	0.14 < 0.79 < 0.42	1 <
500.5	152.5	12.5 < 0.11 <	0.04 < 0.04 < 0.06	0.92 < 0.22 < 0.09	1 <
500.5	157.5	12.5 < 0.11 <	0.04 < 0.05 < 0.05	0.31 < 0.30 < 0.11	1 <
500.5	155	15 < 0.11 <	0.04 < 0.02 < 0.07	0.83 < 0.28 < 0.10	1 <
500.5	17.5	17.5 < 0.11 <	0.05 < 0.05 < 0.08	0.89 < 0.50 < 0.13	1 <
500.5	157.5	17.5 < 0.11 <	0.08 < 0.03 < 0.06	0.30 < 0.22 < 0.11	1 <
500.5	142.5	12.5 < 0.10 <	0.06 < 0.03 < 0.05	0.25 < 0.19 < 0.08	1 <
500.5	147.5	12.5 < 0.10 <	0.06 < 0.06 < 0.10	0.65 < 0.33 < 0.11	1 <
500.5	145	15 < 0.10 <	0.05 < 0.10 < 0.07	0.46 < 0.11 < 0.08	1 <
500.5	142.5	17.5 < 0.10 <	0.08 < 0.09 < 0.11	1.76 < 0.61 < 0.19	1 <
500.5	147.5	17.5 < 0.10 <	0.12 < 0.09 < 0.10	1.85 < 0.48 < 0.31	1 <
500.5	42.5	12.5 < 0.11 <	0.20 < 0.05 < 0.06	0.30 < 0.43 < 0.09	1 <
500.5	47.5	12.5 < 0.11 <	0.06 < 0.03 < 0.05	0.21 < 0.26 < 0.11	1 <
500.5	45	15 < 0.11 <	0.06 < 0.03 < 0.05	0.35 < 0.40 < 0.07	1 <
500.5	42.5	17.5 < 0.11 <	0.04 < 0.04 < 0.08	0.96 < 0.47 < 0.16	1 <
500.5	47.5	17.5 < 0.11 <	0.07 < 0.04 < 0.07	1.01 < 0.25 < 0.12	1 <
500.5	32.5	12.5 < 0.11 <	0.18 < 0.07 < 0.09	1.98 < 0.29 < 0.23	1 <
500.5	37.5	12.5 < 0.11 <	0.25 < 0.09 < 0.07	3.42 < 0.38 < 0.24	1 <
500.5	35	15 < 0.11 <	0.05 < 0.05 < 0.06	1.20 < 0.20 < 0.07	1 <
500.5	32.5	17.5 < 0.11 <	0.12 < 0.10 < 0.10	1.96 < 0.42 < 0.10	1 <
500.5	37.5	17.5 < 0.11 <	0.07 < 0.10 < 0.09	1.63 < 0.27 < 0.24	1 <
500.5	22.5	12.5 < 0.10 <	0.06 < 0.07 < 0.09	2.15 < 0.25 < 0.30	1 <
500.5	27.5	12.5 < 0.10 <	0.12 < 0.13 < 0.10	3.71 < 0.69 < 0.11	1 <
500.5	25	15 < 0.10 <	0.04 < 0.03 < 0.06	1.41 < 0.23 < 0.23	1 <
500.5	22.5	17.5 < 0.10 <	0.05 < 0.07 < 0.07	1.06 < 0.40 < 0.20	1 <
500.5	27.5	17.5 < 0.10 <	0.15 < 0.06 < 0.12	2.73 < 0.47 < 0.34	1 <
500.5	12.5	12.5 < 0.11 <	0.24 < 0.30 < 0.26	2.42 < 1.52 < 0.68	1 <
500.5	17.5	12.5 < 0.11 <	0.29 < 0.29 < 0.28	3.35 < 1.40 < 0.84	1 <
500.5	15	15 < 0.11 <	0.18 < 0.22 < 0.20	3.98 < 1.25 < 0.64	1 <
500.5	12.5	17.5 < 0.11 <	0.38 < 0.21 < 0.20	3.22 < 1.21 < 0.79	1 <
500.5	17.5	17.5 < 0.11 <	0.23 < 0.16 < 0.16	1.00 < 1.53 < 0.65	1 <
500.5	2.5	12.5 < 0.11 <	0.03 < 0.05 < 0.06	0.75 < 0.17 < 0.14	1 <
500.5	7.5	12.5 < 0.11 <	0.04 < 0.03 < 0.08	0.89 < 0.32 < 0.08	1 <
500.5	5	15 < 0.11 <	0.07 < 0.05 < 0.09	2.02 < 0.22 < 0.24	1 <
500.5	2.5	17.5 < 0.11 <	0.11 < 0.03 < 0.08	2.77 < 0.57 < 0.17	1 <
500.5	7.5	17.5 < 0.11 <	0.07 < 0.04 < 0.08	1.11 < 0.25 < 0.10	1 <
500.5	2.55	12.5 < 0.12 <	0.15 < 0.14 < 0.13	0.18 < 0.94 < 0.46	1 <
500.5	7.55	12.5 < 0.12 <	0.17 < 0.17 < 0.14	0.87 < 1.29 < 0.65	1 <
500.5	55	15 < 0.12 <	0.44 < 0.24 < 0.15	0.58 < 1.49 < 0.50	1 <
500.5	2.55	17.5 < 0.12 <	0.23 < 0.20 < 0.16	0.29 < 1.30 < 0.57	1 <
500.5	7.55	17.5 < 0.12 <	0.21 < 0.23 < 0.13	0.38 < 1.68 < 0.82	1 <
500.5	12.55	12.5 < 0.12 <	0.20 < 0.11 < 0.17	0.50 < 0.73 < 0.55	1 <
500.5	17.55	12.5 < 0.12 <	0.17 < 0.22 < 0.13	0.73 < 1.34 < 0.66	1 <
500.5	155	15 < 0.12 <	0.14 < 0.12 < 0.15	0.60 < 1.02 < 0.47	1 <
500.5	12.55	17.5 < 0.12 <	0.20 < 0.11 < 0.16	0.43 < 0.87 < 0.43	1 <
500.5	17.55	17.5 < 0.12 <	0.25 < 0.20 < 0.17	0.62 < 1.44 < 0.64	1 <
500.5	152.5	22.5 < 0.10 <	0.06 < 0.04 < 0.07	0.07 < 0.27 < 0.11	1 <

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

02 <	0.081 <	0.073 <	0.039	0.000 <	0.007 <	0.110	0.000
02 <	0.089 <	0.052 <	0.031	0.000 <	0.005 <	0.102	0.000
02 <	0.063 <	0.042 <	0.033	0.000 <	0.004 <	0.070	0.000
02 <	0.015 <	0.012 <	0.011	0.000 <	0.001 <	0.015	0.000
02 <	0.015 <	0.015 <	0.009	0.000 <	0.002 <	0.018	0.000
02 <	0.015 <	0.006 <	0.013	0.000 <	0.001 <	0.017	0.000
02 <	0.019 <	0.015 <	0.015	0.000 <	0.003 <	0.022	0.000
02 <	0.030 <	0.009 <	0.011	0.000 <	0.001 <	0.018	0.000
02 <	0.022 <	0.009 <	0.009	0.000 <	0.001 <	0.013	0.000
02 <	0.022 <	0.018 <	0.019	0.000 <	0.002 <	0.018	0.000
02 <	0.019 <	0.030 <	0.013	0.000 <	0.001 <	0.013	0.000
02 <	0.030 <	0.027 <	0.020	0.045 <	0.003 <	0.032	0.045
02 <	0.044 <	0.027 <	0.019	0.053 <	0.003 <	0.052	0.053
							0.058421
02 <	0.074 <	0.015 <	0.011	0.000 <	0.002 <	0.015	0.000
02 <	0.022 <	0.009 <	0.009	0.000 <	0.001 <	0.018	0.000
02 <	0.022 <	0.009 <	0.009	0.000 <	0.002 <	0.012	0.000
02 <	0.015 <	0.012 <	0.015	0.000 <	0.002 <	0.027	0.000
02 <	0.026 <	0.012 <	0.013	0.000 <	0.001 <	0.020	0.000
							0
02 <	0.067 <	0.021 <	0.017	0.064 <	0.002 <	0.038	0.064
02 <	0.093 <	0.027 <	0.013	0.190 <	0.002 <	0.040	0.190
02 <	0.019 <	0.015 <	0.011	0.000 <	0.001 <	0.012	0.000
02 <	0.044 <	0.030 <	0.019	0.062 <	0.002 <	0.017	0.062
02 <	0.026 <	0.030 <	0.017	0.033 <	0.001 <	0.040	0.033
							0
02 <	0.022 <	0.021 <	0.017	0.079 <	0.001 <	0.050	0.079
02 <	0.044 <	0.039 <	0.019	0.216 <	0.004 <	0.018	0.216
02 <	0.015 <	0.009 <	0.011	0.014 <	0.001 <	0.038	0.014
02 <	0.019 <	0.021 <	0.013	0.000 <	0.002 <	0.033	0.000
02 <	0.056 <	0.018 <	0.022	0.130 <	0.002 <	0.057	0.130
							0.21
02 <	0.089 <	0.091 <	0.054	0.103 <	0.008 <	0.113	0.103
02 <	0.107 <	0.088 <	0.052	0.184 <	0.007 <	0.140	0.184
02 <	0.067 <	0.067 <	0.037	0.239 <	0.007 <	0.107	0.239
02 <	0.141 <	0.064 <	0.037	0.173 <	0.006 <	0.132	0.173
02 <	0.085 <	0.048 <	0.030	0.000 <	0.008 <	0.108	0.000
							0.263158
02 <	0.011 <	0.015 <	0.011	0.000 <	0.001 <	0.023	0.000
02 <	0.015 <	0.009 <	0.015	0.000 <	0.002 <	0.013	0.000
02 <	0.026 <	0.015 <	0.017	0.068 <	0.001 <	0.040	0.068
02 <	0.041 <	0.009 <	0.015	0.133 <	0.003 <	0.028	0.133
02 <	0.026 <	0.012 <	0.015	0.000 <	0.001 <	0.017	0.000
							0.419474
02 <	0.056 <	0.042 <	0.024 <	0.000 <	0.005 <	0.077	0.000
02 <	0.063 <	0.058 <	0.026	0.000 <	0.007 <	0.108	0.000
02 <	0.163 <	0.073 <	0.028	0.000 <	0.008 <	0.083	0.000
02 <	0.085 <	0.061 <	0.030	0.000 <	0.007 <	0.095	0.000
02 <	0.078 <	0.070 <	0.024	0.000 <	0.009 <	0.137	0.000
							0.120526
02 <	0.074 <	0.033 <	0.031	0.000 <	0.004 <	0.092	0.000
02 <	0.063 <	0.067 <	0.024	0.000 <	0.007 <	0.110	0.000
02 <	0.052 <	0.036 <	0.028	0.000 <	0.005 <	0.078	0.000
02 <	0.074 <	0.033 <	0.030	0.000 <	0.005 <	0.072	0.000
02 <	0.093 <	0.061 <	0.031	0.000 <	0.008 <	0.107	0.000
							0
02 <	0.022 <	0.012 <	0.013 <	0.000 <	0.001 <	0.018	0.000

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TABLE 500.5-2

500.5	157.5	22.5	< 0.10	<	0.06	< 0.04	< 0.06	< 0.06	< 0.35	< 0.09	1	<
500.5	155	25	< 0.10	<	0.04	< 0.06	< 0.06	< 0.05	< 0.17	< 0.18	1	<
500.5	152.5	27.5	< 0.10	<	0.05	< 0.03	< 0.06	< 0.18	< 0.36	< 0.18	1	<
500.5	157.5	27.5	< 0.10	<	0.10	< 0.06	< 0.07	< 0.07	< 0.28	< 0.07	1	<
500.5	142.5	22.5	0.51	<	0.13	< 0.11	< 0.10	4.92	< 0.40	< 0.13	1	<
500.5	147.5	22.5	0.51	<	0.07	< 0.12	< 0.12	3.57	< 0.41	< 0.13	1	<
500.5	145	25	0.51	<	0.25	< 0.21	< 0.18	3.58	< 1.70	< 0.77	1	<
500.5	142.5	27.5	0.51	<	0.20	< 0.30	< 0.23	4.02	< 1.58	< 0.74	1	<
500.5	147.5	27.5	0.51	<	0.07	< 0.10	< 0.10	2.18	< 0.60	< 0.27	1	<
500.5	42.5	22.5	< 0.10	<	0.02	< 0.02	< 0.03	0.18	< 0.10	< 0.06	1	<
500.5	47.5	22.5	< 0.10	<	0.05	< 0.04	< 0.04	0.85	< 0.30	< 0.10	1	<
500.5	45	25	< 0.10	<	0.03	< 0.03	< 0.04	0.45	< 0.20	< 0.08	1	<
500.5	42.5	27.5	< 0.10	<	0.03	< 0.03	< 0.03	0.77	< 0.20	< 0.08	1	<
500.5	47.5	27.5	< 0.10	<	0.05	< 0.06	< 0.06	2.90	< 0.30	< 0.20	1	<
500.5	32.5	22.5	0.12	<	0.05	< 0.05	< 0.06	2.71	< 0.30	< 0.10	1	<
500.5	37.5	22.5	0.12	<	0.03	< 0.02	< 0.03	0.56	< 0.20	< 0.08	1	<
500.5	35	25	0.12	<	0.05	< 0.06	< 0.06	2.80	< 0.40	< 0.20	1	<
500.5	32.5	27.5	0.12	<	0.05	< 0.04	< 0.05	1.32	< 0.20	< 0.10	1	<
500.5	37.5	27.5	0.12	<	0.10	< 0.10	< 0.10	4.60	< 1.00	< 0.50	1	<
500.5	22.5	22.5	< 0.12	<	0.05	< 0.04	< 0.05	1.08	< 0.30	< 0.10	1	<
500.5	27.5	22.5	< 0.12	<	0.03	< 0.03	< 0.03	0.83	< 0.20	< 0.08	1	<
500.5	25	25	< 0.12	<	0.10	< 0.07	< 0.08	2.46	< 0.40	< 0.20	1	<
500.5	22.5	27.5	< 0.12	<	0.07	< 0.08	< 0.08	2.91	< 0.40	< 0.20	1	<
500.5	27.5	27.5	< 0.12	<	0.07	< 0.07	< 0.08	2.13	< 0.50	< 0.20	1	<
500.5	12.5	22.5	< 0.10	<	0.04	< 0.04	< 0.05	1.45	< 0.20	< 0.10	1	<
500.5	17.5	22.5	< 0.10	<	0.06	< 0.06	< 0.06	3.31	< 0.40	< 0.20	1	<
500.5	15	25	< 0.10	<	0.03	< 0.03	< 0.03	0.34	< 0.20	< 0.09	1	<
500.5	12.5	27.5	< 0.10	<	0.06	< 0.06	< 0.06	2.63	< 0.30	< 0.20	1	<
500.5	17.5	27.5	< 0.10	<	0.09	< 0.10	< 0.10	5.46	< 0.60	< 0.30	1	<
500.5	2.5	22.5	< 0.10	<	0.33	< 0.25	< 0.19	1.74	< 1.41	< 0.73	1	<
500.5	7.5	22.5	< 0.10	<	0.21	< 0.24	< 0.09	0.49	< 1.10	< 0.62	1	<
500.5	5	25	< 0.10	<	0.19	< 0.17	< 0.19	0.93	< 1.02	< 0.53	1	<
500.5	2.5	27.5	< 0.10	<	0.27	< 0.11	< 0.17	0.66	< 0.85	< 0.44	1	<
500.5	7.5	27.5	< 0.10	<	0.34	< 0.28	< 0.33	4.33	< 1.52	< 0.80	1	<
500.5	2.55	22.5	< 0.10	<	0.05	< 0.07	< 0.08	1.04	< 0.71	< 0.10	1	<
500.5	7.55	22.5	< 0.10	<	0.06	< 0.06	< 0.08	0.67	< 0.42	< 0.16	1	<
500.5	5.5	25	< 0.10	<	0.04	< 0.05	< 0.08	0.49	< 0.22	< 0.20	1	<
500.5	2.55	27.5	< 0.10	<	0.04	< 0.04	< 0.08	0.47	< 0.27	< 0.09	1	<
500.5	7.55	27.5	< 0.10	<	0.05	< 0.07	< 0.09	0.54	< 0.21	< 0.16	1	<
500.5	12.55	22.5	< 0.12	<	0.18	< 0.18	< 0.22	0.70	< 1.47	< 0.75	1	<
500.5	17.55	22.5	< 0.12	<	0.15	< 0.12	< 0.14	0.40	< 0.68	< 0.38	1	<
500.5	15.5	25	< 0.12	<	0.15	< 0.14	< 0.17	0.30	< 1.08	< 0.45	1	<
500.5	12.55	27.5	< 0.12	<	0.26	< 0.22	< 0.22	0.49	< 1.19	< 0.64	1	<
500.5	17.55	27.5	< 0.12	<	0.19	< 0.13	< 0.10	0.56	< 0.70	< 0.37	1	<
500.5	22.55	22.5	< 0.11	<	0.05	< 0.02	< 0.05	0.22	< 0.27	< 0.06	1	<
500.5	22.55	27.5	< 0.11	<	0.08	< 0.03	< 0.09	0.76	< 0.43	< 0.13	1	<
500.5	152.5	32.5	< 0.10	<	0.04	< 0.06	< 0.06	0.09	< 0.12	< 0.17	1	<
500.5	157.5	32.5	< 0.10	<	0.04	< 0.04	< 0.15	0.71	< 0.14	< 0.16	1	<
500.5	155	35	< 0.10	<	0.03	< 0.04	< 0.05	0.51	< 0.30	< 0.13	1	<
500.5	152.5	37.5	< 0.10	<	0.05	< 0.06	< 0.06	0.08	< 0.28	< 0.07	1	<

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

002 < 0.022 < 0.012 < 0.011 < 0.000 < 0.002 < 0.015 0.000  
 002 < 0.015 < 0.018 < 0.011 < 0.000 < 0.001 < 0.030 0.000  
 002 < 0.019 < 0.009 < 0.011 0.000 < 0.002 < 0.030 0.000  
 002 < 0.037 < 0.018 < 0.013 < 0.000 < 0.001 < 0.012 0.000

0

010 < 0.048 < 0.033 < 0.019 0.322 < 0.002 < 0.022 0.332  
 010 < 0.026 < 0.036 < 0.022 0.204 < 0.002 < 0.022 0.214  
 010 < 0.093 < 0.064 < 0.033 0.204 < 0.009 < 0.128 0.214  
 010 < 0.074 < 0.091 < 0.043 0.243 < 0.008 < 0.123 0.253  
 010 < 0.026 < 0.030 < 0.019 0.082 < 0.003 < 0.045 0.092

0.662632

002 < 0.007 < 0.006 < 0.006 0.000 < 0.001 < 0.010 0.000  
 002 < 0.019 < 0.012 < 0.007 0.000 < 0.002 < 0.017 0.000  
 002 < 0.011 < 0.009 < 0.007 0.000 < 0.001 < 0.013 0.000  
 002 < 0.011 < 0.009 < 0.006 0.000 < 0.001 < 0.013 0.000  
 002 < 0.019 < 0.018 < 0.011 0.145 < 0.002 < 0.033 0.145

0.086842

002 < 0.019 < 0.015 < 0.011 0.128 < 0.002 < 0.017 0.130  
 002 < 0.011 < 0.006 < 0.006 0.000 < 0.001 < 0.013 0.002  
 002 < 0.019 < 0.018 < 0.011 0.136 < 0.002 < 0.033 0.138  
 002 < 0.019 < 0.012 < 0.009 0.006 < 0.001 < 0.017 0.008  
 002 < 0.037 < 0.030 < 0.019 0.294 < 0.005 < 0.083 0.296

0.34548

002 < 0.019 < 0.012 < 0.009 0.000 < 0.002 < 0.017 0.000  
 002 < 0.011 < 0.009 < 0.006 0.000 < 0.001 < 0.013 0.000  
 002 < 0.037 < 0.021 < 0.015 0.106 < 0.002 < 0.033 0.106  
 002 < 0.026 < 0.024 < 0.015 0.146 < 0.002 < 0.033 0.146  
 002 < 0.026 < 0.021 < 0.015 0.077 < 0.003 < 0.033 0.077

0.197368

002 < 0.015 < 0.012 < 0.009 0.018 < 0.001 < 0.017 0.018  
 002 < 0.022 < 0.018 < 0.011 0.181 < 0.002 < 0.033 0.181  
 002 < 0.011 < 0.009 < 0.006 0.000 < 0.001 < 0.015 0.000  
 002 < 0.022 < 0.018 < 0.011 0.121 < 0.002 < 0.033 0.121  
 002 < 0.033 < 0.030 < 0.019 0.369 < 0.003 < 0.050 0.369

0.413158

002 < 0.122 < 0.076 < 0.035 0.043 < 0.007 < 0.122 0.043  
 002 < 0.078 < 0.073 < 0.017 0.000 < 0.006 < 0.103 0.000  
 002 < 0.070 < 0.052 < 0.035 0.000 < 0.005 < 0.088 0.000  
 002 < 0.100 < 0.033 < 0.031 0.000 < 0.004 < 0.073 0.000  
 002 < 0.126 < 0.085 < 0.061 0.270 < 0.008 < 0.133 0.270

0.187895

002 < 0.019 < 0.021 < 0.015 0.000 < 0.004 < 0.017 0.000  
 002 < 0.022 < 0.018 < 0.015 0.000 < 0.002 < 0.027 0.000  
 002 < 0.015 < 0.015 < 0.015 0.000 < 0.001 < 0.033 0.000  
 002 < 0.015 < 0.012 < 0.015 0.000 < 0.001 < 0.015 0.000  
 002 < 0.019 < 0.021 < 0.017 0.000 < 0.001 < 0.027 0.000

0

002 < 0.067 < 0.055 < 0.041 0.000 < 0.008 < 0.125 0.000  
 002 < 0.056 < 0.036 < 0.026 0.000 < 0.004 < 0.063 0.000  
 002 < 0.056 < 0.042 < 0.031 0.000 < 0.006 < 0.075 0.000  
 002 < 0.096 < 0.067 < 0.041 0.000 < 0.006 < 0.107 0.000  
 002 < 0.070 < 0.039 < 0.019 0.000 < 0.004 < 0.062 0.000

0

002 < 0.019 < 0.006 < 0.009 0.000 < 0.001 < 0.010 0.000  
 002 < 0.030 < 0.009 < 0.017 0.000 < 0.002 < 0.022 0.000

0

002 < 0.015 < 0.018 < 0.011 < 0.000 < 0.001 < 0.028 0.000  
 002 < 0.015 < 0.012 < 0.028 0.000 < 0.001 < 0.027 0.000  
 002 < 0.011 < 0.012 < 0.009 0.000 < 0.002 < 0.022 0.000  
 002 < 0.019 < 0.018 < 0.011 < 0.000 < 0.001 < 0.012 0.000

9707240076-18

TABLE 500.5-2

500.5	157.5	37.5	< 0.10	< 0.07	< 0.06	< 0.05	0.94	< 0.44	< 0.08	1
500.5	142.5	32.5	< 0.10	< 0.24	< 0.12	< 0.09	0.40	< 0.82	< 0.37	1
500.5	147.5	32.5	< 0.10	< 0.10	< 0.11	< 0.06	0.27	< 0.86	< 0.30	1
500.5	145	35	< 0.10	< 0.22	< 0.09	< 0.13	0.29	< 0.77	< 0.40	1
500.5	142.5	37.5	< 0.10	< 0.13	< 0.10	< 0.10	0.23	< 0.81	< 0.37	1
500.5	147.5	37.5	< 0.10	< 0.13	< 0.09	< 0.08	0.27	< 0.57	< 0.28	1
500.5	42.5	32.5	< 0.10	< 0.08	< 0.04	< 0.10	2.56	< 0.38	< 0.17	1
500.5	47.5	32.5	< 0.10	< 0.04	< 0.03	< 0.05	0.85	< 0.39	< 0.10	1
500.5	45	35	< 0.10	< 0.11	< 0.14	< 0.13	4.34	< 0.47	< 0.17	1
500.5	42.5	37.5	< 0.10	< 0.10	< 0.13	< 0.13	4.83	< 0.48	< 0.68	1
500.5	47.5	37.5	< 0.10	< 0.12	< 0.05	< 0.11	4.46	< 0.27	< 0.23	1
500.5	32.5	32.5	< 0.12	< 0.18	< 0.20	< 0.18	1.46	< 0.18	< 0.70	1
500.5	37.5	32.5	< 0.12	< 0.32	< 0.13	< 0.19	2.98	< 1.41	< 0.72	1
500.5	35	35	< 0.12	< 0.32	< 0.27	< 0.18	1.44	< 1.65	< 0.64	1
500.5	32.5	37.5	< 0.12	< 0.12	< 0.12	< 0.10	0.86	< 0.62	< 0.32	1
500.5	37.5	37.5	< 0.12	< 0.26	< 0.14	< 0.13	2.02	< 1.07	< 0.49	1
500.5	22.5	32.5	0.11	< 0.32	< 0.29	< 0.28	5.41	< 1.60	< 0.85	1
500.5	27.5	32.5	0.11	< 0.14	< 0.13	< 0.09	4.68	< 0.74	< 0.48	1
500.5	25	35	0.11	< 0.33	< 0.40	< 0.31	5.90	< 1.94	< 0.96	1
500.5	22.5	37.5	0.11	< 0.20	< 0.21	< 0.13	3.01	< 1.46	< 0.69	1
500.5	27.5	37.5	0.11	< 0.22	< 0.17	< 0.17	1.92	< 1.06	< 0.53	1
500.5	12.5	32.5	0.19	< 0.23	< 0.22	< 0.15	0.06	< 1.58	< 0.67	1
500.5	17.5	32.5	0.19	< 0.19	< 0.20	< 0.29	0.77	< 1.07	< 0.49	1
500.5	15	35	0.19	< 0.21	< 0.23	< 0.21	1.68	< 1.37	< 0.69	1
500.5	12.5	37.5	0.19	< 0.29	< 0.27	< 0.16	2.06	< 1.24	< 0.91	1
500.5	17.5	37.5	0.19	< 0.20	< 0.18	< 0.19	1.25	< 1.23	< 0.82	1
500.5	2.5	32.5	< 0.12	< 0.06	< 0.07	< 0.08	2.94	< 0.21	< 0.10	1
500.5	7.5	32.5	< 0.12	< 0.04	< 0.07	< 0.07	1.60	< 0.39	< 0.08	1
500.5	5	35	< 0.12	< 0.06	< 0.07	< 0.10	3.73	< 0.53	< 0.13	1
500.5	2.5	37.5	< 0.12	< 0.06	< 0.07	< 0.10	1.94	< 0.48	< 0.21	1
500.5	7.5	37.5	< 0.12	< 0.08	< 0.08	< 0.10	3.89	< 0.39	< 0.15	1
500.5	2.5S	32.5	< 0.12	< 0.06	< 0.05	< 0.06	1.47	< 0.30	< 0.20	1
500.5	7.5S	32.5	< 0.12	< 0.07	< 0.08	< 0.08	3.01	< 0.40	< 0.20	1
500.5	5S	35	< 0.12	< 0.05	< 0.05	< 0.06	3.09	< 0.30	< 0.20	1
500.5	2.5S	37.5	< 0.12	< 0.06	< 0.07	< 0.07	3.41	< 0.40	< 0.20	1
500.5	7.5S	37.5	< 0.12	< 0.10	< 0.10	< 0.10	3.09	< 0.90	< 0.40	1
500.5	12.5S	32.5	< 0.12	< 0.19	< 0.17	< 0.13	5.03	< 0.96	< 0.43	1
500.5	17.5S	32.5	< 0.12	< 0.20	< 0.17	< 0.19	1.12	< 1.00	< 0.58	1
500.5	15S	35	< 0.12	< 0.15	< 0.13	< 0.15	2.22	< 0.80	< 0.42	1
500.5	12.5S	37.5	< 0.12	< 0.24	< 0.23	< 0.27	2.87	< 1.53	< 0.70	1
500.5	17.5S	37.5	< 0.12	< 0.30	< 0.19	< 0.22	1.02	< 1.62	< 0.68	1
500.5	22.5S	32.5	< 0.10	< 0.10	< 0.06	< 0.09	0.87	< 0.26	< 0.22	1
500.5	25S	35	< 0.10	< 0.05	< 0.08	< 0.08	1.01	< 0.20	< 0.13	1
500.5	27.5S	37.5	< 0.10	< 0.07	< 0.03	< 0.07	1.05	< 0.28	< 0.23	1
500.5	22.5S	37.5	< 0.10	< 0.04	< 0.08	< 0.06	0.56	< 0.17	< 0.10	1
500.5	152.5	42.5	< 0.13	< 0.08	< 0.09	< 0.08	1.13	< 0.20	< 0.17	1
500.5	157.5	42.5	< 0.13	< 0.05	< 0.05	< 0.08	0.51	< 0.16	< 0.08	1
500.5	155	45	< 0.13	< 0.10	< 0.05	< 0.08	0.60	< 0.56	< 0.21	1
500.5	152.5	47.5	< 0.13	< 0.05	< 0.04	< 0.08	1.42	< 0.35	< 0.19	1
500.5	157.5	47.5	< 0.13	< 0.06	< 0.04	< 0.08	0.43	< 0.38	< 0.10	1

002 <	0.026 <	0.018 <	0.009	0.000 <	0.002 <	0.013	0.000	0
002 <	0.089 <	0.036 <	0.017	0.000 <	0.004 <	0.062	0.000	
002 <	0.037 <	0.033 <	0.011	0.000 <	0.005 <	0.050	0.000	
002 <	0.081 <	0.027 <	0.024	0.000 <	0.004 <	0.067	0.000	
002 <	0.048 <	0.030 <	0.019	0.000 <	0.004 <	0.062	0.000	
002 <	0.048 <	0.027 <	0.015	0.000 <	0.003 <	0.047	0.000	0
002 <	0.030 <	0.012 <	0.019	0.115 <	0.002 <	0.028	0.115	
002 <	0.015 <	0.009 <	0.009	0.000 <	0.002 <	0.017	0.000	
002 <	0.041 <	0.042 <	0.024	0.271 <	0.002 <	0.028	0.271	
002 <	0.037 <	0.039 <	0.024	0.314 <	0.003 <	0.113	0.314	
002 <	0.044 <	0.015 <	0.020	0.282 <	0.001 <	0.038	0.282	
							0.588947	
002 <	0.067 <	0.061 <	0.033	0.018 <	0.001 <	0.117	0.018	
002 <	0.119 <	0.039 <	0.035	0.152 <	0.007 <	0.120	0.152	
002 <	0.119 <	0.082 <	0.033	0.017 <	0.009 <	0.107	0.017	
002 <	0.044 <	0.036 <	0.019	0.000 <	0.003 <	0.053	0.000	
002 <	0.096 <	0.042 <	0.024	0.068 <	0.006 <	0.082	0.068	
							0.152632	
002 <	0.119 <	0.088 <	0.052	0.365 <	0.008 <	0.142	0.367	
002 <	0.052 <	0.039 <	0.017	0.301 <	0.004 <	0.080	0.303	
002 <	0.122 <	0.121 <	0.057	0.408 <	0.010 <	0.160	0.410	
002 <	0.074 <	0.064 <	0.024	0.154 <	0.008 <	0.115	0.157	
002 <	0.081 <	0.052 <	0.031	0.059 <	0.006 <	0.088	0.061	
							0.778576	
004 <	0.085 <	0.067 <	0.028	0.000 <	0.008 <	0.112	0.004	
004 <	0.070 <	0.061 <	0.054	0.000 <	0.006 <	0.082	0.004	
004 <	0.078 <	0.070 <	0.039	0.038 <	0.007 <	0.115	0.041	
004 <	0.107 <	0.082 <	0.030	0.071 <	0.007 <	0.152	0.075	
004 <	0.074 <	0.055 <	0.035	0.000 <	0.007 <	0.137	0.004	
							0.07644	
002 <	0.022 <	0.021 <	0.015	0.148 <	0.001 <	0.017	0.148	
002 <	0.015 <	0.021 <	0.013	0.031 <	0.002 <	0.013	0.031	
002 <	0.022 <	0.021 <	0.019	0.218 <	0.003 <	0.022	0.218	
002 <	0.022 <	0.021 <	0.019	0.061 <	0.003 <	0.035	0.061	
002 <	0.030 <	0.024 <	0.019	0.232 <	0.002 <	0.025	0.232	
							0.413158	
002 <	0.022 <	0.015 <	0.011	0.019 <	0.002 <	0.033	0.019	
002 <	0.026 <	0.024 <	0.015	0.154 <	0.002 <	0.033	0.154	
002 <	0.019 <	0.015 <	0.011	0.161 <	0.002 <	0.033	0.161	
002 <	0.022 <	0.021 <	0.013	0.189 <	0.002 <	0.033	0.189	
002 <	0.037 <	0.030 <	0.019	0.161 <	0.005 <	0.067	0.161	
							0.411579	
002 <	0.070 <	0.052 <	0.024	0.332 <	0.005 <	0.072	0.332	
002 <	0.074 <	0.052 <	0.035	0.000 <	0.005 <	0.097	0.000	
002 <	0.056 <	0.039 <	0.028	0.085 <	0.004 <	0.070	0.085	
002 <	0.089 <	0.070 <	0.050	0.142 <	0.008 <	0.117	0.142	
002 <	0.111 <	0.058 <	0.041	0.000 <	0.009 <	0.113	0.000	
							0.335263	
002 <	0.037 <	0.018 <	0.017	0.000 <	0.001 <	0.037	0.000	
002 <	0.019 <	0.024 <	0.015	0.000 <	0.001 <	0.022	0.000	
002 <	0.026 <	0.009 <	0.013	0.000 <	0.001 <	0.038	0.000	
002 <	0.015 <	0.024 <	0.011	0.000 <	0.001 <	0.017	0.000	0
003 <	0.030 <	0.027 <	0.015	0.000 <	0.001 <	0.028	0.000	
003 <	0.019 <	0.015 <	0.015	0.000 <	0.001 <	0.013	0.000	
003 <	0.037 <	0.015 <	0.015	0.000 <	0.003 <	0.035	0.000	
003 <	0.019 <	0.012 <	0.015	0.015 <	0.002 <	0.032	0.015	
003 <	0.022 <	0.012 <	0.015	0.000 <	0.002 <	0.017	0.000	

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076 - 19

TABLE 500.5-2

500.5	142.5	42.5 < 0.11 <	0.06 < 0.04 < 0.08	0.50 < 0.28 < 0.09	1
500.5	147.5	42.5 < 0.11 <	0.06 < 0.04 < 0.08	0.52 < 0.19 < 0.11	1
500.5	145	45 < 0.11 <	0.18 < 0.08 < 0.18	1.83 < 0.29 < 0.31	1
500.5	142.5	47.5 < 0.11 <	0.18 < 0.17 < 0.23	3.56 < 0.36 < 0.30	1
500.5	147.5	47.5 < 0.11 <	0.18 < 0.28 < 0.28	3.55 < 0.83 < 0.36	1
500.5	132.5	42.5 < 0.10 <	0.03 < 0.04 < 0.06	0.09 < 0.18 < 0.21	1
500.5	137.5	42.5 < 0.10 <	0.05 < 0.05 < 0.06	0.45 < 0.40 < 0.19	1
500.5	135	45 < 0.10 <	0.06 < 0.08 < 0.07	0.41 < 0.35 < 0.08	1
500.5	132.5	47.5 < 0.10 <	0.09 < 0.08 < 0.14	1.03 < 0.22 < 0.25	1
500.5	137.5	47.5 < 0.10 <	0.13 < 0.12 < 0.17	2.46 < 0.59 < 0.23	1
500.5	122.5	42.5 < 0.12 <	0.08 < 0.04 < 0.06	0.45 < 0.25 < 0.13	1
500.5	127.5	42.5 < 0.12 <	0.07 < 0.05 < 0.07	0.31 < 0.33 < 0.21	1
500.5	125	45 < 0.12 <	0.06 < 0.06 < 0.10	2.00 < 0.65 < 0.10	1
500.5	122.5	47.5 < 0.12 <	0.05 < 0.09 < 0.08	6.72 < 0.51 < 0.10	1
500.5	127.5	47.5 < 0.12 <	0.12 < 0.26 < 0.20	3.42 < 0.35 < 0.44	1
500.5	112.5	42.5 < 0.10 <	0.05 < 0.10 < 0.07	4.58 < 0.33 < 0.19	1
500.5	117.5	42.5 < 0.10 <	0.04 < 0.03 < 0.07	0.90 < 0.35 < 0.17	1
500.5	115	45 < 0.10 <	0.09 < 0.11 < 0.09	4.41 < 0.50 < 0.10	1
500.5	112.5	47.5 < 0.10 <	0.15 < 0.12 < 0.10	3.66 < 0.26 < 0.23	1
500.5	117.5	47.5 < 0.10 <	0.09 < 0.03 < 0.09	0.79 < 0.21 < 0.11	1
500.5	102.5	42.5 < 0.10 <	0.09 < 0.15 < 0.08	4.07 < 0.18 < 0.17	1
500.5	107.5	42.5 < 0.10 <	0.08 < 0.05 < 0.07	3.58 < 0.14 < 0.25	1
500.5	105	45 < 0.10 <	0.04 < 0.04 < 0.06	2.64 < 0.51 < 0.21	1
500.5	102.5	47.5 < 0.10 <	0.06 < 0.07 < 0.07	3.87 < 0.43 < 0.16	1
500.5	107.5	47.5 < 0.10 <	0.03 < 0.08 < 0.07	2.87 < 0.58 < 0.19	1
500.5	92.5	42.5 < 0.10 <	0.06 < 0.05 < 0.06	0.96 < 0.25 < 0.07	1
500.5	97.5	42.5 < 0.10 <	0.26 < 0.10 < 0.08	2.82 < 0.23 < 0.11	1
500.5	95	45 < 0.10 <	0.03 < 0.03 < 0.05	3.02 < 0.24 < 0.14	1
500.5	92.5	47.5 < 0.10 <	0.04 < 0.04 < 0.05	1.12 < 0.33 < 0.06	1
500.5	97.5	47.5 < 0.10 <	0.06 < 0.07 < 0.07	2.58 < 0.37 < 0.07	1
500.5	82.5	42.5 < 0.12 <	0.05 < 0.02 < 0.07	0.60 < 0.13 < 0.10	1
500.5	87.5	42.5 < 0.12 <	0.05 < 0.03 < 0.04	0.65 < 0.22 < 0.08	1
500.5	85	45 < 0.12 <	0.05 < 0.04 < 0.09	0.40 < 0.38 < 0.25	1
500.5	82.5	47.5 < 0.12 <	0.07 < 0.06 < 0.09	0.77 < 0.34 < 0.13	1
500.5	87.5	47.5 < 0.12 <	0.08 < 0.09 < 0.10	0.58 < 0.17 < 0.10	1
500.5	72.5	42.5 < 0.10 <	0.02 < 0.04 < 0.04	0.42 < 0.17 < 0.12	1
500.5	77.5	42.5 < 0.10 <	0.06 < 0.03 < 0.06	0.34 < 0.19 < 0.09	1
500.5	75	45 < 0.10 <	0.04 < 0.03 < 0.07	0.34 < 0.14 < 0.10	1
500.5	72.5	47.5 < 0.10 <	0.05 < 0.05 < 0.09	0.91 < 0.25 < 0.15	1
500.5	77.5	47.5 < 0.10 <	0.04 < 0.07 < 0.07	0.76 < 0.34 < 0.23	1
500.5	62.5	42.5 < 0.11 <	0.06 < 0.06 < 0.08	0.80 < 0.52 < 0.18	1
500.5	67.5	42.5 < 0.11 <	0.08 < 0.04 < 0.07	0.49 < 0.34 < 0.20	1
500.5	65	45 < 0.11 <	0.05 < 0.03 < 0.07	0.07 < 0.36 < 0.09	1
500.5	62.5	47.5 < 0.11 <	0.08 < 0.07 < 0.08	1.11 < 0.21 < 0.11	1
500.5	67.5	47.5 < 0.11 <	0.08 < 0.06 < 0.10	0.91 < 0.33 < 0.27	1
500.5	52.5	42.5 < 0.12 <	0.06 < 0.06 < 0.11	2.25 < 0.33 < 0.26	1
500.5	57.5	42.5 < 0.12 <	0.06 < 0.09 < 0.09	1.21 < 0.51 < 0.16	1
500.5	55	45 < 0.12 <	0.07 < 0.07 < 0.08	1.05 < 0.45 < 0.09	1
500.5	52.5	47.5 < 0.12 <	0.06 < 0.04 < 0.08	1.88 < 0.21 < 0.28	1
500.5	57.5	47.5 < 0.12 <	0.06 < 0.04 < 0.10	0.94 < 0.33 < 0.10	1

.002 <	0.022 <	0.012 <	0.015	0.000 < 0.001 < 0.015	0.000	0.008947
.002 <	0.022 <	0.012 <	0.015	0.000 < 0.001 < 0.018	0.000	
.002 <	0.067 <	0.024 <	0.033	0.051 < 0.002 < 0.052	0.051	
.002 <	0.067 <	0.052 <	0.043	0.203 < 0.002 < 0.050	0.203	
.002 <	0.067 <	0.085 <	0.052	0.202 < 0.004 < 0.060	0.202	
					0.273158	
.002 <	0.011 <	0.012 <	0.011 <	0.000 < 0.001 < 0.035	0.000	
.002 <	0.019 <	0.015 <	0.011	0.000 < 0.002 < 0.032	0.000	
.002 <	0.022 <	0.024 <	0.013	0.000 < 0.002 < 0.013	0.000	
.002 <	0.033 <	0.024 <	0.026	0.000 < 0.001 < 0.042	0.000	
.002 <	0.048 <	0.036 <	0.031	0.106 < 0.003 < 0.038	0.106	
					0.063684	
.002 <	0.030 <	0.012 <	0.011	0.000 < 0.001 < 0.022	0.000	
.002 <	0.026 <	0.015 <	0.013	0.000 < 0.002 < 0.035	0.000	
.002 <	0.022 <	0.018 <	0.019	0.066 < 0.003 < 0.017	0.066	
.002 <	0.019 <	0.027 <	0.015	0.480 < 0.003 < 0.017	0.480	
.002 <	0.044 <	0.079 <	0.037	0.190 < 0.002 < 0.073	0.190	
					0.441579	
.002 <	0.019 <	0.030 <	0.013	0.292 < 0.002 < 0.032	0.292	
.002 <	0.015 <	0.009 <	0.013	0.000 < 0.002 < 0.028	0.000	
.002 <	0.033 <	0.033 <	0.017	0.277 < 0.003 < 0.017	0.277	
.002 <	0.056 <	0.036 <	0.019	0.211 < 0.001 < 0.038	0.211	
.002 <	0.033 <	0.009 <	0.017	0.000 < 0.001 < 0.018	0.000	
					0.468421	
.002 <	0.033 <	0.045 <	0.015	0.247 < 0.001 < 0.028	0.247	
.002 <	0.030 <	0.015 <	0.013	0.204 < 0.001 < 0.042	0.204	
.002 <	0.015 <	0.012 <	0.011	0.122 < 0.003 < 0.035	0.122	
.002 <	0.022 <	0.021 <	0.013	0.230 < 0.002 < 0.027	0.230	
.002 <	0.011 <	0.024 <	0.013	0.142 < 0.003 < 0.032	0.142	
					0.567368	
.002 <	0.022 <	0.015 <	0.011	0.000 < 0.001 < 0.012	0.000	
.002 <	0.096 <	0.030 <	0.015	0.138 < 0.001 < 0.018	0.138	
.002 <	0.011 <	0.009 <	0.009	0.155 < 0.001 < 0.023	0.155	
.002 <	0.015 <	0.012 <	0.009	0.000 < 0.002 < 0.010	0.000	
.002 <	0.022 <	0.021 <	0.013	0.117 < 0.002 < 0.012	0.117	
					0.245789	
.002 <	0.019 <	0.006 <	0.013	0.000 < 0.001 < 0.017	0.000	
.002 <	0.019 <	0.009 <	0.007	0.000 < 0.001 < 0.013	0.000	
.002 <	0.019 <	0.012 <	0.017	0.000 < 0.002 < 0.042	0.000	
.002 <	0.026 <	0.018 <	0.017	0.000 < 0.002 < 0.022	0.000	
.002 <	0.030 <	0.027 <	0.019	0.000 < 0.001 < 0.017	0.000	
					0	
.002 <	0.007 <	0.012 <	0.007	0.000 < 0.001 < 0.020	0.000	
.002 <	0.022 <	0.009 <	0.011	0.000 < 0.001 < 0.015	0.000	
.002 <	0.015 <	0.009 <	0.013	0.000 < 0.001 < 0.017	0.000	
.002 <	0.019 <	0.015 <	0.017	0.000 < 0.001 < 0.025	0.000	
.002 <	0.015 <	0.021 <	0.013	0.000 < 0.002 < 0.038	0.000	
					0	
.002 <	0.022 <	0.018 <	0.015	0.000 < 0.003 < 0.030	0.000	
.002 <	0.030 <	0.012 <	0.013	0.000 < 0.002 < 0.033	0.000	
.002 <	0.019 <	0.009 <	0.013	0.000 < 0.002 < 0.015	0.000	
.002 <	0.030 <	0.021 <	0.015	0.000 < 0.001 < 0.018	0.000	
.002 <	0.030 <	0.018 <	0.019	0.000 < 0.002 < 0.045	0.000	
					0	
.002 <	0.022 <	0.018 <	0.020	0.088 < 0.002 < 0.043	0.088	
.002 <	0.022 <	0.027 <	0.017	0.000 < 0.003 < 0.027	0.000	
.002 <	0.026 <	0.021 <	0.015	0.000 < 0.002 < 0.015	0.000	
.002 <	0.022 <	0.012 <	0.015	0.055 < 0.001 < 0.047	0.055	
.002 <	0.022 <	0.012 <	0.019	0.000 < 0.002 < 0.017	0.000	

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076 -20

TABLE 500.5-2

500.5	42.5	42.5	< 0.11	< 0.15	< 0.10	< 0.13	2.80	< 0.45	< 0.25	1
500.5	47.5	42.5	< 0.11	< 0.07	< 0.05	< 0.13	2.67	< 0.42	< 0.19	1
500.5	45	45	< 0.11	< 0.07	< 0.09	< 0.12	2.42	< 0.35	< 0.13	1
500.5	42.5	47.5	< 0.11	< 0.10	< 0.10	< 0.13	4.22	< 0.66	< 0.31	1
500.5	47.5	47.5	< 0.11	< 0.13	< 0.08	< 0.12	2.69	< 0.41	< 0.34	1
500.5	32.5	42.5	0.14	< 0.07	< 0.06	< 0.11	2.39	< 0.31	< 0.16	1
500.5	37.5	42.5	0.14	< 0.05	< 0.05	< 0.10	4.27	< 0.61	< 0.19	1
500.5	35	45	0.14	< 0.08	< 0.08	< 0.13	3.02	< 0.37	< 0.13	1
500.5	32.5	47.5	0.14	< 0.07	< 0.05	< 0.12	2.85	< 0.29	< 0.25	1
500.5	37.5	47.5	0.14	< 0.09	< 0.05	< 0.12	3.05	< 0.40	< 0.20	1
500.5	22.5	42.5	< 0.11	< 0.06	< 0.11	< 0.10	4.42	< 0.54	< 0.29	1
500.5	27.5	42.5	< 0.11	< 0.09	< 0.11	< 0.13	1.75	< 0.48	< 0.22	1
500.5	25	45	< 0.11	< 0.07	< 0.13	< 0.13	3.41	< 0.27	< 0.19	1
500.5	22.5	47.5	< 0.11	< 0.09	< 0.12	< 0.13	3.13	< 0.54	< 0.19	1
500.5	27.5	47.5	< 0.11	< 0.18	< 0.06	< 0.15	2.97	< 0.59	< 0.20	1
500.5	12.5	42.5	< 0.11	< 0.05	< 0.06	< 0.09	2.53	< 0.30	< 0.14	1
500.5	17.5	42.5	< 0.11	< 0.09	< 0.04	< 0.08	2.05	< 0.47	< 0.07	1
500.5	15	45	< 0.11	< 0.09	< 0.04	< 0.09	2.75	< 0.41	< 0.18	1
500.5	12.5	47.5	< 0.11	< 0.07	< 0.04	< 0.11	3.48	< 0.68	< 0.25	1
500.5	17.5	47.5	< 0.11	< 0.06	< 0.07	< 0.09	1.31	< 0.21	< 0.11	1
500.5	2.5	42.5	< 0.11	< 0.10	< 0.07	< 0.07	1.11	< 0.28	< 0.07	1
500.5	7.5	42.5	< 0.11	< 0.08	< 0.20	< 0.12	3.59	< 0.38	< 0.17	1
500.5	5	45	< 0.11	< 0.06	< 0.08	< 0.09	1.94	< 0.22	< 0.11	1
500.5	2.5	47.5	< 0.11	< 0.05	< 0.02	< 0.06	0.97	< 0.14	< 0.14	1
500.5	7.5	47.5	< 0.11	< 0.04	< 0.04	< 0.04	0.62	< 0.12	< 0.06	1
500.5	2.55	42.5	< 0.11	< 0.06	< 0.05	< 0.08	1.87	< 0.19	< 0.26	1
500.5	7.55	42.5	< 0.11	< 0.15	< 0.10	< 0.10	1.78	< 0.25	< 0.10	1
500.5	55	45	< 0.11	< 0.07	< 0.05	< 0.10	1.92	< 0.17	< 0.17	1
500.5	7.55	47.5	< 0.11	< 0.11	< 0.07	< 0.21	2.68	< 0.55	< 0.31	1
500.5	2.55	47.5	< 0.11	< 0.08	< 0.05	< 0.13	1.85	< 0.59	< 0.26	1
500.5	17.55	42.5	< 0.11	< 0.09	< 0.09	< 0.15	3.00	< 0.45	< 0.40	1
500.5	12.55	42.5	< 0.11	< 0.08	< 0.04	< 0.09	2.35	< 0.57	< 0.13	1
500.5	155	45	< 0.11	< 0.05	< 0.06	< 0.09	1.30	< 0.16	< 0.11	1
500.5	17.55	47.5	< 0.11	< 0.06	< 0.03	< 0.07	0.77	< 0.31	< 0.10	1
500.5	12.55	47.5	< 0.11	< 0.10	< 0.08	< 0.13	2.69	< 0.40	< 0.30	1
500.5	22.55	42.5	0.17	< 0.19	< 0.14	< 0.17	0.87	< 1.03	< 0.47	1
500.5	27.55	42.5	0.17	< 0.11	< 0.13	< 0.16	0.81	< 1.10	< 0.48	1
500.5	255	45	0.17	< 0.23	< 0.16	< 0.17	1.11	< 1.01	< 0.41	1
500.5	27.55	47.5	0.17	< 0.30	< 0.15	< 0.14	1.05	< 1.05	< 0.51	1
500.5	22.55	47.5	0.17	< 0.19	< 0.12	< 0.12	0.59	< 0.73	< 0.48	1

ABOVE DATA PREVIOUSLY SUBMITTED 11/21/96 BELOW DATA IS NEW

M	E									
500.5	52.5	7.5W	< 0.10	< 0.06	< 0.02	< 0.06	1.27	< 0.32	< 0.10	1
500.5	*57.5	7.5W	< 0.10	< 0.05	< 0.09	< 0.06	0.40	< 0.31	< 0.08	1
500.5	55	5W	< 0.10	< 0.03	< 0.04	< 0.06	2.46	< 0.36	< 0.15	1
500.5	52.5	2.5W	< 0.10	< 0.05	< 0.04	< 0.05	0.11	< 0.28	< 0.11	1
500.5	*57.5	2.5W	< 0.10	< 0.03	< 0.05	< 0.04	0.26	< 0.25	< 0.16	1
500.5	*62.5	7.5W	0.33	< 0.04	< 0.02	< 0.05	0.18	< 0.19	< 0.07	1
500.5	*67.5	7.5W	0.33	< 0.05	< 0.03	< 0.08	0.39	< 0.38	< 0.18	1

					0.085789
0.002 <	0.056 <	0.030 <	0.024	0.136 < 0.002 < 0.042	0.136
0.002 <	0.026 <	0.015 <	0.024	0.125 < 0.002 < 0.032	0.125
0.002 <	0.026 <	0.027 <	0.022	0.103 < 0.002 < 0.022	0.103
0.002 <	0.037 <	0.030 <	0.024	0.261 < 0.003 < 0.052	0.261
0.002 <	0.048 <	0.024 <	0.022	0.126 < 0.002 < 0.057	0.126
					0.45
0.003 <	0.026 <	0.018 <	0.020	0.100 < 0.002 < 0.027	0.103
0.003 <	0.019 <	0.015 <	0.019	0.265 < 0.003 < 0.032	0.268
0.003 <	0.030 <	0.024 <	0.024	0.155 < 0.002 < 0.022	0.158
0.003 <	0.026 <	0.015 <	0.022	0.140 < 0.002 < 0.042	0.143
0.003 <	0.033 <	0.015 <	0.022	0.158 < 0.002 < 0.033	0.161
					0.499288
0.002 <	0.022 <	0.033 <	0.019	0.278 < 0.003 < 0.048	0.278
0.002 <	0.033 <	0.033 <	0.024	0.044 < 0.003 < 0.037	0.044
0.002 <	0.026 <	0.039 <	0.024	0.189 < 0.001 < 0.032	0.189
0.002 <	0.033 <	0.036 <	0.024	0.165 < 0.003 < 0.032	0.165
0.002 <	0.067 <	0.018 <	0.028	0.151 < 0.003 < 0.033	0.151
					0.496316
0.002 <	0.019 <	0.024 <	0.017	0.112 < 0.002 < 0.023	0.112
0.002 <	0.033 <	0.012 <	0.015	0.070 < 0.002 < 0.012	0.070
0.002 <	0.033 <	0.012 <	0.017	0.132 < 0.002 < 0.030	0.132
0.002 <	0.026 <	0.012 <	0.020	0.196 < 0.004 < 0.042	0.196
0.002 <	0.022 <	0.021 <	0.017	0.005 < 0.001 < 0.018	0.005
					0.308947
0.002 <	0.037 <	0.021 <	0.013	0.000 < 0.001 < 0.012	0.000
0.002 <	0.030 <	0.061 <	0.022	0.205 < 0.002 < 0.028	0.205
0.002 <	0.022 <	0.024 <	0.017	0.061 < 0.001 < 0.018	0.061
0.002 <	0.019 <	0.006 <	0.011	0.000 < 0.001 < 0.023	0.000
0.002 <	0.015 <	0.012 <	0.007	0.000 < 0.001 < 0.010	0.000
					0.159474
0.002 <	0.022 <	0.009 <	0.015	0.054 < 0.001 < 0.043	0.054
0.002 <	0.056 <	0.030 <	0.019	0.046 < 0.001 < 0.017	0.046
0.002 <	0.026 <	0.015 <	0.019	0.059 < 0.001 < 0.028	0.059
0.002 <	0.041 <	0.021 <	0.039	0.125 < 0.003 < 0.052	0.125
0.002 <	0.030 <	0.015 <	0.024	0.053 < 0.003 < 0.043	0.053
					0.202632
0.002 <	0.033 <	0.027 <	0.028	0.154 < 0.002 < 0.067	0.154
0.002 <	0.030 <	0.012 <	0.017	0.096 < 0.003 < 0.022	0.096
0.002 <	0.019 <	0.018 <	0.017	0.004 < 0.001 < 0.018	0.004
0.002 <	0.022 <	0.009 <	0.013	0.000 < 0.002 < 0.017	0.000
0.002 <	0.037 <	0.024 <	0.024	0.126 < 0.002 < 0.050	0.126
					0.228421
0.003 <	0.070 <	0.042 <	0.031	0.000 < 0.005 < 0.078	0.003
0.003 <	0.041 <	0.039 <	0.030	0.000 < 0.006 < 0.080	0.003
0.003 <	0.085 <	0.048 <	0.031	0.000 < 0.005 < 0.068	0.003
0.003 <	0.111 <	0.045 <	0.026	0.000 < 0.006 < 0.085	0.003
0.003 <	0.070 <	0.036 <	0.022	0.000 < 0.004 < 0.080	0.003
					0.01
0.002 <	0.022 <	0.006 <	0.011	0.002 < 0.002 < 0.017	0.002
0.002 <	0.018 <	0.029 <	0.010	0.035 < 0.002 < 0.014	0.035
0.002 <	0.010 <	0.013 <	0.011	0.106 < 0.002 < 0.025	0.106
0.002 <	0.019 <	0.012 <	0.010	0.000 < 0.002 < 0.018	0.000
0.002 <	0.012 <	0.015 <	0.008	0.023 < 0.001 < 0.026	0.023
					0.099457
0.006 <	0.015 <	0.006 <	0.008	0.016 < 0.001 < 0.012	0.022
0.006 <	0.019 <	0.009 <	0.015	0.034 < 0.002 < 0.030	0.041

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076-21

TABLE 500.5-2

500.5	*65	5W	0.33 <	0.05 < 0.04 < 0.06 < 0.10 < 0.22 < 0.07	1
500.5	*62.5	2.5W	0.33 <	0.04 < 0.05 < 0.06 < 0.29 < 0.48 < 0.20	1
500.5	*67.5	2.5W	0.33 <	0.07 < 0.04 < 0.07 < 0.85 < 0.31 < 0.17	1
500.5	72.5	7.5W	0.12 <	0.19 < 0.16 < 0.12 < 0.47 < 0.79 < 0.38	1
500.5	77.5	7.5W	0.12 <	0.22 < 0.15 < 0.11 < 2.15 < 1.01 < 0.53	1
500.5	75	5W	0.12 <	0.16 < 0.14 < 0.11 < 0.17 < 1.11 < 0.53	1
500.5	72.5	2.5W	0.12 <	0.22 < 0.18 < 0.19 < 0.29 < 1.07 < 0.52	1
500.5	77.5	2.5W	0.12 <	0.20 < 0.12 < 0.16 < 0.96 < 0.88 < 0.54	1
500.5	82.5	7.5W	0.33 <	0.05 < 0.04 < 0.08 < 1.87 < 0.28 < 0.15	1
500.5	87.5	7.5W	0.33 <	0.05 < 0.06 < 0.07 < 1.79 < 0.30 < 0.22	1
500.5	85	5W	0.33 <	0.04 < 0.05 < 0.09 < 1.02 < 0.32 < 0.08	1
500.5	82.5	2.5W	0.33 <	0.05 < 0.07 < 0.08 < 0.91 < 0.38 < 0.10	1
500.5	87.5	2.5W	0.33 <	0.11 < 0.03 < 0.07 < 1.16 < 0.19 < 0.23	1
500.5	*92.5	7.5W	< 0.20 <	0.05 < 0.06 < 0.07 < 0.36 < 0.23 < 0.10	1
500.5	*97.5	7.5W	< 0.20 <	0.03 < 0.03 < 0.14 < 0.07 < 0.25 < 0.08	1
500.5	*95	5W	< 0.20 <	0.05 < 0.03 < 0.04 < 0.14 < 0.40 < 0.10	1
500.5	*92.5	2.5W	< 0.20 <	0.05 < 0.05 < 0.08 < 0.44 < 0.45 < 0.09	1
500.5	*97.5	2.5W	< 0.20 <	0.06 < 0.05 < 0.05 < 0.11 < 0.37 < 0.09	1
500.5	102.5	7.5W	0.58 <	0.04 < 0.05 < 0.06 < 0.51 < 0.18 < 0.17	1
500.5	107.5	7.5W	0.58 <	0.10 < 0.07 < 0.08 < 0.68 < 0.33 < 0.14	1
500.5	105	5W	0.58 <	0.05 < 0.03 < 0.06 < 0.08 < 0.29 < 0.07	1
500.5	102.5	2.5W	0.58 <	0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00	1
500.5	107.5	2.5W	0.58 <	0.11 < 0.03 < 0.18 < 0.57 < 0.38 < 0.14	1
500.5	112.5	7.5W	< 0.12 <	0.11 < 0.14 < 0.13 < 0.90 < 0.82 < 0.47	1
500.5	117.5	7.5W	< 0.12 <	0.20 < 0.15 < 0.10 < 0.14 < 0.91 < 0.40	1
500.5	115	5W	< 0.12 <	0.14 < 0.18 < 0.15 < 0.47 < 1.05 < 0.52	1
500.5	112.5	2.5W	< 0.12 <	0.16 < 0.14 < 0.11 < 0.86 < 1.01 < 0.51	1
500.5	117.5	2.5W	< 0.12 <	0.16 < 0.12 < 0.14 < 1.00 < 0.86 < 0.51	1
500.5	122.5	7.5W	< 0.30 <	0.04 < 0.04 < 0.05 < 0.11 < 0.19 < 0.12	1
500.5	127.5	7.5W	< 0.11 <	0.03 < 0.04 < 0.05 < 0.07 < 0.41 < 0.07	1
500.5	125	5W	< 0.11 <	0.06 < 0.07 < 0.09 < 0.80 < 0.30 < 0.31	1
500.5	122.5	2.5W	< 0.11 <	0.05 < 0.03 < 0.06 < 0.16 < 0.50 < 0.19	1
500.5	127.5	2.5W	< 0.11 <	0.04 < 0.06 < 0.06 < 0.15 < 0.24 < 0.17	1
500.5	132.5	7.5W	0.18 <	0.11 < 0.08 < 0.12 < 0.09 < 0.70 < 0.35	1
500.5	137.5	7.5W	0.18 <	0.11 < 0.09 < 0.09 < 0.13 < 0.72 < 0.34	1
500.5	135	5W	0.18 <	0.15 < 0.12 < 0.13 < 0.13 < 0.79 < 0.32	1
500.5	132.5	2.5W	0.18 <	0.14 < 0.07 < 0.12 < 0.27 < 0.72 < 0.39	1
500.5	137.5	2.5W	0.18 <	0.15 < 0.11 < 0.13 < 0.28 < 0.80 < 0.33	1
500.5	52.5	2.5	< 0.30 <	0.03 < 0.02 < 0.05 < 0.06 < 0.40 < 0.08	1
500.5	*57.5	2.5	< 0.30 <	0.03 < 0.02 < 0.05 < 0.07 < 0.29 < 0.10	1
500.5	*55	5	< 0.30 <	0.07 < 0.03 < 0.14 < 0.06 < 0.18 < 0.13	1
500.5	*52.5	7.5	< 0.30 <	0.04 < 0.04 < 0.06 < 0.07 < 0.22 < 0.15	1
500.5	*57.5	7.5	< 0.30 <	0.04 < 0.02 < 0.05 < 0.06 < 0.22 < 0.07	1
500.5	*62.5	2.5	< 0.20 <	0.06 < 0.05 < 0.05 < 0.03 < 0.23 < 0.13	1
500.5	*67.5	2.5	< 0.20 <	0.04 < 0.03 < 0.14 < 0.06 < 0.29 < 0.06	1
500.5	*65	5	< 0.20 <	0.04 < 0.04 < 0.05 < 0.26 < 0.19 < 0.13	1
500.5	*62.5	7.5	< 0.20 <	0.06 < 0.02 < 0.14 < 0.10 < 0.36 < 0.06	1
500.5	*67.5	7.5	< 0.20 <	0.09 < 0.06 < 0.06 < 0.36 < 0.26 < 0.12	1
500.5	72.5	2.5	< 0.11 <	0.15 < 0.10 < 0.08 < 0.18 < 0.69 < 0.31	1
500.5	77.5	2.5	< 0.11 <	0.13 < 0.08 < 0.09 < 0.47 < 0.68 < 0.39	1

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

0.006 < 0.019 < 0.012 < 0.011 < 0.009 < 0.001 < 0.012	0.006
0.006 < 0.015 < 0.009 < 0.011 < 0.025 < 0.003 < 0.033	0.032
0.006 < 0.026 < 0.012 < 0.013 < 0.075 < 0.002 < 0.028	0.081
	0.109254
0.002 < 0.070 < 0.048 < 0.022 < 0.000 < 0.004 < 0.063	0.002
0.002 < 0.081 < 0.045 < 0.020 < 0.079 < 0.005 < 0.088	0.081
0.002 < 0.059 < 0.042 < 0.020 < 0.000 < 0.006 < 0.088	0.002
0.002 < 0.081 < 0.055 < 0.035 < 0.000 < 0.006 < 0.087	0.002
0.002 < 0.074 < 0.036 < 0.030 < 0.000 < 0.005 < 0.090	0.002
	0.054427
0.006 < 0.019 < 0.012 < 0.015 < 0.054 < 0.001 < 0.025	0.061
0.006 < 0.019 < 0.018 < 0.013 < 0.047 < 0.002 < 0.037	0.054
0.006 < 0.015 < 0.015 < 0.017 < 0.000 < 0.002 < 0.013	0.006
0.006 < 0.019 < 0.021 < 0.015 < 0.000 < 0.002 < 0.017	0.006
0.006 < 0.041 < 0.009 < 0.013 < 0.000 < 0.001 < 0.038	0.006
	0.080464
0.004 < 0.019 < 0.018 < 0.012 < 0.032 < 0.001 < 0.017	0.032
0.004 < 0.011 < 0.009 < 0.026 < 0.006 < 0.001 < 0.013	0.000
0.004 < 0.019 < 0.009 < 0.007 < 0.012 < 0.002 < 0.017	0.000
0.004 < 0.019 < 0.015 < 0.015 < 0.039 < 0.002 < 0.015	0.039
0.004 < 0.022 < 0.015 < 0.009 < 0.010 < 0.002 < 0.015	0.000
	0.042105
0.011 < 0.015 < 0.015 < 0.011 < 0.000 < 0.001 < 0.028	0.011
0.011 < 0.037 < 0.021 < 0.015 < 0.000 < 0.002 < 0.023	0.011
0.011 < 0.019 < 0.009 < 0.011 < 0.000 < 0.002 < 0.012	0.011
0.011 < 0.000 < 0.000 < 0.000 < 0.000 < 0.000 < 0.000	0.011
0.011 < 0.041 < 0.009 < 0.032 < 0.000 < 0.002 < 0.023	0.011
	0.034118
0.002 < 0.041 < 0.042 < 0.024 < 0.000 < 0.004 < 0.078	0.000
0.002 < 0.074 < 0.045 < 0.019 < 0.000 < 0.005 < 0.067	0.000
0.002 < 0.052 < 0.055 < 0.028 < 0.000 < 0.006 < 0.087	0.000
0.002 < 0.059 < 0.042 < 0.020 < 0.000 < 0.005 < 0.085	0.000
0.002 < 0.059 < 0.036 < 0.026 < 0.000 < 0.005 < 0.085	0.000
	0
0.006 < 0.015 < 0.012 < 0.009 < 0.000 < 0.001 < 0.020	0.000
0.002 < 0.011 < 0.012 < 0.009 < 0.000 < 0.002 < 0.012	0.000
0.002 < 0.022 < 0.021 < 0.017 < 0.000 < 0.002 < 0.052	0.000
0.002 < 0.019 < 0.009 < 0.011 < 0.000 < 0.003 < 0.032	0.000
0.002 < 0.015 < 0.018 < 0.011 < 0.000 < 0.001 < 0.028	0.000
	0
0.004 < 0.041 < 0.024 < 0.022 < 0.000 < 0.004 < 0.058	0.004
0.004 < 0.041 < 0.027 < 0.017 < 0.000 < 0.004 < 0.057	0.004
0.004 < 0.056 < 0.036 < 0.024 < 0.000 < 0.004 < 0.053	0.004
0.004 < 0.052 < 0.021 < 0.022 < 0.000 < 0.004 < 0.065	0.004
0.004 < 0.056 < 0.033 < 0.024 < 0.000 < 0.004 < 0.055	0.004
	0.010588
0.006 < 0.011 < 0.006 < 0.009 < 0.000 < 0.002 < 0.013	0.000
0.006 < 0.011 < 0.006 < 0.009 < 0.006 < 0.002 < 0.017	0.000
0.006 < 0.026 < 0.009 < 0.026 < 0.005 < 0.001 < 0.022	0.000
0.006 < 0.015 < 0.012 < 0.011 < 0.006 < 0.001 < 0.025	0.000
0.006 < 0.015 < 0.006 < 0.009 < 0.005 < 0.001 < 0.012	0.000
	0
0.004 < 0.022 < 0.015 < 0.009 < 0.003 < 0.001 < 0.022	0.000
0.004 < 0.015 < 0.009 < 0.026 < 0.005 < 0.002 < 0.010	0.000
0.004 < 0.015 < 0.012 < 0.009 < 0.023 < 0.001 < 0.022	0.023
0.004 < 0.022 < 0.006 < 0.026 < 0.009 < 0.002 < 0.010	0.000
0.004 < 0.033 < 0.018 < 0.011 < 0.032 < 0.001 < 0.020	0.032
	0.032632
0.002 < 0.056 < 0.030 < 0.015 < 0.000 < 0.004 < 0.052	0.000
0.002 < 0.048 < 0.024 < 0.017 < 0.000 < 0.004 < 0.065	0.000

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TABLE 500.5-2

500.5	75	5	< 0.11	< 0.10	< 0.21	< 0.19	0.16	< 1.27	< 0.52	1
500.5	72.5	7.5	< 0.13	< 0.07	< 0.02	< 0.05	0.11	< 0.24	< 0.14	1
500.5	77.5	7.5	< 0.13	< 0.06	< 0.04	< 0.05	0.19	< 0.30	< 0.09	1
500.5	82.5	2.5	< 0.40	< 0.04	< 0.03	< 0.17	0.59	< 0.50	< 0.15	1
500.5	87.5	2.5	< 0.40	< 0.04	< 0.04	< 0.09	0.93	< 0.34	< 0.26	1
500.5	85	5	< 0.40	< 0.06	< 0.05	< 0.08	0.71	< 0.27	< 0.17	1
500.5	82.5	7.5	< 0.40	< 0.06	< 0.02	< 0.07	1.07	< 0.30	< 0.09	1
500.5	87.5	7.5	< 0.40	< 0.05	< 0.08	< 0.08	0.72	< 0.45	< 0.23	1
500.5	92.5	2.5	0.61	< 0.09	< 0.03	< 0.15	1.08	< 0.33	< 0.11	1
500.5	*97.5	2.5	0.61	0.45	< 0.03	< 0.06	0.36	< 0.21	< 0.22	1
500.5	*95	5	0.61	0.72	< 0.05	< 0.06	< 0.08	< 0.40	< 0.13	1
500.5	*92.5	7.5	0.61	< 0.10	< 0.08	< 0.07	0.96	< 0.13	< 0.14	1
500.5	*97.5	7.5	0.61	0.16	< 0.03	< 0.13	< 0.08	< 0.31	< 0.05	1
500.5	102.5	2.5	1.00	0.37	< 0.09	< 0.08	1.17	< 0.27	< 0.18	1
500.5	107.5	2.5	1.00	< 0.11	< 0.17	< 0.20	1.01	< 0.61	< 0.23	1
500.5	*105	5	1.00	< 0.05	< 0.02	< 0.05	0.24	< 0.31	< 0.07	1
500.5	*102.5	7.5	1.00	0.95	< 0.07	< 0.07	0.44	< 0.32	< 0.19	1
500.5	107.5	7.5	1.00	< 0.07	< 0.08	< 0.07	0.64	< 0.45	< 0.10	1
500.5	112.5	2.5	0.19	< 0.13	< 0.13	< 0.14	0.74	< 0.85	< 0.40	1
500.5	117.5	2.5	0.19	< 0.19	< 0.11	< 0.17	0.75	< 0.91	< 0.45	1
500.5	115	5	0.19	< 0.25	< 0.15	< 0.15	1.75	< 1.01	< 0.58	1
500.5	112.5	7.5	0.19	< 0.12	< 0.15	< 0.18	0.88	< 0.80	< 0.47	1
500.5	117.5	7.5	0.19	< 0.17	< 0.16	< 0.18	1.77	< 0.96	< 0.56	1
500.5	122.5	2.5	0.24	< 0.07	< 0.06	< 0.07	1.45	< 0.10	< 0.20	1
500.5	127.5	2.5	0.32	< 0.06	< 0.07	< 0.08	1.98	< 0.45	< 0.12	1
500.5	125	5	0.32	< 0.11	< 0.06	< 0.35	6.07	< 0.83	< 0.37	1
500.5	122.5	7.5	0.24	< 0.10	< 0.10	< 0.10	3.65	< 0.90	< 0.40	1
500.5	127.5	7.5	0.24	< 0.09	< 0.10	< 0.10	3.46	< 0.60	< 0.30	1
500.5	132.5	2.5	< 0.30	< 0.04	< 0.03	< 0.07	1.07	< 0.29	< 0.09	1
500.5	137.5	2.5	< 0.12	< 0.11	< 0.07	< 0.07	0.49	< 0.43	< 0.16	1
500.5	135	5	< 0.12	< 0.10	< 0.09	< 0.14	< 0.16	< 0.26	< 0.16	1
500.5	132.5	7.5	< 0.20	< 0.11	< 0.10	< 0.11	2.47	< 0.33	< 0.36	1
500.5	137.5	7.5	< 0.12	< 0.04	< 0.02	< 0.05	< 0.03	< 0.20	< 0.11	1
500.5	*52.5	12.5	< 0.20	< 0.03	< 0.02	< 0.05	0.11	< 0.29	< 0.10	1
500.5	*57.5	12.5	< 0.20	< 0.06	< 0.05	< 0.05	0.08	< 0.19	< 0.11	1
500.5	*55	15	< 0.20	< 0.06	< 0.05	< 0.13	0.08	< 0.41	< 0.16	1
500.5	*52.5	17.5	< 0.20	< 0.03	< 0.04	< 0.05	0.09	< 0.13	< 0.20	1
500.5	*57.5	17.5	< 0.20	< 0.03	< 0.02	< 0.07	0.08	< 0.13	< 0.16	1
500.5	*62.5	12.5	0.50	< 0.07	< 0.03	< 0.05	0.27	< 0.33	< 0.08	1
500.5	*67.5	12.5	0.50	< 0.05	< 0.04	< 0.06	0.06	< 0.38	< 0.17	1
500.5	*65	15	0.50	< 0.04	< 0.05	< 0.07	0.09	< 0.34	< 0.13	1
500.5	*62.5	17.5	0.50	0.09	< 0.02	< 0.14	0.07	< 0.28	< 0.08	1
500.5	*67.5	17.5	0.50	< 0.03	< 0.04	< 0.06	0.06	< 0.35	< 0.17	1
500.5	*72.5	12.5	1.00	< 0.07	< 0.06	< 0.07	0.77	< 0.46	< 0.14	1
500.5	*77.5	12.5	1.00	< 0.05	< 0.05	< 0.07	1.20	< 0.23	< 0.11	1
500.5	*75	15	0.12	< 0.17	< 0.16	< 0.16	0.36	< 1.07	< 0.58	1
500.5	*72.5	17.5	0.12	< 0.14	< 0.10	< 0.09	0.29	< 0.67	< 0.25	1
500.5	*77.5	17.5	0.12	< 0.13	< 0.08	< 0.12	0.20	< 0.67	< 0.33	1
500.5	82.5	12.5	1.00	< 0.03	< 0.03	< 0.17	0.41	< 0.47	< 0.15	1
500.5	87.5	12.5	1.00	< 0.10	< 0.05	< 0.21	2.44	< 1.61	< 0.10	1

002 <	0.037 <	0.064 <	0.035	0.000 <	0.007 <	0.087	0.000
003 <	0.026 <	0.006 <	0.009	0.000 <	0.001 <	0.023	0.000
003 <	0.022 <	0.012 <	0.009	0.000 <	0.002 <	0.015	0.000
0							
008 <	0.015 <	0.009 <	0.031	0.000 <	0.003 <	0.025	0.000
008 <	0.015 <	0.012 <	0.017	0.000 <	0.002 <	0.043	0.000
008 <	0.022 <	0.015 <	0.015	0.000 <	0.001 <	0.028	0.000
008 <	0.022 <	0.006 <	0.013	0.000 <	0.002 <	0.015	0.000
008 <	0.019 <	0.024 <	0.015	0.000 <	0.002 <	0.038	0.000
0							
012 <	0.033 <	0.009 <	0.028	0.000 <	0.002 <	0.018	0.012
012	0.167 <	0.009 <	0.011	0.032 <	0.001 <	0.037	0.210
012	0.267 <	0.015 <	0.011 <	0.007 <	0.002 <	0.022	0.279
012 <	0.037 <	0.024 <	0.013	0.084 <	0.001 <	0.023	0.096
012	0.059 <	0.009 <	0.024 <	0.007 <	0.002 <	0.008	0.071
0.400912							
020	0.137 <	0.027 <	0.015	0.000 <	0.001 <	0.030	0.157
020 <	0.041 <	0.052 <	0.037	0.000 <	0.003 <	0.038	0.020
020 <	0.019 <	0.006 <	0.009	0.021 <	0.002 <	0.012	0.041
020	0.352 <	0.021 <	0.013	0.039 <	0.002 <	0.032	0.410
020 <	0.026 <	0.024 <	0.013	0.000 <	0.002 <	0.017	0.020
0.387946							
004 <	0.048 <	0.039 <	0.026	0.000 <	0.004 <	0.067	0.004
004 <	0.070 <	0.033 <	0.031	0.000 <	0.005 <	0.075	0.004
004 <	0.093 <	0.045 <	0.028	0.044 <	0.005 <	0.097	0.048
004 <	0.044 <	0.045 <	0.033	0.000 <	0.004 <	0.078	0.004
004 <	0.063 <	0.048 <	0.033	0.046 <	0.005 <	0.093	0.049
0.064861							
005 <	0.026 <	0.018 <	0.013	0.018 <	0.001 <	0.033	0.022
006 <	0.022 <	0.021 <	0.015	0.064 <	0.002 <	0.020	0.070
006 <	0.041 <	0.018 <	0.065	0.423 <	0.004 <	0.062	0.429
005 <	0.037 <	0.030 <	0.019	0.211 <	0.005 <	0.067	0.215
005 <	0.033 <	0.030 <	0.019	0.194 <	0.003 <	0.050	0.199
0.561263							
006 <	0.015 <	0.011 <	0.013	0.000 <	0.002 <	0.015	0.000
002 <	0.041 <	0.021 <	0.013	0.000 <	0.002 <	0.027	0.000
002 <	0.037 <	0.027 <	0.026 <	0.000 <	0.001 <	0.027	0.000
004 <	0.041 <	0.030 <	0.020	0.107 <	0.002 <	0.060	0.107
002 <	0.015 <	0.006 <	0.009 <	0.000 <	0.001 <	0.018	0.000
0.064211							
004 <	0.011 <	0.006 <	0.009	0.010 <	0.002 <	0.017	0.010
004 <	0.022 <	0.015 <	0.009 <	0.007 <	0.001 <	0.018	0.000
004 <	0.022 <	0.015 <	0.024 <	0.007 <	0.002 <	0.027	0.000
004 <	0.011 <	0.012 <	0.009 <	0.008 <	0.001 <	0.033	0.000
004 <	0.011 <	0.006 <	0.013 <	0.007 <	0.001 <	0.027	0.000
0.005789							
010 <	0.026 <	0.009 <	0.009	0.024 <	0.002 <	0.013	0.033
010 <	0.020 <	0.012 <	0.011 <	0.005 <	0.002 <	0.028	0.010
010 <	0.015 <	0.015 <	0.013 <	0.008 <	0.002 <	0.022	0.010
010	0.033 <	0.006 <	0.026 <	0.006 <	0.001 <	0.013	0.043
010 <	0.011 <	0.012 <	0.011 <	0.005 <	0.002 <	0.028	0.010
0.063622							
020 <	0.026 <	0.018 <	0.013	0.068 <	0.002 <	0.023	0.087
020 <	0.019 <	0.015 <	0.013	0.105 <	0.001 <	0.018	0.125
02 <	0.063 <	0.048 <	0.030	0.032 <	0.006 <	0.097	0.034
02 <	0.052 <	0.030 <	0.017	0.025 <	0.004 <	0.042	0.028
02 <	0.048 <	0.024 <	0.022	0.018 <	0.004 <	0.055	0.020
0.176186							
020 <	0.011 <	0.009 <	0.031	0.000 <	0.002 <	0.025	0.020
020 <	0.037 <	0.015 <	0.039	0.104 <	0.009 <	0.017	0.124

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

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TABLE 500.5-2

500.5	85	15 < 0.11 <	0.12 < 0.11 < 0.10	0.08 < 0.71 < 0.28	1 <
500.5	82.5	17.5 < 0.11 <	0.14 < 0.14 < 0.11	0.95 < 1.06 < 0.43	1 <
500.5	87.5	17.5 < 0.11 <	0.19 < 0.08 < 0.11	0.14 < 0.82 < 0.29	1 <
500.5	92.5	12.5 < 0.25 <	0.18 < 0.06 < 0.12	2.22 < 0.90 < 0.12	1
500.5	97.5	12.5 < 0.25 <	0.13 < 0.05 < 0.07	1.66 < 0.21 < 0.15	1
500.5	95	15 < 0.25 <	0.06 < 0.02 < 0.06	0.62 < 0.30 < 0.12	1
500.5	92.5	17.5 < 0.25 <	0.08 < 0.03 < 0.05	0.46 < 0.22 < 0.10	1
500.5	97.5	17.5 < 0.25 <	0.03 < 0.02 < 0.04	0.29 < 0.16 < 0.06	1
500.5	105.5	12.5 < 0.31 <	0.06 < 0.05 < 0.06	0.12 < 0.33 < 0.07	1
500.5	107.5	12.5 < 0.31 <	0.03 < 0.04 < 0.14	0.27 < 0.24 < 0.15	1
500.5	105	15 < 0.31 <	0.06 < 0.03 < 0.06	0.74 < 0.25 < 0.15	1
500.5	102.5	17.5 < 0.31 <	0.07 < 0.05 < 0.04	0.24 < 0.28 < 0.12	1
500.5	107.5	17.5 < 0.31 <	0.06 < 0.03 < 0.06	0.78 < 0.33 < 0.20	1
500.5	112.5	12.5 < 0.50 <	0.05 < 0.03 < 0.07	0.71 < 0.41 < 0.11	1 <
500.5	117.5	12.5 < 0.50 <	0.03 < 0.02 < 0.06	1.61 < 0.42 < 0.18	1 <
500.5	115	15 < 0.50 <	0.05 < 0.06 < 0.09	1.69 < 0.34 < 0.13	1 <
500.5	112.5	17.5 < 0.50 <	0.04 < 0.04 < 0.17	0.75 < 0.46 < 0.18	1 <
500.5	117.5	17.5 < 0.50 <	0.07 < 0.05 < 0.12	1.66 < 0.42 < 0.14	1 <
500.5	122.5	12.5 < 0.20 <	0.14 < 0.14 < 0.16	10.00 < 0.79 < 0.18	1 <
500.5	127.5	12.5 < 0.20 <	0.25 < 0.24 < 0.34	7.68 < 1.14 < 0.82	1 <
500.5	125	15 < 1.60 <	0.33 < 0.26 < 0.26	3.43 < 1.16 < 0.80	1
500.5	122.5	17.5 < 0.46 <	0.07 < 0.17 < 0.11	11.16 < 0.74 < 0.37	1 <
500.5	127.5	17.5 < 0.81 <	0.32 < 0.21 < 0.11	4.21 < 1.51 < 0.79	1
500.5	132.5	12.5 < 0.30 <	0.13 < 0.12 < 0.10	4.99 < 0.44 < 0.38	1 <
500.5	137.5	12.5 < 0.30 <	0.05 < 0.05 < 0.08	1.63 < 0.32 < 0.16	1 <
500.5	135	15 < 0.30 <	0.03 < 0.04 < 0.05	2.36 < 0.14 < 0.15	1 <
500.5	132.5	17.5 < 0.30 <	0.09 < 0.07 < 0.09	7.82 < 0.38 < 0.31	1 <
500.5	137.5	17.5 < 0.30 <	0.08 < 0.08 < 0.08	7.12 < 0.31 < 0.18	1 <
500.5	52.5	22.5 < 0.12 <	0.07 < 0.07 < 0.07	2.95 < 0.40 < 0.20	1 <
500.5	57.5	22.5 < 0.12 <	0.03 < 0.03 < 0.04	0.61 < 0.20 < 0.10	1 <
500.5	55	25 < 0.12 <	0.10 < 0.09 < 0.10	1.93 < 0.70 < 0.30	1 <
500.5	52.5	27.5 < 0.12 <	0.10 < 0.06 < 0.06	3.50 < 0.30 < 0.20	1 <
500.5	57.5	27.5 < 0.12 <	0.08 < 0.10 < 0.10	4.88 < 0.60 < 0.30	1 <
500.5	62.5	22.5 < 0.11 <	0.04 < 0.06 < 0.05	0.08 < 0.24 < 0.16	1 <
500.5	67.5	22.5 < 0.11 <	0.07 < 0.03 < 0.05	0.10 < 0.35 < 0.10	1 <
500.5	65	25 < 0.11 <	0.18 < 0.09 < 0.09	1.74 < 0.48 < 0.18	1 <
500.5	62.5	27.5 < 0.20 <	0.10 < 0.06 < 0.06	0.84 < 0.39 < 0.17	1 <
500.5	67.5	27.5 < 0.11 <	0.07 < 0.07 < 0.07	2.31 < 0.41 < 0.28	1 <
500.5	72.5	22.5 < 0.14 <	0.13 < 0.09 < 0.09	1.56 < 0.38 < 0.30	1
500.5	77.5	22.5 < 0.30 <	0.04 < 0.04 < 0.06	1.28 < 0.26 < 0.12	1 <
500.5	75	25 < 0.30 <	0.15 < 0.05 < 0.09	4.86 < 0.49 < 0.12	1 <
500.5	72.5	27.5 < 0.30 <	0.11 < 0.04 < 0.09	3.28 < 0.53 < 0.18	1 <
500.5	77.5	27.5 < 0.30 <	0.07 < 0.07 < 0.12	3.07 < 0.50 < 0.27	1 <
500.5	*82.5	22.5 < 0.20 <	0.03 < 0.04 < 0.05	0.77 < 0.20 < 0.10	1 <
500.5	*87.5	22.5 < 0.20 <	0.03 < 0.06 < 0.05	0.73 < 0.26 < 0.11	1 <
500.5	*85	25 < 0.20 <	0.09 < 0.03 < 0.07	3.78 < 0.22 < 0.25	1 <
500.5	*82.5	27.5 < 0.20 <	0.11 < 0.06 < 0.16	1.96 < 0.41 < 0.16	1 <
500.5	*87.5	27.5 < 0.20 <	0.04 < 0.06 < 0.13	2.90 < 0.20 < 0.16	1 <
500.5	*92.5	22.5 < 0.20 <	0.05 < 0.04 < 0.13	0.54 < 0.27 < 0.09	1 <
500.5	*97.5	22.5 < 0.20 <	0.03 < 0.05 < 0.06	2.92 < 0.41 < 0.16	1 <

.002 < 0.044 < 0.033 < 0.019	0.000 < 0.004 < 0.047	0.000
.002 < 0.052 < 0.042 < 0.020	0.000 < 0.006 < 0.072	0.000
.002 < 0.070 < 0.024 < 0.020	0.000 < 0.004 < 0.048	0.000
		0.086161
.005 < 0.067 < 0.018 < 0.022	0.085 < 0.005 < 0.020	0.090
.005 < 0.048 < 0.015 < 0.013	0.036 < 0.001 < 0.025	0.041
.005 < 0.022 < 0.007 < 0.011	0.000 < 0.002 < 0.020	0.005
.005 < 0.030 < 0.009 < 0.009	0.000 < 0.001 < 0.017	0.005
.005 < 0.011 < 0.006 < 0.007	0.000 < 0.001 < 0.010	0.005
		0.087337
.006 < 0.022 < 0.015 < 0.011	0.000 < 0.002 < 0.012	0.006
.006 < 0.011 < 0.012 < 0.026	0.000 < 0.001 < 0.025	0.006
.006 < 0.022 < 0.009 < 0.011	0.000 < 0.001 < 0.025	0.006
.006 < 0.026 < 0.015 < 0.007	0.000 < 0.001 < 0.020	0.006
.006 < 0.022 < 0.009 < 0.011	0.000 < 0.002 < 0.033	0.006
		0.018235
.010 < 0.019 < 0.009 < 0.013	0.000 < 0.002 < 0.018	0.000
.010 < 0.011 < 0.007 < 0.011	0.032 < 0.002 < 0.030	0.032
.010 < 0.019 < 0.018 < 0.017	0.039 < 0.002 < 0.022	0.039
.010 < 0.015 < 0.012 < 0.031	0.000 < 0.002 < 0.030	0.000
.010 < 0.026 < 0.015 < 0.022	0.036 < 0.002 < 0.023	0.036
		0.063684
.004 < 0.052 < 0.042 < 0.030	0.768 < 0.004 < 0.030	0.768
.004 < 0.093 < 0.073 < 0.063	0.564 < 0.006 < 0.137	0.564
.031 < 0.122 < 0.079 < 0.048	0.191 < 0.006 < 0.133	0.223
.009 < 0.026 < 0.052 < 0.020	0.869 < 0.004 < 0.062	0.869
.016 < 0.119 < 0.064 < 0.020	0.260 < 0.008 < 0.132	0.296
		1.631628
.006 < 0.048 < 0.036 < 0.019	0.328 < 0.002 < 0.063	0.328
.006 < 0.019 < 0.015 < 0.015	0.033 < 0.002 < 0.027	0.033
.006 < 0.011 < 0.012 < 0.009	0.097 < 0.001 < 0.025	0.097
.006 < 0.033 < 0.021 < 0.017	0.576 < 0.002 < 0.052	0.576
.006 < 0.030 < 0.024 < 0.015	0.515 < 0.002 < 0.030	0.515
		0.93
.002 < 0.026 < 0.021 < 0.013	0.149 < 0.002 < 0.033	0.149
.002 < 0.011 < 0.009 < 0.007	0.000 < 0.001 < 0.017	0.000
.002 < 0.037 < 0.027 < 0.019	0.060 < 0.004 < 0.050	0.060
.002 < 0.037 < 0.018 < 0.011	0.197 < 0.002 < 0.033	0.234
.002 < 0.030 < 0.030 < 0.019	0.318 < 0.003 < 0.050	0.318
		0.456959
.002 < 0.017 < 0.018 < 0.009	0.000 < 0.001 < 0.027	0.000
.002 < 0.026 < 0.009 < 0.009	0.000 < 0.002 < 0.017	0.000
.002 < 0.067 < 0.027 < 0.017	0.043 < 0.003 < 0.030	0.043
.004 < 0.037 < 0.018 < 0.011	0.000 < 0.002 < 0.028	0.000
.002 < 0.026 < 0.021 < 0.013	0.093 < 0.002 < 0.047	0.093
		0.081579
.003 < 0.048 < 0.027 < 0.017	0.027 < 0.002 < 0.050	0.030
.006 < 0.015 < 0.012 < 0.011	0.003 < 0.001 < 0.020	0.003
.006 < 0.056 < 0.015 < 0.017	0.317 < 0.003 < 0.020	0.317
.006 < 0.041 < 0.012 < 0.017	0.178 < 0.003 < 0.030	0.178
.006 < 0.026 < 0.021 < 0.022	0.160 < 0.003 < 0.045	0.160
		0.412173
.004 < 0.011 < 0.012 < 0.009	0.068 < 0.001 < 0.017	0.068
.004 < 0.011 < 0.018 < 0.009	0.064 < 0.001 < 0.018	0.064
.004 < 0.033 < 0.009 < 0.013	0.332 < 0.001 < 0.042	0.332
.004 < 0.041 < 0.018 < 0.030	0.172 < 0.002 < 0.027	0.172
.004 < 0.015 < 0.018 < 0.024	0.254 < 0.001 < 0.027	0.254
		0.533684
.004 < 0.019 < 0.012 < 0.024	0.047 < 0.001 < 0.015	0.047
.004 < 0.011 < 0.015 < 0.011	0.256 < 0.002 < 0.027	0.256

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076-24

TABLE 500.5-2

500.5	*95	25	< 0.20	< 0.13	< 0.06	< 0.08	5.35	< 0.18	< 0.22	1
500.5	*92.5	27.5	< 0.20	< 0.09	< 0.06	< 0.14	3.19	< 0.39	< 0.18	1
500.5	*97.5	27.5	< 0.20	< 0.03	< 0.02	< 0.11	0.75	< 0.32	< 0.05	1
500.5	*102.5	22.5	< 0.30	< 0.03	< 0.05	< 0.13	0.33	< 0.27	< 0.08	1
500.5	107.5	22.5	< 0.30	< 0.13	< 0.07	< 0.08	1.57	< 0.41	< 0.11	1
500.5	105	25	< 0.30	< 0.03	< 0.02	< 0.06	0.55	< 0.17	< 0.10	1
500.5	*102.5	27.5	< 0.30	< 0.04	< 0.04	< 0.14	1.04	< 0.28	< 0.17	1
500.5	*107.5	27.5	< 0.30	< 0.04	< 0.05	< 0.15	1.13	< 0.18	< 0.09	1
500.5	112.5	22.5	0.36	< 0.19	< 0.13	< 0.13	1.78	< 0.79	< 0.44	1
500.5	117.5	22.5	< 0.30	< 0.06	< 0.12	< 0.08	4.34	< 0.54	< 0.20	1
500.5	115	25	0.36	< 0.19	< 0.10	< 0.12	0.58	< 0.81	< 0.35	1
500.5	112.5	27.5	< 0.30	< 0.06	< 0.08	< 0.15	2.22	< 0.41	< 0.10	1
500.5	117.5	27.5	0.36	< 0.32	< 0.25	< 0.19	4.64	< 1.22	< 0.74	1
500.5	122.5	22.5	< 0.20	< 0.07	< 0.10	< 0.08	5.22	< 0.25	< 0.40	1
500.5	127.5	22.5	< 0.20	< 0.10	< 0.10	< 0.20	6.97	< 0.20	< 0.22	1
500.5	125	25	0.19	< 0.07	< 0.07	< 0.07	4.83	< 0.30	< 0.20	1
500.5	122.5	27.5	0.19	< 0.06	< 0.02	< 0.05	2.43	< 0.31	< 0.09	1
500.5	127.5	27.5	0.19	< 0.05	< 0.05	< 0.05	3.27	< 0.30	< 0.20	1
500.5	132.5	22.5	< 0.30	< 0.07	< 0.10	< 0.08	4.67	< 0.37	< 0.17	1
500.5	137.5	22.5	0.36	< 0.08	< 0.14	< 0.11	8.42	< 0.43	< 0.47	1
500.5	135	25	< 0.30	< 0.07	< 0.03	< 0.06	0.60	< 0.22	< 0.09	1
500.5	132.5	27.5	< 0.30	< 0.07	< 0.07	< 0.09	3.28	< 0.46	< 0.22	1
500.5	137.5	27.5	0.29	< 0.05	< 0.08	< 0.17	2.98	< 0.31	< 0.10	1
500.5	52.5	32.5	0.16	< 0.31	< 0.25	< 0.18	3.41	< 1.31	< 0.78	1
500.5	57.5	32.5	0.16	< 0.12	< 0.12	< 0.09	2.08	< 0.73	< 0.38	1
500.5	55	35	0.16	< 0.22	< 0.18	< 0.18	2.32	< 1.14	< 0.64	1
500.5	52.5	37.5	0.16	< 0.18	< 0.15	< 0.12	3.67	< 0.68	< 0.44	1
500.5	57.5	37.5	0.16	< 0.24	< 0.19	< 0.14	2.29	< 0.64	< 0.69	1
500.5	62.5	32.5	< 0.10	< 0.06	< 0.15	< 0.09	1.30	< 0.19	< 0.17	1
500.5	67.5	32.5	< 0.10	< 0.06	< 0.10	< 0.11	2.80	< 0.45	< 0.33	1
500.5	65	35	< 0.10	< 0.09	< 0.08	< 0.10	1.52	< 0.42	< 0.17	1
500.5	62.5	37.5	< 0.10	< 0.07	< 0.04	< 0.06	1.51	< 0.37	< 0.19	1
500.5	67.5	37.5	< 0.10	< 0.11	< 0.05	< 0.06	1.10	< 0.43	< 0.17	1
500.5	72.5	32.5	0.16	< 0.42	< 0.26	< 0.31	3.39	< 1.60	< 0.74	1
500.5	77.5	32.5	0.16	< 0.23	< 0.19	< 0.19	1.84	< 1.03	< 0.52	1
500.5	75	35	0.16	< 0.29	< 0.27	< 0.32	0.97	< 1.93	< 0.92	1
500.5	72.5	37.5	0.16	< 0.17	< 0.18	< 0.20	3.04	< 0.88	< 0.46	1
500.5	77.5	37.5	0.16	< 0.26	< 0.22	< 0.18	2.99	< 1.67	< 0.85	1
500.5	82.5	32.5	< 0.12	< 0.07	< 0.05	< 0.06	3.10	< 0.30	< 0.20	1
500.5	87.5	32.5	< 0.12	< 0.05	< 0.04	< 0.04	3.03	< 0.30	< 0.10	1
500.5	85	35	< 0.12	< 0.06	< 0.04	< 0.04	2.09	< 0.20	< 0.10	1
500.5	82.5	37.5	< 0.12	< 0.10	< 0.10	< 0.10	2.22	< 0.70	< 0.30	1
500.5	87.5	37.5	< 0.12	< 0.04	< 0.03	< 0.04	0.30	< 0.20	< 0.10	1
500.5	92.5	32.5	< 0.09	< 0.10	< 0.06	< 0.07	1.82	< 0.27	< 0.09	1
500.5	97.5	32.5	< 0.09	< 0.09	< 0.06	< 0.06	2.11	< 0.31	< 0.13	1
500.5	95	35	< 0.09	< 0.09	< 0.09	< 0.07	2.09	< 0.44	< 0.10	1
500.5	92.5	37.5	< 0.09	< 0.07	< 0.06	< 0.10	3.99	< 0.19	< 0.16	1
500.5	97.5	37.5	< 0.09	< 0.16	< 0.13	< 0.10	4.12	< 0.53	< 0.21	1
500.5	*102.5	32.5	< 0.12	< 0.04	< 0.05	< 0.08	1.32	< 0.34	< 0.24	1
500.5	*107.5	32.5	< 0.12	< 0.07	< 0.04	< 0.07	0.80	< 0.37	< 0.10	1

4 <	0.048 < 0.018 < 0.015	0.469 < 0.001 < 0.037	0.469
4 <	0.033 < 0.018 < 0.026	0.280 < 0.002 < 0.030	0.280
4 <	0.011 < 0.006 < 0.020	0.066 < 0.002 < 0.008	0.066
			0.671053
6 <	0.011 < 0.015 < 0.024	0.029 < 0.001 < 0.013	0.029
6 <	0.048 < 0.021 < 0.015	0.028 < 0.002 < 0.018	0.028
6 <	0.011 < 0.006 < 0.011	0.000 < 0.001 < 0.017	0.000
6 <	0.015 < 0.012 < 0.026	0.091 < 0.001 < 0.028	0.091
6 <	0.015 < 0.015 < 0.028	0.099 < 0.001 < 0.015	0.099
			0.148421
7 <	0.070 < 0.039 < 0.024	0.046 < 0.004 < 0.073	0.054
6 <	0.022 < 0.036 < 0.015	0.271 < 0.003 < 0.033	0.271
7 <	0.070 < 0.030 < 0.022	0.000 < 0.004 < 0.058	0.007
6 <	0.022 < 0.024 < 0.028	0.085 < 0.002 < 0.017	0.085
7 <	0.119 < 0.076 < 0.035	0.297 < 0.006 < 0.123	0.304
			0.432706
4 <	0.026 < 0.030 < 0.015	0.348 < 0.001 < 0.067	0.348
4 <	0.037 < 0.030 < 0.037	0.502 < 0.001 < 0.037	0.502
4 <	0.026 < 0.021 < 0.013	0.314 < 0.002 < 0.033	0.318
4 <	0.022 < 0.006 < 0.009	0.104 < 0.002 < 0.015	0.107
4 <	0.019 < 0.015 < 0.009	0.177 < 0.002 < 0.033	0.181
			0.873548
6 <	0.026 < 0.030 < 0.015	0.300 < 0.002 < 0.028	0.300
7 <	0.030 < 0.042 < 0.020	0.629 < 0.002 < 0.078	0.636
6 <	0.026 < 0.009 < 0.011	0.000 < 0.001 < 0.015	0.000
6 <	0.026 < 0.021 < 0.017	0.178 < 0.002 < 0.037	0.178
6 <	0.019 < 0.024 < 0.031	0.152 < 0.002 < 0.017	0.157
			0.76291
3 <	0.115 < 0.076 < 0.033	0.189 < 0.007 < 0.130	0.193
3 <	0.044 < 0.036 < 0.017	0.073 < 0.004 < 0.063	0.076
3 <	0.081 < 0.055 < 0.033	0.094 < 0.006 < 0.107	0.097
3 <	0.067 < 0.045 < 0.022	0.212 < 0.004 < 0.073	0.215
3 <	0.089 < 0.058 < 0.026	0.091 < 0.003 < 0.115	0.094
			0.405201
2 <	0.022 < 0.045 < 0.017	0.004 < 0.001 < 0.028	0.004
2 <	0.022 < 0.030 < 0.020	0.136 < 0.002 < 0.055	0.136
2 <	0.033 < 0.024 < 0.019	0.024 < 0.002 < 0.028	0.024
2 <	0.026 < 0.012 < 0.011	0.023 < 0.002 < 0.032	0.023
2 <	0.041 < 0.015 < 0.011	0.000 < 0.002 < 0.028	0.000
			0.112105
3 <	0.156 < 0.079 < 0.057	0.188 < 0.008 < 0.123	0.191
3 <	0.085 < 0.058 < 0.035	0.052 < 0.005 < 0.087	0.055
3 <	0.107 < 0.082 < 0.059	0.000 < 0.010 < 0.153	0.156
3 <	0.063 < 0.055 < 0.037	0.157 < 0.005 < 0.077	0.160
3 <	0.096 < 0.067 < 0.033	0.153 < 0.009 < 0.142	0.156
			0.430885
2 <	0.026 < 0.015 < 0.011	0.162 < 0.002 < 0.033	0.188
2 <	0.019 < 0.012 < 0.007	0.156 < 0.002 < 0.017	0.156
2 <	0.022 < 0.012 < 0.007	0.074 < 0.001 < 0.017	0.096
2 <	0.037 < 0.030 < 0.019	0.085 < 0.001 < 0.050	0.085
2 <	0.015 < 0.009 < 0.007	0.000 < 0.001 < 0.017	0.000
			0.315205
2 <	0.037 < 0.018 < 0.013	0.050 < 0.001 < 0.015	0.050
2 <	0.033 < 0.018 < 0.011	0.075 < 0.002 < 0.022	0.075
2 <	0.033 < 0.027 < 0.013	0.074 < 0.002 < 0.017	0.074
2 <	0.026 < 0.018 < 0.019	0.240 < 0.001 < 0.027	0.240
2 <	0.059 < 0.039 < 0.019	0.252 < 0.003 < 0.035	0.252
			0.414737
2 <	0.015 < 0.015 < 0.015	0.116 < 0.002 < 0.040	0.116
2 <	0.026 < 0.012 < 0.013	0.070 < 0.002 < 0.017	0.070

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076 -25-

TABLE 500.5-2

500.5	105	35 < 0.12 <	0.04 < 0.07 < 0.07	0.69 < 0.43 < 0.15	1
500.5	102.5	37.5 < 0.12 <	0.13 < 0.04 < 0.08	1.59 < 0.33 < 0.13	1
500.5	107.5	37.5 < 0.12 <	0.09 < 0.04 < 0.06	0.74 < 0.38 < 0.10	1
500.5	*112.5	32.5 < 0.40 <	0.03 < 0.04 < 0.05	0.32 < 0.24 < 0.15	1
500.5	*117.5	32.5 < 0.40 <	0.05 < 0.03 < 0.12	0.17 < 0.33 < 0.08	1
500.5	115	35 < 0.40 <	0.03 < 0.05 < 0.07	0.93 < 0.21 < 0.21	1
500.5	112.5	37.5 < 0.40 <	0.03 < 0.03 < 0.05	0.65 < 0.31 < 0.16	1
500.5	117.5	37.5 < 0.40 <	0.04 < 0.02 < 0.06	0.65 < 0.30 < 0.07	1
500.5	122.5	32.5 < 0.09 <	0.07 < 0.03 < 0.05	1.02 < 0.32 < 0.09	1
500.5	127.5	32.5 < 0.09 <	0.05 < 0.03 < 0.06	0.51 < 0.30 < 0.13	1
500.5	125	35 < 0.09 <	0.06 < 0.07 < 0.07	0.26 < 0.36 < 0.14	1
500.5	122.5	37.5 < 0.09 <	0.05 < 0.04 < 0.08	0.31 < 0.47 < 0.13	1
500.5	127.5	37.5 < 0.09 <	0.04 < 0.04 < 0.06	0.13 < 0.21 < 0.12	1
500.5	132.5	32.5 < 0.08 <	0.05 < 0.04 < 0.05	0.20 < 0.37 < 0.12	1
500.5	137.5	32.5 < 0.08 <	0.07 < 0.06 < 0.08	0.16 < 0.24 < 0.08	1
500.5	135	35 < 0.08 <	0.05 < 0.05 < 0.06	0.50 < 0.23 < 0.24	1
500.5	132.5	37.5 < 0.08 <	0.06 < 0.05 < 0.05	0.26 < 0.27 < 0.15	1
500.5	137.5	37.5 < 0.08 <	0.06 < 0.03 < 0.08	0.42 < 0.31 < 0.14	1
BIAS SAMPLES					
500.5	90	27.5 < 0.00 <	0.07 < 0.07 < 0.05	2.05 < 0.19 < 0.17	1
500.5	94	27.5 < 0.00 <	0.05 < 0.06 < 0.06	1.30 < 0.25 < 0.15	1
500.5	101	22.5 < 0.00 <	0.03 < 0.04 < 0.06	2.79 < 0.30 < 0.16	1
500.5	102.5	20 < 0.00 <	0.07 < 0.04 < 0.05	1.67 < 0.24 < 0.10	1
500.5	102.5	25 < 0.00 <	0.02 < 0.02 < 0.05	0.79 < 0.27 < 0.07	1
500.5	102.5	29 < 0.00 <	0.03 < 0.07 < 0.05	2.94 < 0.30 < 0.07	1
500.5	M OF 155 25E	< 0.11 <	0.06 < 0.06 < 0.09	0.61 < 0.43 < 0.16	1
500.5	30' MW OF 155N 35E	< 0.12 <	0.10 < 0.03 < 0.08	2.30 < 0.29 < 0.11	1
500.5	18' E OF 115N 45E	< 0.11 <	0.05 < 0.10 < 0.09	5.00 < 0.30 < 0.11	1
500.5	NW OF 255 45E	< 0.12 <	0.06 < 0.05 < 0.07	1.86 < 0.38 < 0.12	1

\* - SAMPLES TAKEN &gt;6" BELOW GRADE LEVEL - NO Cs137 BACKGROUND SUBTRACTED

< 0.015 < 0.021 < 0.013	0.000 < 0.002 < 0.025	0.000
< 0.048 < 0.012 < 0.015	0.030 < 0.002 < 0.022	0.030
< 0.033 < 0.012 < 0.011	0.000 < 0.002 < 0.017	0.000
		0.129474
< 0.011 < 0.012 < 0.009	0.028 < 0.001 < 0.025	0.028
< 0.019 < 0.009 < 0.022	0.015 < 0.002 < 0.013	0.015
< 0.011 < 0.015 < 0.013	0.000 < 0.01 < 0.035	0.000
< 0.011 < 0.009 < 0.009	0.000 < 0.002 < 0.027	0.000
< 0.015 < 0.006 < 0.011	0.000 < 0.002 < 0.012	0.000
		0.025789
< 0.026 < 0.009 < 0.009	0.000 < 0.002 < 0.015	0.000
< 0.019 < 0.009 < 0.011	0.000 < 0.002 < 0.022	0.000
< 0.022 < 0.021 < 0.013 < 0.000 < 0.002 < 0.023		0.000
< 0.019 < 0.012 < 0.015	0.000 < 0.002 < 0.022	0.000
< 0.015 < 0.012 < 0.011 < 0.000 < 0.001 < 0.020		0.000
		0
< 0.019 < 0.012 < 0.009	0.000 < 0.002 < 0.020	0.000
< 0.026 < 0.018 < 0.015 < 0.000 < 0.001 < 0.013		0.000
< 0.019 < 0.015 < 0.011	0.000 < 0.001 < 0.040	0.000
< 0.022 < 0.015 < 0.009	0.000 < 0.001 < 0.025	0.000
< 0.022 < 0.009 < 0.015	0.000 < 0.002 < 0.023	0.000
		0
< 0.026 < 0.021 < 0.009	0.070 < 0.001 < 0.028	0.070
< 0.019 < 0.018 < 0.011	0.004 < 0.001 < 0.025	0.004
		0
< 0.011 < 0.012 < 0.011	0.135 < 0.002 < 0.027	0.135
< 0.026 < 0.012 < 0.009	0.037 < 0.001 < 0.017	0.037
< 0.007 < 0.006 < 0.009	0.000 < 0.001 < 0.012	0.000
< 0.011 < 0.021 < 0.009	0.148 < 0.002 < 0.012	0.148
		0.222368
< 0.022 < 0.018 < 0.017	0.000 < 0.002 < 0.027	0.000
		0
< 0.037 < 0.009 < 0.015	0.092 < 0.002 < 0.018	0.175
		0.525806
< 0.019 < 0.030 < 0.017	0.329 < 0.002 < 0.018	0.417
		1.249539
< 0.022 < 0.015 < 0.013	0.054 < 0.002 < 0.020	0.128
		0.384627

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076 -26-

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.6 survey unit was surveyed on an affected area basis and has a surface area of 2300 m<sup>2</sup>. 179 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 169 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.6 survey unit are provided in 2 attached tables as follows:

Table 500.6-1 Land North of Waste Storage Building  
gamma exposure rate data

Table 500.6-2 Land North of Waste Storage Building  
surface soil contamination data

Table 500.6-3 Land North of Waste Storage Building  
in-situ gamma spectroscopy results

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

LAND NORTH OF WASTE STORAGE BUILDING

AREA 500.6 FOR uR/HR

RADIACTION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 06/12/97

TECHNICIANS: MANY

## MATERIAL CODE

AREA: 500.0

1=CONCRETE

5=PLASTIC

UNIT: 500.6

2=ROCK

6=SOIL

MEDIA TYPE: SOIL

3=WODO

7=ASPHALT

# of POINTS: 169

4=METAL

8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR:

## LIMIT

MAX: 14.00 FAIL 10

AVG: 2.30 PASS 5

STD X: 2.57

MU SUB ALPHA: 2.63 PASS 5

TD #	GRID POINT	INST.	ID #	MATER-			
				BKG	READING	CODE	UREM/HR
				UREM/HR	UREM/HR		
500.6	272.5	A	6	10	8	4	
500.6	277.5	A	6	7	8	1	
500.6	275	A	6	8	8	2	
500.6	272.5	A	6	8	8	2	
500.6	277.5	A	6	8	8	2	
500.6	262.5	A	6	3	8	-3	
500.6	267.5	A	6	5	8	-1	
500.6	265	A	6	4	8	-2	
500.6	262.5	A	6	4	8	-2	
500.6	267.5	A	6	5	8	-1	
500.6	272.5	A	6	9	8	3	
500.6	277.5	A	6	6	8	0	
500.6	275	A	6	8	8	2	
500.6	272.5	A	6	5	8	-1	
500.6	277.5	A	6	5	8	-1	
500.6	262.5	A	6	6	8	0	
500.6	267.5	A	6	5	8	-1	
500.6	265	A	6	7	8	1	
500.6	262.5	A	6	5	8	-1	
500.6	267.5	A	6	5	8	-1	
500.6	272.5	A	6	9	8	3	
500.6	277.5	A	6	12	8	6	
500.6	275	A	6	11	8	5	
500.6	272.5	A	6	11	8	5	
500.6	277.5	A	6	11	8	5	
500.6	262.5	A	6	8	8	2	
500.6	267.5	A	6	10	8	4	
500.6	265	A	6	8	8	2	
500.6	262.5	A	6	9	8	3	
500.6	267.5	A	6	6	8	0	

TABLE 500.6-1

500.6	272.5	37.5	A	6	6	8	0
500.6	277.5	37.5	A	6	6	8	0
500.6	275	35	A	6	6	8	0
500.6	272.5	32.5	A	6	5	8	-1
500.6	277.5	32.5	A	6	6	8	0
500.6	262.5	37.5	A	6	10	8	4
500.6	267.5	37.5	A	6	7	8	-1
500.6	265	35	A	6	7	8	1
500.6	262.5	32.5	A	6	6	8	0
500.6	267.5	32.5	A	6	9	8	3
500.6	272.5	27.5	A	6	8	8	2
500.6	277.5	27.5	A	6	12	8	6
500.6	275	25	A	6	10	8	4
500.6	272.5	22.5	A	6	9	8	3
500.6	277.5	22.5	A	6	10	8	4
500.6	262.5	27.5	A	6	5	8	-1
500.6	267.5	27.5	A	6	8	8	2
500.6	265	25	A	6	4	8	-2
500.6	262.5	22.5	A	6	6	8	0
500.6	267.5	22.5	A	6	6	8	0
500.6	252.5	27.5	A	6	6	8	0
500.6	257.5	27.5	A	6	6	8	0
500.6	255	25	A	6	5	8	-1
500.6	252.5	22.5	A	6	6	8	0
500.6	257.5	22.5	A	6	8	8	2
500.6	242.5	27.5	A	6	6	8	0
500.6	247.5	27.5	A	6	5	8	-1
500.6	245	25	A	6	10	8	4
500.6	242.5	22.5	A	6	8	8	2
500.6	247.5	22.5	A	6	7	8	1
500.6	232.5	27.5	A	6	7	8	1
500.6	237.5	27.5	A	6	10	8	4
500.6	235	25	A	6	7	8	1
500.6	232.5	22.5	A	6	12	8	6
500.6	237.5	22.5	A	6	6	8	0
500.6	222.5	27.5	A	6	8	8	2
500.6	227.5	27.5	A	6	8	8	2
500.6	225	25	A	6	7	8	1
500.6	222.5	22.5	A	6	10	8	4
500.6	227.5	22.5	A	6	8	8	2
500.6	212.5	27.5	A	6	12	8	6
500.6	217.5	27.5	A	6	8	8	2
500.6	215	25	A	6	20	8	14
500.6	212.5	22.5	A	6	7	8	1
500.6	217.5	22.5	A	6	13	8	7
500.6	202.5	27.5	A	6	11	8	5
500.6	207.5	27.5	A	6	9	8	3
500.6	205	25	A	6	9	8	3
500.6	202.5	22.5	A	6	11	8	5
500.6	207.5	22.5	A	6	9	8	3
500.6	192.5	27.5	A	6	15	8	9
500.6	197.5	27.5	A	6	11	8	5
500.6	195	25	A	6	12	8	6
500.6	192.5	22.5	A	6	14	8	8
500.6	197.5	22.5	A	6	10	8	4
500.6	182.5	22.5	A	6	10	8	4
500.6	187.5	22.5	A	6	10	8	4
500.6	202.5	17.5	A	6	9	8	3
500.6	207.5	17.5	A	6	8	8	2
500.6	192.5	17.5	A	6	9	8	3

TABLE 500.6-1

500.6	197.5	17.5	A	6	12	8	6
500.6	182.5	17.5	A	6	14	8	8
500.6	187.5	17.5	A	6	14	8	8
500.6	185	15	A	6	9	8	3
500.6	172.5	17.5	A	6	10	8	4
500.6	177.5	17.5	A	6	7	8	1
500.6	175	15	A	6	12	8	6
500.6	172.5	12.5	A	6	14	8	8
500.6	177.5	12.5	A	6	7	8	1
500.6	162.5	17.5	A	6	9	8	3
500.6	167.5	17.5	A	6	9	8	3
500.6	165	15	A	6	8	8	2
500.6	162.5	12.5	A	6	8	8	2
500.6	167.5	12.5	A	6	11	8	5
500.6	152.5	17.5	A	6	9	8	3
500.6	157.5	17.5	A	6	10	8	4
500.6	155	15	A	6	6	8	0
500.6	152.5	12.5	A	6	8	8	2
500.6	157.5	12.5	A	6	8	8	2
500.6	242.5	67.5	A	6	7	8	1
500.6	247.5	67.5	A	6	7	8	1
500.6	245	65	A	6	8	8	2
500.6	242.5	62.5	A	6	7	8	1
500.6	247.5	62.5	A	6	8	8	2
500.6	252.5	67.5	A	6	5	8	-1
500.6	257.5	67.5	A	6	7	8	1
500.6	255	65	A	6	7	8	1
500.6	252.5	62.5	A	6	5	8	-1
500.6	257.5	62.5	A	6	8	8	2
500.6	237.5	57.5	A	6	12	8	6
500.6	237.5	52.5	A	6	11	8	5
500.6	242.5	57.5	A	6	8	8	2
500.6	247.5	57.5	A	6	13	8	7
500.6	245	55	A	6	6	8	0
500.6	242.5	52.5	A	6	10	8	4
500.6	247.5	52.5	A	6	9	8	3
500.6	252.5	57.5	A	6	6	8	0
500.6	257.5	57.5	A	6	6	8	0
500.6	255	55	A	6	5	8	-1
500.6	252.5	52.5	A	6	6	8	0
500.6	257.5	52.5	A	6	8	8	2
500.6	237.5	47.5	A	6	8	8	2
500.6	235	45	A	6	9	8	3
500.6	237.5	42.5	A	6	10	8	4
500.6	242.5	47.5	A	6	12	8	6
500.6	247.5	47.5	A	6	13	8	7
500.6	245	45	A	6	12	8	6
500.6	242.5	42.5	A	6	10	8	4
500.6	247.5	42.5	A	6	12	8	6
500.6	252.5	47.5	A	6	6	8	0
500.6	257.5	47.5	A	6	8	8	2
500.6	255	45	A	6	8	8	2
500.6	252.5	42.5	A	6	6	8	0
500.6	257.5	42.5	A	6	7	8	1
500.6	212.5	37.5	A	6	10	8	4
500.6	217.5	37.5	A	6	7	8	1
500.6	215	35	A	6	7	8	1
500.6	212.5	32.5	A	6	7	8	1
500.6	217.5	32.5	A	6	8	8	2
500.6	222.5	37.5	A	6	7	8	1

TABLE 500.6-1

500.6	227.5	37.5	A	6	7	8	9	1
500.6	225	35	A	6	7	8	9	1
500.6	222.5	32.5	A	6	8	8	9	2
500.6	227.5	32.5	A	6	7	8	9	1
500.6	232.5	37.5	A	6	7	8	9	1
500.6	237.5	37.5	A	6	7	8	9	1
500.6	235	35	A	6	7	8	9	1
500.6	232.5	32.5	A	6	9	8	9	3
500.6	237.5	32.5	A	6	8	8	9	2
500.6	242.5	37.5	A	6	8	8	9	2
500.6	247.5	37.5	A	6	5	3	4	-1
500.6	245	35	A	6	12	8	9	6
500.6	242.5	32.5	A	6	10	8	9	4
500.6	247.5	32.5	A	6	9	8	9	3
500.6	252.5	37.5	A	6	12	8	9	6
500.6	257.5	37.5	A	6	8	8	9	2
500.6	255	35	A	6	10	8	9	4
500.6	252.5	32.5	A	6	5	8	9	-1
500.6	" "	32.5	A	6	5	8	9	-1

CINTICHEN DECOMMISSIONING PLAN 07/02/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

LAND NORTH OF WASTE STORAGE BUILDING

AREA 500.6

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 06/12/97

TECHNICIANS: MANY

AREA: 500.0

UNIT: 500.6

MEDIA TYPE: SOIL

# OF POINTS: 169 PLUS 19 BIASED SAMPLES

SOIL DATA IN

SUM OF FRACTIONS:	MAX	2.41	PASS	3	LIMIT
	MAX GRID AVG.	0.51	PASS	1	
	STD X	0.10			
	MU SUB ALPHA	0.52	PASS	1	

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ISOTOPES OF CONCERN INDIVID  
(WITH Cs-137 BACKGROUND OF

ID # OR OTHER ID	GRID COORDINATES	N	E	SR-90						CO-60						AG-108M						CS-134						CS-137						CE-144						EU-152						SOIL CODE						SR-90						CO-60						AG-108M					
				SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SOIL CODE	SR-90	CO-60	AG-108M																																																							
500.6	272.5	67.5	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.40	1	< 0.002	< 0.074	< 0.030																																																							
500.6	277.5	67.5	< 0.10	< 0.30	< 0.20	< 0.20	2.60	< 0.50	< 1.10	1	< 0.002	< 0.111	< 0.061																																																								
500.6	275	65	< 0.10	< 0.20	< 0.10	< 0.10	0.60	< 0.40	< 0.70	1	< 0.002	< 0.074	< 0.030																																																								
500.6	272.5	62.5	< 0.10	< 0.30	< 0.20	< 0.10	5.30	< 0.60	< 0.90	1	< 0.002	< 0.111	< 0.061																																																								
500.6	277.5	62.5	< 0.10	< 0.30	< 0.10	< 0.10	1.60	< 0.20	< 1.10	1	< 0.002	< 0.111	< 0.030																																																								
500.6	262.5	67.5	< 0.12	< 0.10	< 0.09	< 0.12	4.13	< 0.27	< 0.27	1	< 0.002	< 0.037	< 0.027																																																								
500.6	267.5	67.5	< 0.12	< 0.06	< 0.05	< 0.09	0.92	< 0.41	< 0.17	1	< 0.002	< 0.022	< 0.015																																																								
500.6	265	65	< 0.12	< 0.06	< 0.08	< 0.09	2.61	< 0.31	< 0.27	1	< 0.002	< 0.022	< 0.024																																																								
500.6	262.5	62.5	< 0.12	< 0.08	< 0.04	< 0.10	0.96	< 0.22	< 0.14	1	< 0.002	< 0.030	< 0.012																																																								
500.6	267.5	62.5	< 0.12	< 0.04	< 0.03	< 0.08	0.77	< 0.42	< 0.16	1	< 0.002	< 0.015	< 0.009																																																								
500.6	272.5	57.5	< 0.12	< 0.10	< 0.10	< 0.10	1.40	< 0.40	< 0.40	1	< 0.002	< 0.037	< 0.030																																																								
500.6	277.5	57.5	< 0.12	< 0.10	< 0.10	< 0.10	0.70	< 0.10	< 0.30	1	< 0.002	< 0.037	< 0.030																																																								
500.6	275	55	< 0.12	< 0.10	< 0.10	< 0.10	0.60	< 0.20	< 0.30	1	< 0.002	< 0.037	< 0.030																																																								
500.6	272.5	52.5	< 0.12	< 0.10	< 0.10	< 0.10	0.70	< 0.20	< 0.30	1	< 0.002	< 0.037	< 0.030																																																								
500.6	277.5	52.5	< 0.12	< 0.10	< 0.10	< 0.10	2.80	< 0.30	< 0.50	1	< 0.002	< 0.037	< 0.030																																																								
500.6	262.5	57.5	< 0.10	< 0.20	< 0.10	< 0.10	0.60	< 0.40	< 0.50	1	< 0.002	< 0.074	< 0.030																																																								
500.6	267.5	57.5	< 0.10	< 0.20	< 0.10	< 0.10	1.50	< 0.70	< 0.60	1	< 0.002	< 0.074	< 0.030																																																								
500.6	265	55	< 0.10	< 0.20	< 0.10	< 0.10	1.40	< 0.50	< 0.90	1	< 0.002	< 0.074	< 0.030																																																								
500.6	262.5	52.5	< 0.10	< 0.20	< 0.10	< 0.10	2.50	< 0.20	< 0.80	1	< 0.002	< 0.074	< 0.030																																																								
500.6	267.5	52.5	< 0.10	< 0.30	< 0.10	< 0.20	4.10	< 0.40	< 0.90	1	< 0.002	< 0.111	< 0.030																																																								
500.6	272.5	47.5	0.12	< 0.20	< 0.10	< 0.30	1.40	< 0.30	< 0.50	1	0.002	< 0.074	< 0.036																																																								
500.6	277.5	47.5	0.12	< 0.30	< 0.10	< 0.20	2.70	< 0.50	< 1.40	1	0.002	< 0.111	< 0.030																																																								
500.6	275	45	0.12	< 0.30	< 0.20	< 0.10	2.00	< 0.60	< 1.00	1	0.002	< 0.111	< 0.061																																																								
500.6	272.5	42.5	0.12	< 0.30	< 0.10	< 0.20	1.00	< 0.30	< 1.10	1	0.002	< 0.111	< 0.030																																																								
500.6	277.5	42.5	0.12	< 0.10	< 0.10	< 0.10	2.00	< 0.40	< 0.60	1	0.002	< 0.037	< 0.030																																																								
500.6	262.5	47.5	0.11	< 0.07	< 0.10	< 0.09	1.32	< 0.46	< 0.19	1	< 0.002	< 0.026	< 0.030																																																								
500.6	267.5	47.5	0.11	< 0.09	< 0.06	< 0.08	1.02	< 0.35	< 0.19	1	< 0.002	< 0.033	< 0.018																																																								

MG 7-2-97

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

SAMPLE FRACTION OF HOT SPOT LIMIT

(DCI/gm SUBTRACTED)

134 CS-137 CE-144 EU-152 SUM

19 < 0.000 < 0.001 < 0.067 0.000  
37 0.118 < 0.003 < 0.183 0.118  
19 0.000 < 0.002 < 0.117 0.000  
19 0.355 < 0.005 < 0.150 0.355  
19 0.031 < 0.001 < 0.183 0.031

22 0.253 < 0.001 < 0.028 0.253  
17 0.000 < 0.002 < 0.028 0.000  
7 0.119 < 0.002 < 0.045 0.119  
19 0.000 < 0.001 < 0.023 0.000  
5 0.000 < 0.002 < 0.027 0.000

9 0.013 < 0.002 < 0.067 0.013  
9 0.000 < 0.001 < 0.050 0.000  
9 0.000 < 0.001 < 0.050 0.000  
9 0.000 < 0.001 < 0.050 0.000  
9 0.136 < 0.002 < 0.083 0.136

9 0.000 < 0.002 < 0.083 0.000  
9 0.022 < 0.004 < 0.100 0.022  
9 0.013 < 0.003 < 0.150 0.013  
9 0.110 < 0.001 < 0.133 0.110  
7 0.250 < 0.002 < 0.150 0.250

6 0.013 < 0.002 < 0.083 0.016  
7 0.127 < 0.003 < 0.233 0.130  
9 0.066 < 0.003 < 0.167 0.068  
7 0.000 < 0.002 < 0.183 0.002  
9 0.066 < 0.002 < 0.100 0.068

7 0.006 < 0.002 < 0.032 0.006  
5 0.000 < 0.002 < 0.032 0.000

9707240076-29

TABLE 520.6-2

500.6	265	45	< 0.11	< 0.12	< 0.05	< 0.09	1.87	< 0.40	< 0.21	1	< 0.002	< 0.044	< 0.015
500.6	262.5	42.5	< 0.11	< 0.09	< 0.10	< 0.12	1.93	< 0.61	< 0.14	1	< 0.002	< 0.033	< 0.030
500.6	267.5	42.5	0.23	< 0.12	< 0.10	< 0.21	4.59	< 0.42	< 0.26	1	< 0.005	< 0.044	< 0.030
500.6	272.5	37.5	< 0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.30	< 0.40	1	< 0.002	< 0.037	< 0.030
500.6	277.5	37.5	< 0.12	< 0.20	< 0.20	< 0.10	1.80	< 0.60	< 0.60	1	< 0.002	< 0.074	< 0.061
500.6	275	35	< 0.12	< 0.30	< 0.10	< 0.10	0.40	< 0.40	< 0.40	1	< 0.002	< 0.111	< 0.030
500.6	272.5	32.5	< 0.12	< 0.20	< 0.17	< 0.10	0.50	< 0.70	< 0.40	1	< 0.002	< 0.074	< 0.030
500.6	277.5	32.5	< 0.12	< 0.20	< 0.10	< 0.10	0.50	< 0.40	< 1.00	1	< 0.002	< 0.074	< 0.030
500.6	262.5	37.5	< 0.08	< 0.08	< 0.05	< 0.10	1.29	< 0.41	< 0.21	1	< 0.002	< 0.030	< 0.015
500.6	267.5	37.5	< 0.10	< 0.09	< 0.07	< 0.10	1.53	< 0.40	< 0.24	1	< 0.002	< 0.033	< 0.021
500.6	265	35	< 0.09	< 0.12	< 0.06	< 0.12	4.74	< 0.62	< 0.34	1	< 0.002	< 0.044	< 0.018
500.6	262.5	32.5	< 0.10	< 0.09	< 0.08	< 0.07	1.22	< 0.40	< 0.18	1	< 0.002	< 0.033	< 0.024
500.6	267.5	32.5	< 0.10	< 0.11	< 0.04	< 0.11	0.98	< 0.35	< 0.19	1	< 0.002	< 0.041	< 0.012
500.6	272.5	27.5	< 0.11	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.30	1	< 0.002	< 0.037	< 0.030
500.6	277.5	27.5	< 0.11	< 0.10	< 0.10	< 0.10	1.70	< 0.50	< 0.30	1	< 0.002	< 0.037	< 0.030
500.6	275	25	< 0.11	< 0.10	< 0.20	< 0.20	0.60	< 0.30	< 0.50	1	< 0.002	< 0.037	< 0.030
500.6	272.5	22.5	< 0.11	< 0.10	< 0.10	< 0.10	0.20	< 0.20	< 0.20	1	< 0.002	< 0.037	< 0.030
500.6	277.5	22.5	< 0.11	< 0.10	< 0.10	< 0.10	0.80	< 0.10	< 0.30	1	< 0.002	< 0.037	< 0.030
500.6	262.5	27.5	< 0.10	< 0.10	< 0.10	< 0.10	0.40	< 0.10	< 0.30	1	< 0.002	< 0.037	< 0.030
500.6	267.5	27.5	< 0.10	< 0.10	< 0.10	< 0.10	0.60	< 0.20	< 0.40	1	< 0.002	< 0.037	< 0.030
500.6	265	25	< 0.10	< 0.20	< 0.10	< 0.10	0.50	< 0.30	< 0.30	1	< 0.002	< 0.074	< 0.030
500.6	262.5	22.5	< 0.10	< 0.10	< 0.10	< 0.10	0.40	< 0.30	< 0.40	1	< 0.002	< 0.037	< 0.030
500.6	267.5	22.5	< 0.10	< 0.10	< 0.10	< 0.10	0.20	< 0.20	< 0.20	1	< 0.002	< 0.074	< 0.030
500.6	252.5	27.5	< 0.10	< 0.04	< 0.05	< 0.08	0.49	< 0.46	< 0.17	1	< 0.002	< 0.015	< 0.015
500.6	257.5	27.5	< 0.10	< 0.04	< 0.03	< 0.06	0.59	< 0.17	< 0.20	1	< 0.002	< 0.015	< 0.009
500.6	255	25	< 0.10	< 0.08	< 0.08	< 0.08	0.66	< 0.21	< 0.19	1	< 0.002	< 0.030	< 0.024
500.6	252.5	22.5	< 0.10	< 0.09	< 0.05	< 0.06	0.52	< 0.31	< 0.18	1	< 0.002	< 0.033	< 0.015
500.6	257.5	22.5	< 0.10	< 0.08	< 0.07	< 0.07	0.37	< 0.44	< 0.08	1	< 0.002	< 0.030	< 0.021
500.6	242.5	27.5	< 0.11	< 0.11	< 0.06	< 0.10	1.75	< 0.38	< 0.25	1	< 0.002	< 0.041	< 0.018
500.6	247.5	27.5	< 0.11	< 0.04	< 0.04	< 0.07	0.44	< 0.35	< 0.10	1	< 0.002	< 0.015	< 0.012
500.6	245	25	< 0.11	< 0.04	< 0.03	< 0.06	0.33	< 0.34	< 0.16	1	< 0.002	< 0.015	< 0.009
500.6	242.5	22.5	< 0.11	< 0.05	< 0.02	< 0.05	0.44	< 0.43	< 0.07	1	< 0.002	< 0.019	< 0.006
500.6	247.5	22.5	< 0.11	< 0.05	< 0.05	< 0.05	0.12	< 0.31	< 0.07	1	< 0.002	< 0.019	< 0.015
500.6	232.5	27.5	0.12	< 0.20	< 0.10	< 0.20	3.60	< 0.30	< 0.40	1	0.002	< 0.074	< 0.030
500.6	237.5	27.5	0.12	< 0.10	< 0.20	< 0.20	2.00	< 0.30	< 0.40	1	0.002	< 0.037	< 0.030
500.6	235	25	0.12	< 0.10	< 0.10	< 0.10	0.40	< 0.20	< 0.30	1	0.002	< 0.037	< 0.030
500.6	232.5	22.5	0.12	< 0.10	< 0.10	< 0.10	0.70	< 0.20	< 0.40	1	0.002	< 0.037	< 0.030
500.6	237.5	22.5	0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.10	< 0.20	1	0.002	< 0.037	< 0.030
500.6	222.5	27.5	0.14	< 0.10	< 0.10	< 0.20	3.10	< 0.30	< 0.90	1	0.003	< 0.037	< 0.030
500.6	227.5	27.5	0.22	< 0.19	< 0.17	< 0.27	4.18	< 0.58	< 0.36	1	0.004	< 0.070	< 0.052
500.6	225	25	0.14	< 0.50	< 0.20	< 0.70	6.00	< 0.70	< 2.60	1	0.003	< 0.185	< 0.061
500.6	222.5	22.5	0.14	< 0.20	< 0.10	< 0.20	0.60	< 0.30	< 0.70	1	0.003	< 0.074	< 0.030
500.6	227.5	22.5	0.14	< 0.20	< 0.10	< 0.20	0.80	< 0.30	< 0.80	1	0.003	< 0.074	< 0.030
500.6	212.5	27.5	0.17	< 0.60	< 0.10	< 0.20	4.60	< 1.10	< 2.00	1	0.003	< 0.222	< 0.030
500.6	217.5	27.5	0.17	< 0.20	< 0.10	< 0.10	2.10	< 0.30	< 0.40	1	0.003	< 0.074	< 0.030
500.6	215	25	0.17	< 0.70	< 0.40	< 1.00	1.20	< 1.80	< 1.50	1	0.003	< 0.259	< 0.121
500.6	212.5	22.5	0.17	< 0.10	< 0.10	< 0.10	1.10	< 0.40	< 0.50	1	0.003	< 0.037	< 0.030
500.6	217.5	22.5	0.17	< 0.10	< 0.10	< 0.20	0.60	< 0.20	< 0.80	1	0.003	< 0.037	< 0.030
500.6	202.5	27.5	0.16	< 0.30	< 0.10	< 0.50	1.40	< 0.80	< 1.70	1	0.003	< 0.111	< 0.030
500.6	207.5	27.5	0.16	< 0.10	< 0.10	< 0.10	0.20	< 0.20	< 0.60	1	0.003	< 0.037	< 0.030

0.054 < 0.002 < 0.035	0.054
0.060 < 0.003 < 0.025	0.060
0.293 < 0.002 < 0.043	0.297
< 0.000 < 0.002 < 0.067	0.000
0.048 < 0.003 < 0.100	0.048
0.000 < 0.002 < 0.067	0.000
0.000 < 0.004 < 0.067	0.000
0.000 < 0.002 < 0.167	0.000
0.064 < 0.002 < 0.035	0.004
0.025 < 0.002 < 0.040	0.025
0.306 < 0.003 < 0.057	0.306
0.000 < 0.002 < 0.030	0.000
0.000 < 0.002 < 0.032	0.000
< 0.000 < 0.001 < 0.050	0.000
0.039 < 0.003 < 0.050	0.039
0.000 < 0.002 < 0.083	0.000
< 0.000 < 0.001 < 0.033	0.000
0.000 < 0.001 < 0.050	0.000
0.000 < 0.001 < 0.050	0.000
0.000 < 0.001 < 0.067	0.000
0.000 < 0.002 < 0.050	0.000
0.000 < 0.002 < 0.067	0.000
< 0.000 < 0.001 < 0.033	0.000
0.000 < 0.002 < 0.028	0.000
0.000 < 0.001 < 0.033	0.000
0.000 < 0.001 < 0.032	0.000
0.000 < 0.002 < 0.030	0.000
0.000 < 0.002 < 0.013	0.000
0.044 < 0.002 < 0.042	0.044
0.000 < 0.002 < 0.017	0.000
0.000 < 0.002 < 0.027	0.000
0.000 < 0.002 < 0.012	0.000
< 0.000 < 0.002 < 0.012	0.000
0.206 < 0.002 < 0.067	0.208
0.066 < 0.002 < 0.067	0.068
0.000 < 0.001 < 0.050	0.002
0.000 < 0.001 < 0.067	0.002
< 0.000 < 0.001 < 0.033	0.002
0.162 < 0.002 < 0.150	0.165
0.257 < 0.003 < 0.060	0.261
0.417 < 0.004 < 0.433	0.419
0.000 < 0.002 < 0.117	0.003
0.000 < 0.002 < 0.133	0.003
0.294 < 0.006 < 0.333	0.297
0.075 < 0.002 < 0.067	0.078
< 0.000 < 0.010 < 0.250	0.003
0.000 < 0.002 < 0.083	0.003
0.000 < 0.001 < 0.133	0.137
0.013 < 0.004 < 0.283	0.016
0.000 < 0.001 < 0.100	0.103

**ANSTEC  
APERTURE  
CARD**

*Also Available on  
Aperture Card*

9707240076-28

TABLE 500.6-2

500.6	205	25	0.16 <	0.10 < 0.10 < 0.10	0.40 < 0.20 < 0.40	1	0.003 < 0.037 < 0.030	
500.6	202.5	22.5	0.16 <	0.20 < 0.10 < 0.10	1.20 < 0.30 < 0.60	1	0.003 < 0.074 < 0.030	
500.6	207.5	22.5	0.16 <	0.10 < 0.10 < 0.10	0.80 < 0.10 < 0.30	1	0.003 < 0.037 < 0.030	
500.6	192.5	27.5	0.15 <	0.10 < 0.05 < 0.07	1.02 < 0.60 < 0.15	1	0.003 < 0.037 < 0.015	
500.6	197.5	27.5	0.65 <	0.07 < 0.04 < 0.09	3.53 < 0.42 < 0.22	1	0.013 < 0.026 < 0.012	
500.6	195	25	0.12 <	0.07 < 0.07 < 0.06	0.66 < 0.45 < 0.10	1	0.002 < 0.026 < 0.021	
500.6	192.5	22.5	0.15 <	0.17 < 0.06 < 0.06	0.74 < 0.38 < 0.19	1	0.003 < 0.063 < 0.018	
500.6	197.5	22.5	0.15 <	0.04 < 0.04 < 0.06	0.48 < 0.16 < 0.14	1	0.003 < 0.015 < 0.012	
500.6	182.5	22.5	< 0.10 <	0.20 < 0.10 < 0.10	0.90 < 0.20 < 0.40	1	< 0.002 < 0.074 < 0.030	
500.6	187.5	22.5	< 0.13 <	0.10 < 0.10 < 0.20	0.80 < 0.20 < 0.30	1	< 0.003 < 0.037 < 0.030	
500.6	202.5	17.5	< 0.12 <	0.10 < 0.10 < 0.10	0.30 < 0.30 < 0.80	1	< 0.002 < 0.037 < 0.030	
500.6	207.5	17.5	< 0.12 <	0.20 < 0.10 < 0.10	0.40 < 0.10 < 0.30	1	< 0.002 < 0.074 < 0.030	
500.6	192.5	17.5	< 0.09 <	0.10 < 0.10 < 0.10	0.70 < 0.10 < 0.40	1	< 0.002 < 0.037 < 0.030	
500.6	197.5	17.5	< 0.09 <	0.10 < 0.10 < 0.20	0.30 < 0.20 < 0.50	1	< 0.002 < 0.037 < 0.030	
500.6	182.5	17.5	0.12 <	0.10 < 0.10 < 0.10	0.70 < 0.20 < 0.40	1	0.002 < 0.037 < 0.030	
500.6	187.5	17.5	0.12 <	0.20 < 0.10 < 0.30	0.60 < 0.30 < 0.70	1	0.002 < 0.074 < 0.030	
500.6	185	15	0.12 <	0.20 < 0.10 < 0.10	0.90 < 0.20 < 0.40	1	0.002 < 0.074 < 0.030	
500.6	172.5	17.5	< 0.10 <	0.26 < 0.05 < 0.05	0.49 < 0.25 < 0.07	1	< 0.002 < 0.022 < 0.015	
500.6	177.5	17.5	< 0.10 <	0.11 < 0.04 < 0.04	0.63 < 0.25 < 0.12	1	< 0.002 < 0.041 < 0.012	
500.6	175	15	< 0.10 <	0.04 < 0.05 < 0.07	0.58 < 0.56 < 0.17	1	< 0.002 < 0.015 < 0.015	
500.6	172.5	12.5	< 0.10 <	0.12 < 0.09 < 0.08	1.27 < 0.28 < 0.12	1	< 0.002 < 0.044 < 0.027	
500.6	177.5	12.5	< 0.10 <	0.20 < 0.08 < 0.06	1.18 < 0.41 < 0.13	1	< 0.002 < 0.037 < 0.024	
500.6	162.5	17.5	< 0.10 <	0.08 < 0.04 < 0.06	0.32 < 0.34 < 0.10	1	< 0.002 < 0.030 < 0.012	
500.6	167.5	17.5	< 0.10 <	0.11 < 0.07 < 0.06	0.55 < 0.19 < 0.08	1	< 0.002 < 0.041 < 0.021	
500.6	165	15	< 0.10 <	0.08 < 0.05 < 0.06	0.37 < 0.26 < 0.17	1	< 0.002 < 0.030 < 0.015	
500.6	162.5	12.5	< 0.10 <	0.04 < 0.08 < 0.07	0.63 < 0.28 < 0.09	1	< 0.002 < 0.015 < 0.024	
500.6	167.5	12.5	< 0.10 <	0.14 < 0.15 < 0.07	1.27 < 0.31 < 0.10	1	< 0.002 < 0.052 < 0.045	
500.6	152.5	17.5	< 0.12 <	0.10 < 0.10 < 0.10	0.10 < 0.30 < 0.10	1	< 0.002 < 0.037 < 0.030	
500.6	157.5	17.5	< 0.12 <	0.10 < 0.10 < 0.10	0.20 < 0.30 < 0.30	1	< 0.002 < 0.037 < 0.030	
500.6	155	15	< 0.12 <	0.10 < 0.10 < 0.10	0.10 < 0.10 < 0.30	1	< 0.002 < 0.037 < 0.030	
500.6	152.5	12.5	< 0.12 <	0.10 < 0.10 < 0.10	0.30 < 0.20 < 0.50	1	< 0.002 < 0.037 < 0.030	
500.6	157.5	12.5	< 0.12 <	0.10 < 0.10 < 0.10	0.20 < 0.10 < 0.30	1	< 0.002 < 0.037 < 0.030	
500.6	242.5	67.5	< 0.13 <	0.20 < 0.10 < 0.10	2.70 < 0.20 < 0.40	1	< 0.003 < 0.074 < 0.030	
500.6	247.5	67.5	< 0.13 <	0.10 < 0.10 < 0.10	1.20 < 0.30 < 0.70	1	< 0.003 < 0.037 < 0.030	
500.6	245	65	< 0.13 <	0.20 < 0.10 < 0.10	1.10 < 0.20 < 0.30	1	< 0.003 < 0.074 < 0.030	
500.6	242.5	62.5	< 0.13 <	0.20 < 0.10 < 0.30	1.70 < 0.30 < 0.70	1	< 0.003 < 0.074 < 0.030	
500.6	247.5	62.5	< 0.13 <	0.30 < 0.10 < 0.10	3.60 < 0.30 < 1.10	1	< 0.003 < 0.111 < 0.030	
500.6	252.5	67.5	< 0.11 <	0.07 < 0.14 < 0.12	2.87 < 0.39 < 0.43	1	< 0.002 < 0.026 < 0.042	
500.6	257.5	67.5	< 0.11 <	0.07 < 0.08 < 0.09	0.88 < 0.27 < 0.21	1	< 0.002 < 0.026 < 0.024	
500.6	255	65	< 0.11 <	0.05 < 0.05 < 0.10	1.20 < 0.17 < 0.22	1	< 0.002 < 0.019 < 0.015	
500.6	252.5	62.5	< 0.11 <	0.09 < 0.13 < 0.15	2.91 < 0.38 < 0.29	1	< 0.002 < 0.033 < 0.039	
500.6	257.5	62.5	< 0.11 <	0.06 < 0.07 < 0.10	1.08 < 0.61 < 0.14	1	< 0.002 < 0.022 < 0.021	
500.6	237.5	57.5	< 0.11 <	0.20 < 0.10 < 0.10	0.10 < 0.30 < 0.50	1	< 0.002 < 0.074 < 0.030	
500.6	237.5	52.5	*	0.45 < 0.08 < 0.08	0.33 < 0.19 < 0.08	1	*	0.167 < 0.024
500.6	242.5	57.5	< 0.11 <	0.10 < 0.20 < 0.10	0.30 < 0.10 < 0.30	1	< 0.002 < 0.037 < 0.061	
500.6	247.5	57.5	< 0.11 <	0.20 < 0.50 < 0.10	2.90 < 0.30 < 0.80	1	< 0.002 < 0.074 < 0.152	
500.6	245	55	< 0.11 <	0.10 < 0.10 < 0.10	0.20 < 0.20 < 0.30	1	< 0.002 < 0.037 < 0.030	
500.6	242.5	52.5	< 0.11 <	0.10 < 0.20 < 0.10	0.60 < 0.20 < 0.40	1	< 0.002 < 0.037 < 0.061	

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

19	0.000 < 0.001 < 0.067	0.003
19	0.000 < 0.002 < 0.100	0.003
19	0.000 < 0.001 < 0.050	0.033
13	0.000 < 0.003 < 0.025	0.003
17	0.200 < 0.002 < 0.037	0.213
11	0.000 < 0.002 < 0.017	0.002
11	0.000 < 0.002 < 0.032	0.003
11	0.000 < 0.001 < 0.023	0.003
19	0.000 < 0.001 < 0.067	0.000
37	0.000 < 0.001 < 0.050	0.000
19	0.000 < 0.002 < 0.133	0.133
19	0.000 < 0.001 < 0.050	0.000
19	0.000 < 0.001 < 0.067	0.000
37	0.000 < 0.001 < 0.083	0.000
19	0.000 < 0.001 < 0.067	0.002
56	0.000 < 0.002 < 0.117	0.002
19	0.000 < 0.001 < 0.067	0.002
09	0.000 < 0.001 < 0.012	0.000
07	0.000 < 0.001 < 0.020	0.000
13	0.000 < 0.003 < 0.028	0.000
15	0.002 < 0.001 < 0.020	0.002
11	0.000 < 0.002 < 0.022	0.000
11	0.000 < 0.002 < 0.017	0.000
11	0.000 < 0.001 < 0.013	0.000
11	0.000 < 0.001 < 0.028	0.000
13	0.000 < 0.001 < 0.015	0.000
13	0.002 < 0.002 < 0.017	0.002
9	0.000 < 0.002 < 0.017	0.000
9	0.000 < 0.002 < 0.050	0.000
9	0.000 < 0.001 < 0.050	0.000
9	0.000 < 0.001 < 0.083	0.000
9	0.000 < 0.001 < 0.050	0.000
9	0.127 < 0.001 < 0.067	0.127
9	0.000 < 0.002 < 0.117	0.117
9	0.000 < 0.001 < 0.050	0.000
6	0.039 < 0.002 < 0.117	0.039
9	0.206 < 0.002 < 0.183	0.389
22	0.142 < 0.002 < 0.072	0.142
7	0.000 < 0.001 < 0.035	0.000
9	0.000 < 0.001 < 0.037	0.000
8	0.146 < 0.002 < 0.048	0.146
9	0.000 < 0.003 < 0.023	0.000
9	0.000 < 0.002 < 0.083	0.000
5	0.000 < 0.001 < 0.013	0.191
9	0.000 < 0.001 < 0.050	0.000
9	0.145 < 0.002 < 0.133	0.145
9	0.000 < 0.001 < 0.050	0.000
9	0.000 < 0.001 < 0.067	0.000

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TABLE 500.6-2

500.6	247.5	52.5	< 0.11	< 0.10	< 0.40	< 0.20	2.00	< 0.40	< 0.80	1	< 0.002	< 0.037	< 0.121
500.6	252.5	57.5	< 0.11	< 0.07	< 0.05	< 0.10	1.50	< 0.48	< 0.29	1	< 0.002	< 0.026	< 0.015
500.6	257.5	57.5	< 0.11	< 0.09	< 0.09	< 0.09	2.70	< 0.60	< 0.15	1	< 0.002	< 0.033	< 0.027
500.6	255	55	< 0.11	< 0.06	< 0.06	< 0.10	0.78	< 0.39	< 0.28	1	< 0.002	< 0.022	< 0.018
500.6	252.5	52.5	< 0.11	< 0.12	< 0.11	< 0.10	2.16	< 0.60	< 0.25	1	< 0.002	< 0.044	< 0.033
500.6	257.5	52.5	< 0.11	< 0.09	< 0.05	< 0.07	0.62	< 0.21	< 0.24	1	< 0.002	< 0.033	< 0.015
500.6	237.5	47.5	< 0.11	< 0.10	< 0.10	< 0.20	0.30	< 0.20	< 0.50	1	< 0.002	< 0.037	< 0.030
500.6	235	45	< 0.11	< 0.10	< 0.10	< 0.10	0.20	< 1.20	< 0.40	1	< 0.002	< 0.037	< 0.030
500.6	237.5	42.5	< 0.11	< 0.10	< 0.10	< 0.10	0.40	< 0.20	< 0.30	1	< 0.002	< 0.037	< 0.030
500.6	242.5	47.5	< 0.11	< 0.06	< 0.08	< 0.09	0.82	< 0.39	< 0.17	1	< 0.002	< 0.022	< 0.024
500.6	247.5	47.5	< 0.11	< 0.09	< 0.04	< 0.12	2.22	< 0.44	< 0.28	1	< 0.002	< 0.033	< 0.012
500.6	245	45	< 0.11	< 0.06	< 0.08	< 0.06	0.42	< 0.40	< 0.21	1	< 0.002	< 0.022	< 0.024
500.6	242.5	42.5	< 0.11	< 0.20	< 0.08	< 0.11	2.20	< 0.24	< 0.37	1	< 0.002	< 0.074	< 0.024
500.6	247.5	42.5	< 0.11	< 0.08	< 0.05	< 0.05	0.21	< 0.42	< 0.08	1	< 0.002	< 0.030	< 0.015
500.6	252.5	47.5	< 0.10	< 0.09	< 0.05	< 0.12	2.44	< 0.46	< 0.22	1	< 0.002	< 0.033	< 0.015
500.6	257.5	47.5	< 0.10	< 0.12	< 0.15	< 0.18	2.99	< 0.73	< 0.27	1	< 0.002	< 0.044	< 0.045
500.6	255	45	< 0.10	< 0.06	< 0.04	< 0.09	1.57	< 0.48	< 0.22	1	< 0.002	< 0.022	< 0.012
500.6	252.5	42.5	< 0.10	< 0.06	< 0.06	< 0.10	0.73	< 0.35	< 0.11	1	< 0.002	< 0.022	< 0.018
500.6	257.5	42.5	< 0.10	< 0.04	< 0.07	< 0.08	1.10	< 0.44	< 0.24	1	< 0.002	< 0.015	< 0.021
500.6	212.5	37.5	0.25	< 0.20	< 0.10	< 0.10	3.00	< 0.40	< 0.60	1	0.005	< 0.074	< 0.030
500.6	217.5	37.5	*	< 0.05	< 0.04	< 0.06	0.42	< 0.24	< 0.16	1	*	< 0.019	< 0.012
500.6	215	35	0.25	< 0.10	< 0.10	< 0.10	0.60	< 0.20	< 0.60	1	0.005	< 0.037	< 0.030
500.6	212.5	32.5	0.25	< 0.10	< 0.10	< 0.10	1.10	< 0.20	< 0.30	1	0.005	< 0.037	< 0.030
500.6	217.5	32.5	0.25	< 0.10	< 0.10	< 0.10	0.50	< 0.20	< 0.60	1	0.005	< 0.037	< 0.030
500.6	222.5	37.5	0.12	< 0.20	< 0.10	< 0.10	1.10	< 0.20	< 0.40	1	0.002	< 0.074	< 0.030
500.6	227.5	37.5	0.12	< 0.20	< 0.10	< 0.10	0.60	< 0.30	< 0.30	1	0.002	< 0.074	< 0.030
500.6	225	35	0.12	< 0.10	< 0.10	< 0.10	0.10	< 0.20	< 0.40	1	0.002	< 0.037	< 0.030
500.6	222.5	32.5	0.12	< 0.10	< 0.10	< 0.20	0.90	< 0.30	< 0.50	1	0.002	< 0.037	< 0.030
500.6	227.5	32.5	0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.30	< 0.30	1	0.002	< 0.037	< 0.030
500.6	232.5	37.5	0.12	< 0.20	< 0.10	< 0.10	0.70	< 0.20	< 0.50	1	< 0.002	< 0.074	< 0.030
500.6	237.5	37.5	0.12	< 0.10	< 0.20	< 0.10	0.50	< 0.30	< 0.60	1	< 0.002	< 0.037	< 0.061
500.6	235	35	0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.30	< 0.60	1	< 0.002	< 0.037	< 0.030
500.6	232.5	32.5	0.12	< 0.04	< 0.04	< 0.07	0.33	< 0.13	< 0.14	1	< 0.002	< 0.015	< 0.012
500.6	237.5	32.5	0.12	< 0.10	< 0.10	< 0.10	0.20	< 0.20	< 0.50	1	< 0.002	< 0.037	< 0.030
500.6	242.5	37.5	0.28	1.36	0.72	< 0.07	2.11	< 0.39	< 0.27	1	0.005	0.504	0.218
500.6	247.5	37.5	0.28	< 0.14	< 0.10	< 0.10	0.85	< 0.17	< 0.08	1	0.005	< 0.052	< 0.030
500.6	245	35	0.28	< 0.20	< 0.08	< 0.14	0.92	< 0.51	< 0.23	1	0.005	< 0.074	< 0.024
500.6	242.5	32.5	0.28	< 0.04	< 0.02	< 0.06	1.03	< 0.35	< 0.11	1	0.005	< 0.015	< 0.006
500.6	247.5	32.5	0.28	< 0.05	< 0.07	< 0.06	1.28	< 0.30	< 0.18	1	0.005	< 0.019	< 0.021
500.6	252.5	37.5	0.10	< 0.03	< 0.03	< 0.05	0.47	< 0.24	< 0.12	1	< 0.002	< 0.011	< 0.009
500.6	257.5	37.5	0.10	< 0.05	< 0.04	< 0.11	1.26	< 0.20	< 0.20	1	< 0.002	< 0.019	< 0.012
500.6	255	35	0.10	< 0.05	< 0.07	< 0.08	1.55	< 0.36	< 0.13	1	< 0.002	< 0.019	< 0.021
500.6	252.5	32.5	0.10	< 0.08	< 0.02	< 0.06	0.09	< 0.23	< 0.08	1	< 0.002	< 0.030	< 0.006
500.6	257.5	32.5	0.10	< 0.06	< 0.06	< 0.06	1.33	< 0.37	< 0.17	1	< 0.002	< 0.022	< 0.018

## BIASED SAMPLES TAKEN

500.6	207.5	35.5	*	< 0.04	< 0.07	< 0.05	0.78	< 0.14	< 0.16	1	< 0.015	< 0.021
500.6	210	35.5	*	< 0.07	< 0.05	< 0.06	0.70	< 0.20	< 0.17	1	< 0.026	< 0.015
500.6	213	35.5	*	< 0.07	< 0.09	< 0.05	1.51	< 0.33	< 0.07	1	< 0.026	< 0.027
500.6	222	35.5	*	< 0.05	< 0.04	< 0.08	0.14	< 0.37	< 0.11	1	< 0.019	< 0.012

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

.037	0.066 < 0.002 < 0.133	0.066
.019	0.022 < 0.003 < 0.048	0.022
.017	0.127 < 0.003 < 0.025	0.127
.019	0.000 < 0.002 < 0.047	0.000
.019	0.080 < 0.003 < 0.042	0.080
.013	0.000 < 0.001 < 0.040	0.000
.037	0.000 < 0.001 < 0.083	0.000
.019 <	0.000 < 0.006 < 0.067	0.000
.019	0.000 < 0.001 < 0.050	0.000
.017	0.000 < 0.002 < 0.028	0.000
.022	0.085 < 0.002 < 0.047	0.085
.011	0.000 < 0.002 < 0.035	0.000
.020	0.083 < 0.001 < 0.062	0.083
.009	0.000 < 0.002 < 0.013	0.000
.022	0.104 < 0.002 < 0.037	0.104
.033	0.153 < 0.004 < 0.045	0.153
.017	0.028 < 0.003 < 0.037	0.028
.019	0.000 < 0.002 < 0.018	0.000
.015	0.000 < 0.002 < 0.040	0.000
.019	0.154 < 0.002 < 0.100	0.158
.011	0.000 < 0.001 < 0.027	0.000
.019	0.000 < 0.001 < 0.100	0.005
.019	0.000 < 0.001 < 0.050	0.005
.019	0.000 < 0.001 < 0.100	0.000
.019	0.000 < 0.001 < 0.067	0.002
.019	0.000 < 0.002 < 0.050	0.002
.019 <	0.000 < 0.001 < 0.067	0.002
.037	0.000 < 0.002 < 0.083	0.002
.019 <	0.000 < 0.002 < 0.050	0.000
.019	0.000 < 0.001 < 0.083	0.000
.019	0.000 < 0.002 < 0.100	0.000
.019 <	0.000 < 0.002 < 0.100	0.000
.013	0.000 < 0.001 < 0.023	0.000
.019 <	0.000 < 0.001 < 0.083	0.000
.013	0.075 < 0.002 < 0.045	0.083
.019	0.000 < 0.001 < 0.013	0.005
.026	0.000 < 0.003 < 0.038	0.005
.011	0.000 < 0.002 < 0.018	0.005
.011	0.003 < 0.002 < 0.030	0.000
.009	0.000 < 0.001 < 0.020	0.000
.020	0.001 < 0.001 < 0.033	0.001
.015	0.026 < 0.002 < 0.022	0.026
.011 <	0.000 < 0.001 < 0.013	0.000
.011	0.007 < 0.002 < 0.028	0.000
.009	0.000 < 0.001 < 0.027	0.073
.011	0.000 < 0.001 < 0.028	0.082
.009	0.023 < 0.002 < 0.012	0.099
.015 <	0.000 < 0.002 < 0.018	0.066

9707240076 -30

TABLE 500.6-2

500.6	217.5	35.5	*	<	0.05	<	0.05	<	0.15	1.55	<	0.23	<	0.15	1	<	0.019	<	0.015
500.6	214.5	35.5	*	<	0.10	<	0.07	<	0.08	1.20	<	0.30	<	0.10	1	<	0.037	<	0.021
500.6	218.5	37.5	*	<	0.08	<	0.05	<	0.05	1.06	<	0.13	<	0.13	1	<	0.030	<	0.015
500.6	235	45	*	<	0.07	<	0.10	<	0.05	0.48	<	0.32	<	0.11	1	<	0.026	<	0.030
500.6	MEAR 235	65	*	<	0.07	<	0.28	<	0.06	0.08	<	0.14	<	0.18	1	<	0.026	<	0.085
500.6	198	32.5	*	<	0.03	<	0.04	<	0.05	0.34	<	0.27	<	0.06	1	<	0.011	<	0.012
500.6	205	25	0.10	<	0.08	<	0.08	<	0.08	1.52	<	0.29	<	0.12	1	<	0.030	<	0.024
500.6	220	37.5	*	<	0.12	<	0.10	<	0.08	2.83	<	0.44	<	0.08	1	<	0.044	<	0.030
500.6	222	34.5	*	<	0.05	<	0.05	<	0.08	0.84	<	0.36	<	0.22	1	<	0.019	<	0.015
500.6	226	34.5	*	<	0.04	<	0.06	<	0.07	0.48	<	0.30	<	0.09	1	<	0.015	<	0.018
500.6	228	34.5	*	<	0.09	<	0.04	<	0.06	0.17	<	0.30	<	0.15	1	<	0.033	<	0.012
500.6	220	37.5	*	<	0.05	<	0.04	<	0.05	0.7	<	0.22	<	0.12	1	<	0.019	<	0.012
500.6	222	37.5	*	<	0.03	<	0.02	<	0.05	0.15	<	0.24	<	0.28	1	<	0.011	<	0.006
500.6	226	37.5	*	<	0.03	<	0.03	<	0.06	0.16	<	0.15	<	0.13	1	<	0.011	<	0.009
500.6	228	37.5	*	<	0.06	<	0.02	<	0.15	0.89	<	0.30	<	0.15	1	<	0.022	<	0.006

Cs-137 BKG NOT SUBTRACTED \* Sr-90 RESULTS PENDING 7/2/97

0.028	0.026 < 0.001 < 0.025	0.114
0.015	0.000 < 0.002 < 0.017	0.091
0.009	0.000 < 0.001 < 0.022	0.076
0.009	0.000 < 0.002 < 0.018	0.086
0.011	< 0.000 < 0.001 < 0.030	0.153
0.009	< 0.000 < 0.001 < 0.010	0.044
0.015	0.024 < 0.001 < 0.020	0.024
0.015	0.248 < 0.002 < 0.013	0.248
0.015	0.074 < 0.002 < 0.037	0.074
0.013	0.642 < 0.002 < 0.015	0.042
0.011	< 0.012 < 0.002 < 0.025	0.000
0.009	0.024 < 0.001 < 0.020	0.024
0.009	0.013 < 0.001 < 0.047	0.013
0.011	0.014 < 0.001 < 0.022	0.014
0.028	0.078 < 0.002 < 0.025	0.078

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

9707240076-31

3.6-3

20-Jun

## GAMMA SPECTRUM ANALYSIS

ITEM: 500.6 DATE: 11-14-96 FILENAME:  
 ID #: 96111408 TECH: RW 111408.WK3  
 MICROREM PER HOUR: 20 DESIGNATION:  
 COUNT TIME IN SECONDS: 600 OUTSIDE

DETECTOR LOCATION: AREA 500.6 GRID 215N, 25W

ROI #	CENTROID ENERGY KeV	NET COUNTS/ SECOND	NET CPS CS-137 EQUIV	FLUX TO DOSE CONV.	CPS * CONV.	FRACT. OF DOSE ENERGY	UREM/HR DOSE PER ENERGY RANGE	
						*	PB#	
1	185.82	0.523	BA-226	0.22	3.71E-04	8.00E-05	3.25E-03	0.0650
2	238.63	2.490	PB-212	1.19	4.78E-04	5.70E-04	2.32E-02	0.4632
3	270.73	0.367	AC-228	0.19	5.43E-04	1.03E-04	4.20E-03	0.0840
4	295.59	1.372	PB-214	0.75	5.93E-04	4.48E-04	1.82E-02	0.3640
5	338.56	0.627	AC-228	0.32	6.81E-04	2.57E-04	1.05E-02	0.2093
6	352.02	2.257	PB-214	1.40	7.08E-04	9.91E-04	4.03E-02	0.8058
7	463.34	0.195	AC-228	0.15	9.36E-04	1.38E-04	5.62E-03	0.1124
8	510.98	0.563	TL-208	0.46	1.03E-03	4.76E-04	1.93E-02	0.3867
9	583.98	1.172	TL-208	1.16	1.18E-03	1.26E-03	5.12E-02	1.0235
10	610.39	1.903	BI-214	1.19	1.24E-03	2.22E-03	9.01E-02	1.8023
11	720.44	0.225	BI-212	0.25	1.48E-03	3.63E-04	1.48E-02	0.2953
	912.25	0.497	AC-228	0.66	1.86E-03	1.23E-03	4.98E-02	0.9963
13	970.24	0.733	AC-228	1.03	1.98E-03	2.04E-03	8.28E-02	1.6553
14	1121.43	0.392	BI-214	0.63	2.29E-03	1.44E-03	5.85E-02	1.1702
15	1239.48	0.192	BI-214	0.34	2.54E-03	8.57E-04	3.48E-02	0.6968
16	1462.64	1.193	K-40	2.47	3.00E-03	7.41E-03	3.01E-01	6.0204
17	1594.16	0.198	AC-228	0.43	3.27E-03	1.40E-03	5.71E-02	1.1415
18	1766.06	0.365	BI-214	0.91	3.63E-03	3.32E-03	1.35E-01	2.7000
					2.78E-02	2.46E-02	1.00E+00	20.00

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.7 survey unit was surveyed on an affected area basis and has a surface area of 1300 m<sup>2</sup>. 69 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 68 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.7 survey unit are provided in 2 attached tables as follows:

Table 500.7-1 Land Surrounding Butler Buildings  
gamma exposure rate data

Table 500.7-2 Land Surrounding Butler Buildings  
surface soil contamination data

## CINTICHEM DECOMMISSIONING PLAN

06/12/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

LAND SURROUNDING BUTLER BUILDINGS

AREA 500.7 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 06/10/97

TECHNICIANS: JB/GF

## MATERIAL CODE

AREA: 500.0

1=CONCRETE

5=PLASTIC

UNIT: 500.7

2=ROCK

6=SOIL

MEDIA TYPE: SOIL

3=WOOD

7=ASPHALT

# OF POINTS: 68

4=METAL

8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

QA ok  
P.D. 6/12/97

## MICRO REM

## PER HOUR: LIMIT

MAX:	6.00 PASS	10
Avg:	3.56 PASS	5
STD X:	1.58	
MU SUB ALPHA:	3.88 PASS	5

## MATER-

ID #	GRID POINT	INST.	AREA	AREA	IAL	NET
		ID #	BKG	READING	CODE	UREM/HR
			UREM/HR	UREM/HR		

500.7	372.5	77.5	A	6	10	8	4
500.7	377.5	77.5	A	6	8	8	2
500.7	375	75	A	6	9	8	3
500.7	377.5	67.5A	A	6	9	8	3
500.7	375	65A	A	6	9	8	3
500.7	377.5	62.5A	A	6	9	8	3
500.7	382.5	67.5A	A	6	5	8	-1
500.7	387.5	67.5A	A	6	6	8	0
500.7	385	65A	A	6	7	8	1
500.7	382.5	62.5A	A	6	8	8	2
500.7	387.5	62.5A	A	6	6	8	0
500.7	372.5	67.5	A	6	11	8	5
500.7	377.5	67.5	A	6	12	8	6
500.7	375	65	A	6	11	8	5
500.7	372.5	62.5	A	6	11	8	5
500.7	377.5	62.5	A	6	9	8	3
500.7	382.5	67.5	A	6	9	8	3
500.7	387.5	67.5	A	6	11	8	5
500.7	385	65	A	6	9	8	3
500.7	382.5	62.5	A	6	10	8	4
500.7	387.5	62.5	A	6	10	8	4
500.7	367.5	57.5	A	6	9	8	3
500.7	367.5	52.5	A	6	10	8	4
500.7	372.5	57.5	A	6	8	8	2
500.7	377.5	57.5	A	6	11	8	5
500.7	375	55	A	6	10	8	4
500.7	372.5	52.5	A	6	8	8	2
500.7	377.5	52.5	A	6	11	8	5
500.7	382.5	57.5	A	6	11	8	5
500.7	387.5	57.5	A	6	11	8	5

TABLE 500.7-1

500.7	385	55	A	6	11	8	5
500.7	382.5	52.5	A	6	12	8	6
500.7	387.5	52.5	A	6	11	8	5
500.7	352.5	47.5	A	6	7	8	1
500.7	355	45	A	6	7	8	1
500.7	352.5	42.5	A	6	10	8	4
500.7	362.5	47.5	A	6	6	8	0
500.7	367.5	47.5	A	6	8	8	2
500.7	365	45	A	6	8	8	2
500.7	362.5	42.5	A	6	9	8	3
500.7	367.5	42.5	A	6	9	8	3
500.7	372.5	47.5	A	6	11	8	5
500.7	377.5	47.5	A	6	11	8	5
500.7	375	45	A	6	10	8	4
500.7	372.5	42.5	A	6	12	8	6
500.7	377.5	42.5	A	6	12	8	6
500.7	382.5	47.5	A	6	10	8	4
500.7	387.5	47.5	A	6	10	8	4
500.7	385	45	A	6	11	8	5
500.7	382.5	42.5	A	6	10	8	4
500.7	387.5	42.5	A	6	9	8	3
500.7	357.5	37.5	A	6	9	8	3
500.7	357.5	32.5	A	6	9	8	3
500.7	362.5	37.5	A	6	9	8	3
500.7	367.5	37.5	A	6	11	8	5
500.7	365	35	A	6	10	8	4
500.7	362.5	32.5	A	6	10	8	4
500.7	367.5	32.5	A	6	10	8	4
500.7	372.5	37.5	A	6	11	8	5
500.7	377.5	37.5	A	6	9	8	3
500.7	375	35	A	6	9	8	3
500.7	372.5	32.5	A	6	10	8	4
500.7	377.5	32.5	A	6	9	8	3
500.7	382.5	37.5	A	6	12	8	6
500.7	387.5	37.5	A	6	9	8	3
500.7	385	35	A	6	11	8	5
500.7	382.5	32.5	A	6	11	8	5
500.7	387.5	32.5	A	6	9	8	3

## TABLE 500.7-2

CINTICHEM DECOMMISSIONING PLAN 06/13/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

LAND SURROUNDING BUTLER BUILDINGS

AREA 500.7

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE:

TECHNICIANS:

AREA: 500.0

UNIT: 500.7

MEDIA TYPE: SOIL

# of POINTS: 69

SOIL DATA IN

SUM OF FRACTIONS:		LIMIT		
		MAX	PASS	3
	MAX GRID AVG.	0.62	PASS	1
	STD X	0.09		
	MU SUB ALPHA	0.64	PASS	1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	OR OTHER ID	GRID COORDINATES	SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SOIL CODE

N	M									
500.7	372.5	77.5 < 0.13 <	0.03 < 0.03 < 0.04	0.15 < 0.20 < 0.09						1
500.7	377.5	77.5 < 0.13 <	0.04 < 0.04 < 0.05	0.20 < 0.30 < 0.10						1
500.7	375	75 < 0.13 <	0.04 < 0.03 < 0.04	0.29 < 0.20 < 0.20						1
500.7	377.5	67.5A < 0.10 <	0.10 < 0.10 < 0.10	0.80 < 0.30 < 0.00						1
500.7	375	65A < 0.10 <	0.10 < 0.10 < 0.20	0.80 < 0.30 < 0.40						1
500.7	377.5	62.5A < 0.10 <	0.10 < 0.10 < 0.10	0.20 < 0.10 < 0.50						1
500.7	382.5	67.5A < 0.10 <	0.05 < 0.05 < 0.06	0.67 < 0.30 < 0.20						1
500.7	387.5	67.5A < 0.10 <	0.03 < 0.02 < 0.02	0.18 < 0.20 < 0.07						1
500.7	385	65A < 0.10 <	0.03 < 0.03 < 0.03	0.16 < 0.20 < 0.08						1
500.7	382.5	62.5A < 0.10 <	0.02 < 0.02 < 0.02	0.09 < 0.10 < 0.06						1
500.7	387.5	62.5A < 0.10 <	0.02 < 0.02 < 0.02	0.20 < 0.10 < 0.07						1
500.7	372.5	67.5 < 0.11	0.59 < 0.09 < 0.04	0.33 < 0.20 < 0.17						1
500.7	377.5	67.5 < 0.12	0.37 < 0.04 < 0.05	0.25 < 0.30 < 0.10						1
500.7	375	65 < 0.12	0.88 < 0.56 < 0.07	2.14 < 0.30 < 0.33						1
500.7	372.5	62.5 < 0.12 <	0.05 < 0.05 < 0.06	0.62 < 0.10 < 0.10						1
500.7	377.5	62.5 < 0.12 <	0.05 < 0.04 < 0.05	0.33 < 0.30 < 0.10						1
500.7	382.5	67.5	0.12 <	0.06 < 0.06 < 0.08	1.66 < 0.40 < 0.20					1
500.7	387.5	67.5	0.12 <	0.03 < 0.03 < 0.04	0.39 < 0.20 < 0.01					1
500.7	385	65	0.12 <	0.07 < 0.06 < 0.08	1.61 < 0.40 < 0.02					1
500.7	382.5	62.5	0.12 <	0.03 < 0.03 < 0.04	0.21 < 0.20 < 0.09					1
500.7	387.5	62.5	0.12 <	0.03 < 0.03 < 0.03	0.08 < 0.20 < 0.80					1
500.7	367.5	57.5 < 0.10 <	0.04 < 0.04 < 0.06	2.11 < 0.30 < 0.10						1
500.7	367.5	52.5 < 0.10 <	0.04 < 0.03 < 0.05	0.05 < 0.30 < 0.10						1
500.7	372.5	57.5 < 0.11 <	0.04 < 0.03 < 0.05	0.49 < 0.20 < 0.10						1
500.7	377.5	57.5 < 0.11 <	0.05 < 0.05 < 0.06	1.10 < 0.40 < 0.20						1
500.7	375	55 < 0.11 <	0.07 < 0.07 < 0.08	1.02 < 0.40 < 0.20						1

AGG-27-97

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

**ISOTOPES OF CONCERN INDIVIDUAL SAMPLE FRACTION OF HOT SPOT LIMIT  
(WITH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)**

SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM	GRID BLOCK
							Avg. Fraction of Limit	
0.003 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.000	
0.003 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000	
0.003 <	0.015 <	0.009 <	0.007	0.000 <	0.001 <	0.033	0.000	
							0	
0.002 <	0.037 <	0.030 <	0.019	0.000 <	0.002 <	0.000	0.000	
0.002 <	0.037 <	0.030 <	0.037	0.000 <	0.002 <	0.067	0.000	
0.002 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.083	0.000	
							0	
0.002 <	0.019 <	0.015 <	0.011	0.000 <	0.002 <	0.033	0.000	
0.002 <	0.011 <	0.006 <	0.004	0.000 <	0.001 <	0.012	0.000	
0.002 <	0.011 <	0.009 <	0.006	0.000 <	0.001 <	0.013	0.000	
0.002 <	0.007 <	0.006 <	0.004	0.000 <	0.001 <	0.010	0.000	
0.002 <	0.007 <	0.006 <	0.004	0.000 <	0.001 <	0.012	0.000	
							0	
0.002	0.219	0.027 <	0.007	0.000 <	0.001	0.028	0.274	
0.002	0.137 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.137	
0.002	0.326	0.170 <	0.013	0.078 <	0.002	0.055	0.629	
0.002 <	0.019 <	0.015 <	0.011	0.000 <	0.001 <	0.017	0.000	
0.002 <	0.019 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000	
							0.623913	
0.002 <	0.022 <	0.018 <	0.015	0.036 <	0.002 <	0.033	0.038	
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.002	0.002	
0.002 <	0.026 <	0.018 <	0.015	0.032 <	0.002 <	0.003	0.034	
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.002	
0.002 <	0.011 <	0.009 <	0.006	0.000 <	0.001 <	0.133	0.002	
							0.047585	
0.002 <	0.015 <	0.012 <	0.011	0.075 <	0.002 <	0.017	0.075	
0.002 <	0.015 <	0.009 <	0.009 <	0.000 <	0.002 <	0.017	0.000	
							0.045263	
0.002 <	0.015 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.000	
0.002 <	0.019 <	0.015 <	0.011	0.000 <	0.002 <	0.033	0.000	
0.002 <	0.026 <	0.021 <	0.015	0.000 <	0.002 <	0.033	0.000	

9707240076-32

TABLE 500.7-2

500.7	372.5	52.5 < 0.11 <	0.04 < 0.03 < 0.05	0.82 < 0.20 < 0.10	1
500.7	377.5	52.5 < 0.11 <	0.05 < 0.05 < 0.06	1.09 < 0.30 < 0.10	1
500.7	382.5	57.5 < 0.10 <	0.04 < 0.03 < 0.05	0.12 < 0.20 < 0.10	1
500.7	387.5	57.5 < 0.10 <	0.04 < 0.04 < 0.05	0.75 < 0.20 < 0.10	1
500.7	385	55 < 0.10 <	0.04 < 0.03 < 0.05	0.65 < 0.20 < 0.10	1
500.7	382.5	52.5 < 0.10 <	0.05 < 0.04 < 0.06	0.67 < 0.30 < 0.10	1
500.7	387.5	52.5 < 0.10 <	0.04 < 0.04 < 0.04	0.77 < 0.30 < 0.10	1
500.7	352.5	47.5 < 0.10 <	0.03 < 0.03 < 0.04	0.21 < 0.20 < 0.10	1
500.7	355	45 < 0.10 <	0.04 < 0.04 < 0.05	0.49 < 0.30 < 0.10	1
500.7	352.5	42.5 < 0.10 <	0.04 < 0.04 < 0.05	0.68 < 0.30 < 0.10	1
500.7	357.5	42.5 < 0.10 <	0.03 < 0.03 < 0.04	0.11 < 0.20 < 0.08	1
500.7	362.5	47.5 < 0.08 <	0.03 < 0.03 < 0.04	0.67 < 0.20 < 0.90	1
500.7	367.5	47.5 < 0.08 <	0.06 < 0.05 < 0.06	0.86 < 0.30 < 0.10	1
500.7	365	45 < 0.08	0.12 < 0.03 < 0.05	0.14 < 0.20 < 0.10	1
500.7	362.5	42.5 < 0.08 <	0.03 < 0.03 < 0.04	0.13 < 0.20 < 0.08	1
500.7	367.5	42.5 < 0.08 <	0.04 < 0.04 < 0.05	0.19 < 0.30 < 0.10	1
500.7	372.5	47.5 < 0.11 <	0.10 < 0.10 < 0.10	0.30 < 0.40 < 0.60	1
500.7	377.5	47.5 < 0.11 <	0.20 < 0.10 < 0.10 < 0.20 < 0.30 < 0.40	1	
500.7	375	45 < 0.11 <	0.10 < 0.10 < 0.10 < 0.20 < 0.10 < 0.40	1	
500.7	372.5	42.5 < 0.11 <	0.10 < 0.10 < 0.10	0.70 < 0.10 < 0.50	1
500.7	377.5	42.5 < 0.11 <	0.10 < 0.10 < 0.10	0.40 < 0.20 < 0.70	1
500.7	382.5	47.5 < 0.12 <	0.04 < 0.04 < 0.05	0.90 < 0.30 < 0.10	1
500.7	387.5	47.5 < 0.12 <	0.04 < 0.03 < 0.04 < 0.04 < 0.30 < 0.10	1	
500.7	385	45 < 0.12 <	0.03 < 0.03 < 0.04	0.36 < 0.20 < 0.09	1
500.7	382.5	42.5 < 0.12 <	0.05 < 0.04 < 0.06	0.49 < 0.30 < 0.10	1
500.7	387.5	42.5 < 0.12 <	0.04 < 0.03 < 0.05	0.52 < 0.20 < 0.10	1
500.7	357.5	37.5 < 0.12 <	0.05 < 0.03 < 0.07	0.70 < 0.37 < 0.08	1
500.7	357.5	32.5 < 0.12 <	0.06 < 0.03 < 0.06	0.47 < 0.48 < 0.13	1
500.7	362.5	37.5 < 0.10 <	0.13 < 0.05 < 0.07	0.20 < 0.23 < 0.17	1
500.7	367.5	37.5 < 0.10 <	0.04 < 0.04 < 0.06 < 0.10 < 0.20 < 0.10	1	
500.7	365	35 < 0.10 <	0.04 < 0.06 < 0.07	0.45 < 0.40 < 0.08	1
500.7	362.5	32.5 < 0.10 <	0.04 < 0.06 < 0.06	0.59 < 0.41 < 0.15	1
500.7	367.5	32.5 < 0.10 <	0.04 < 0.06 < 0.06	0.37 < 0.44 < 0.14	1
500.7	372.5	37.5 < 0.12 <	0.06 < 0.05 < 0.07	0.34 < 0.30 < 0.10	1
500.7	377.5	37.5 < 0.12 <	0.03 < 0.03 < 0.04	0.11 < 0.20 < 0.08	1
500.7	375	35 < 0.12 <	0.04 < 0.04 < 0.05	0.57 < 0.30 < 0.10	1
500.7	372.5	32.5 < 0.12 <	0.04 < 0.04 < 0.06	0.64 < 0.30 < 0.10	1
500.7	377.5	32.5 < 0.12 <	0.10 < 0.03 < 0.07	0.32 < 0.19 < 0.15	1
500.7	382.5	37.5 < 0.12 <	0.10 < 0.10	0.10 < 0.20 < 0.60 < 0.60	1
500.7	387.5	37.5 < 0.12 <	0.10 < 0.10	0.60 < 0.30 < 0.60	1
500.7	385	35 < 0.12 <	0.20 < 0.10	0.90 < 0.40 < 0.90	1
500.7	382.5	32.5 < 0.12 <	0.20 < 0.10	1.30 < 0.40 < 0.60	1
500.7	387.5	32.5 < 0.12 <	0.20 < 0.10	3.70 < 0.40 < 0.60	1

0.002 <	0.015 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.000
0.002 <	0.019 <	0.015 <	0.011	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.000
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.001 <	0.017	0.000
0.002 <	0.015 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.000
0.002 <	0.019 <	0.012 <	0.011	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.012 <	0.007	0.000 <	0.002 <	0.017	0.000
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.017	0.000
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.013	0.000
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.150	0.000
0.002 <	0.022 <	0.015 <	0.011	0.000 <	0.002 <	0.017	0.000
0.002 <	0.044 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.044
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.013	0.000
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.056
							0.060277
0.002 <	0.037 <	0.030 <	0.019	0.000 <	0.002 <	0.100	0.000
0.002 <	0.074 <	0.030 <	0.019 <	0.000 <	0.002 <	0.067	0.000
0.002 <	0.037 <	0.030 <	0.019 <	0.000 <	0.001 <	0.067	0.000
0.002 <	0.037 <	0.030 <	0.019	0.000 <	0.001 <	0.083	0.000
0.002 <	0.037 <	0.030 <	0.019	0.000 <	0.001 <	0.117	0.000
							0
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.009 <	0.007 <	0.000 <	0.002 <	0.017	0.000
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.015	0.000
0.002 <	0.019 <	0.012 <	0.011	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.009 <	0.009	0.000 <	0.001 <	0.017	0.000
							0
0.002 <	0.019 <	0.009 <	0.013	0.000 <	0.002 <	0.013	0.000
0.002 <	0.022 <	0.009 <	0.011	0.000 <	0.003 <	0.022	0.000
							0
0.002 <	0.048 <	0.015 <	0.013	0.000 <	0.001 <	0.028	0.000
0.002 <	0.015 <	0.012 <	0.011 <	0.000 <	0.001 <	0.017	0.000
0.002 <	0.013 <	0.018 <	0.013	0.000 <	0.002 <	0.013	0.000
0.002 <	0.015 <	0.018 <	0.011	0.000 <	0.002 <	0.025	0.000
0.002 <	0.015 <	0.018 <	0.011	0.000 <	0.002 <	0.023	0.072
							0.043038
0.002 <	0.022 <	0.015 <	0.013	0.000 <	0.002 <	0.017	0.000
0.002 <	0.011 <	0.009 <	0.007	0.000 <	0.001 <	0.013	0.000
0.002 <	0.015 <	0.012 <	0.009	0.000 <	0.002 <	0.017	0.000
0.002 <	0.015 <	0.012 <	0.011	0.000 <	0.002 <	0.017	0.000
<	0.037 <	0.009 <	0.013	0.000 <	0.001 <	0.025	0.000
							0
0.002 <	0.037 <	0.030	0.019 <	0.000 <	0.003 <	0.100	0.019
0.002 <	0.037 <	0.030 <	0.019	0.000 <	0.002 <	0.100	0.000
0.002 <	0.074 <	0.030 <	0.037	0.000 <	0.002 <	0.150	0.000
0.002 <	0.074 <	0.030 <	0.037	0.004 <	0.002 <	0.100	0.004
0.002 <	0.074 <	0.030 <	0.019	0.215 <	0.002 <	0.100	0.215
							0.14269

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970724.0076-33

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 500.8 survey unit was surveyed on an affected area basis and has a surface area of 400 m<sup>2</sup>. 16 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 16 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 500.8 survey unit are provided in 2 attached tables as follows:

Table 500.8-1 Soil Area @ N. End of B-3  
gamma exposure rate data

Table 500.8-2 Soil Area @ N. End of B-3  
surface soil contamination data

QA OK  
 P. Sheel  
 6/17/97

## CINTICHEM DECOMMISSIONING PLAN

04/16/97

## FINAL SURVEY DATA SHEET

DATA FOR AFFECTED AREA DESCRIPTION:  
 SOIL AREA @ N END OF B-3 OUTSIDE FENCE  
 AREA 500.8 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 10/30/96

TECHNICIANS: MANY

## MATERIAL CODE

AREA: 500.0

1:CONCRETE

5:PLASTIC

UNIT: 500.8

2:ROCK

6:SOIL

MEDIA TYPE: SOIL

3:WOOD

7:ASPHALT

# OF POINTS: 16

4:METAL

8:OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX:	4.00 PASS	10
AVG:	0.88 PASS	5
STD X:	1.41	
MU SUB ALPHA:	1.49 PASS	5

ID #	GRID POINT	MATER-					
		INST.	AREA	AREA	IAL	NET	
		ID #	BKG	READING	CODE	UREM/HR	
			UREM/HR	UREM/HR			
			N	W			
500.8	167.5	A	6	7	8	1	
500.8	165	A	6	7	8	1	
500.8	167.5	A	6	6	8	0	
500.8	172.5	A	6	7	8	1	
500.8	177.5	A	6	7	8	1	
500.8	175	A	6	7	8	1	
500.8	172.5	A	6	9	8	3	
500.8	177.5	A	6	5	8	-1	
500.8	182.5	A	6	8	8	2	
500.8	187.5	A	6	6	8	0	
500.8	185	A	6	10	8	4	
500.8	182.5	A	6	8	8	2	
500.8	192.5	A	6	6	8	0	
500.8	197.5	A	6	5	8	-1	
500.8	167.5	A	6	5	8	-1	
500.8	172.5	A	6	7	8	1	



AG6-27-97

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OTOPES OF CONCERN IN FRACTION OF HOT SPOT LIMIT

(TH Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

-90 CO-60 AG-108M CS-134 CS-137 CE-144 EU-152 SUM

.004 < 0.026 < 0.012 < 0.011 < 0.000 < 0.001 < 0.017 0.000

.004 < 0.019 < 0.018 < 0.026 < 0.000 < 0.001 < 0.023 0.000

.004 < 0.015 < 0.009 < 0.009 0.000 < 0.001 < 0.015 0.000

0

.004 < 0.011 < 0.006 < 0.026 < 0.000 < 0.001 < 0.020 0.000

.004 < 0.019 < 0.009 < 0.011 0.000 < 0.001 < 0.015 0.000

.004 < 0.022 < 0.006 < 0.028 < 0.000 < 0.001 < 0.015 0.000

.004 < 0.030 < 0.015 < 0.028 0.000 < 0.002 < 0.012 0.000

.004 < 0.015 < 0.015 < 0.011 < 0.000 < 0.002 < 0.037 0.000

0

.004 < 0.015 < 0.009 < 0.007 < 0.000 < 0.001 < 0.023 0.000

.004 < 0.030 < 0.015 < 0.009 0.000 < 0.001 < 0.017 0.000

.004 < 0.011 < 0.006 < 0.024 < 0.000 < 0.001 < 0.018 0.000

.004 < 0.015 < 0.012 < 0.007 < 0.000 < 0.002 < 0.035 0.000

0

.006 < 0.041 < 0.030 < 0.013 0.000 < 0.001 < 0.017 0.000

.006 < 0.019 < 0.009 < 0.009 0.000 < 0.002 < 0.012 0.000

0

.014 < 0.019 < 0.015 < 0.011 < 0.000 < 0.002 < 0.018 0.014

0.041765

.006 < 0.019 < 0.015 < 0.015 0.000 < 0.002 < 0.038 0.006

0.017647

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## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.1 survey unit was surveyed on an affected area basis and has a surface area of 1200 m<sup>2</sup>. 33 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 33 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the accompanying map.

Measurement and sampling results for the 501.1 survey unit are provided in 3 attached tables as follows:

Table 501.1-1 Road to Butler Building  
gamma exposure rate data

Table 501.1-2 Road to Butler Building  
direct beta/gamma surface contamination data

Table 501.1-3 Road to Butler Building  
direct alpha surface contamination data

FINAL SURVEY  
ROAD TO BUTLER BLDG  
UNIT 501.1

STA 1+00W  
STA 0+90W  
STA 0+80W  
STA 0+70W  
STA 0+60W  
STA 0+50W  
STA 0+40W  
STA 0+30W  
STA 0+20W  
STA 0+10W  
STA 0+00  
STA 0+10E  
STA 0+20E  
STA 0+30E  
STA 0+40E  
STA 1+50N  
STA 1+60N  
STA 1+70N  
STA 1+80N  
STA 1+90N  
STA 2+00N  
STA 2+10N  
STA 2+20N  
STA 2+30N  
STA 2+40N  
STA 2+50N  
STA 2+60N  
STA 2+70N  
STA 2+80N  
STA 2+90N  
STA 3+00N  
STA 3+10N  
STA 3+20N  
STA 3+30N  
STA 3+40N  
STA 3+50N

10/16/96  
DWGS/3139

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

## AREA 501.1

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	394	60
Number of Meas.:	33	33	33
Survey Unit Mean:	2.8	422	9
True Mean; U alpha 95% C.L.:	3.3	462	11
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	6	688	28
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural radioactive material content

1A66-4-97

## CINTICHEM DECOMMISSIONING PLAN

06/04/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

BUTLER BUILDING ROAD

AREA 501.1 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 11/20/96

TECHNICIANS: PS/FM/LC

## MATERIAL CODE

AREA: 501.0

1=CONCRETE 5=PLASTIC

UNIT: 501.1

2=ROCK 6=SOIL

MEDIA TYPE: ASPHALT

3=WOOD 7=ASPHALT

# OF POINTS: 33

4=METAL 8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX: 6.00 PASS 10

AVG: 2.82 PASS 5

STD X: 1.59

MU SUB ALPHA: 3.29 PASS 5

## MATER-

ID #	GRID POINT	INST.	AREA	AREA	IAL	NET	
						BKG	READING
						CODE	UREM/HR
			UREM/HR	UREM/HR			
			N	W			
501.1	357.5	47.5	6	9	8	3	
501.1	355	45	6	7	8	1	
501.1	352.5	42.5	6	12	8	6	
501.1	347.5	37.5	6	9	8	3	
501.1	332.5	32.5	6	9	8	3	
501.1	332.5	27.5	6	10	8	4	
501.1	322.5	22.5	6	9	8	3	
501.1	317.5	22.5	6	10	8	4	
501.1	292.5	22.5	6	7	8	1	
501.1	282.5	22.5	6	8	8	2	
501.1	287.5	22.5	6	7	8	1	
501.1	272.5	22.5	6	10	8	4	
501.1	277.5	22.5	6	7	8	1	
501.1	262.5	22.5	6	11	8	5	
501.1	267.5	22.5	6	9	8	3	
501.1	257.5	22.5	6	9	8	3	
501.1	232.5	17.5	6	6	8	0	
501.1	237.5	17.5	6	7	8	1	
501.1	222.5	17.5	6	7	8	1	
501.1	227.5	17.5	6	8	8	2	
501.1	217.5	17.5	6	12	8	6	
501.1	202.5	12.5	6	6	8	0	
501.1	192.5	12.5	6	9	8	3	
501.1	197.5	12.5	6	7	8	1	
501.1	182.5	12.5	6	9	8	3	
501.1	187.5	12.5	6	11	8	5	
501.1	172.5	12.5	6	10	8	4	
501.1	177.5	12.5	6	8	8	2	
501.1	162.5	12.5	6	10	8	4	
501.1	167.5	12.5	6	9	8	3	

## TABLE 501.1-1

501.1	152.5	17.5	6	10	8	4
501.1	152.5	12.5	6	9	8	3
501.1	157.5	12.5	6	10	8	4

M66-6-97

## CINTICHEM DECOMMISSIONING PLAN

06/05/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

BUTLER BUILDING ROAD

AREA 501.1 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR : 0.975  
 COMPLETION

DATE: 11/20/96  
 TECHNICIANS: PS/FM/LC MATERIAL CODE  
 AREA: 501.0 1=CONCRETE 5=PLASTIC  
 UNIT: 501.1 2=ROCK 6=SOIL  
 MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT  
 # of POINTS: 33 4=METAL 8=OTHER(SPECIFY):  
 CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM. + FIXED:		LIMIT
MAX FOR IND GRID	688 PASS	1273
Avg - SURVEY UNIT	422 PASS	1273
STD X	135	
MU SUB ALPHA	462 PASS	
MAX HOT SPOT	NONE PASS	3818

GRID COORDINATES GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	WEIGHTED			
		INST.	FIXED	MAX	CONT.	MATER-	AVG.	MAX	INST. EFF.
		BKG	AREA COUNTS/	BETA	AREA	IAL	DPM/	FIXED	PER
		CPM	MINUTES		CM^2	CODE	100 CM^2	100 CM^2 TEST	100 CM^2 TEST
N	W								
501.1	357.5	47.5	1	437	542	0	0	8	392
501.1	355	45	1	421	592	0	0	8	394
501.1	352.5	42.5	1	437	575	0	0	8	392
501.1	347.5	37.5	1	437	513	0	0	8	392
501.1	332.5	32.5	1	437	499	0	0	8	392
501.1	332.5	27.5	1	437	584	0	0	8	392
501.1	322.5	22.5	1	437	498	0	0	8	392
501.1	317.5	22.5	1	437	525	0	0	8	392
501.1	292.5	22.5	1	437	536	0	0	8	392
501.1	282.5	22.5	1	437	518	0	0	8	392
501.1	287.5	22.5	1	437	498	0	0	8	392
501.1	272.5	22.5	1	437	516	0	0	8	392
501.1	277.5	22.5	1	437	530	0	0	8	392
501.1	262.5	22.5	1	437	508	0	0	8	392
501.1	267.5	22.5	1	437	587	0	0	8	392
501.1	257.5	22.5	1	437	535	0	0	8	392
501.1	232.5	17.5	1	437	517	0	0	8	392
501.1	237.5	17.5	1	437	547	0	0	8	392
501.1	222.5	17.5	1	437	515	0	0	8	392
501.1	227.5	17.5	1	437	540	0	0	8	392
501.1	217.5	17.5	1	437	520	0	0	8	392
501.1	202.5	12.5	1	437	518	0	0	8	392
501.1	192.5	12.5	1	437	536	0	0	8	392
501.1	197.5	12.5	1	437	564	0	0	8	392
501.1	182.5	12.5	1	437	602	0	0	8	392
501.1	187.5	12.5	1	437	580	0	0	8	392
501.1	172.5	12.5	1	437	557	0	0	8	392
501.1	177.5	12.5	1	437	558	0	0	8	392
501.1	162.5	12.5	1	437	573	0	0	8	392

## TABLE 501.1-2

501.1	167.5	12.5	1	437	569	0	0	8	392	518 +/- 244	NA	0.2615
501.1	152.5	17.5	1	437	591	0	0	8	392	604 +/- 246	NA	0.2615
501.1	152.5	12.5	1	437	609	0	0	8	392	675 +/- 249	NA	0.2615
501.1	157.5	12.5	1	437	497	0	0	8	392	235 +/- 235	NA	0.2615

## CINTICHEM DECOMMISSIONING PLAN

12/11/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

BUTLER BUILDING ROAD

AREA 501.1 FOR ALPHA

RADIACTION TYPE: 2

## COMPLETION

DATE: 11/20/96

TECHNICIANS: PS/FM/LC MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.1 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# of POINTS: 33 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR INDO GRID 28 PASS 5000

AVG - SURVEY UNIT 9 PASS 5000

STD X 7

MU SUB ALPHA 11 PASS 5000

MAX HOT SPOT NONE PASS 15000

GRID COORDINATES GRID ID LOCATION	INST. ID #	INST. BKG	ALPHA AREA COUNTS/ CPM	ALPHA 1 COUNTS MINUTES	SCAN MAX	TOTAL CONT. MATER- IAL CODE	MDA DPM/ 100 CM^2	WEIGHTED			
								Avg.	Max	Inst. Eff.	Per CPM/DPM
N	W							100 CM^2 TEST	100 CM^2 TEST		
501.1	357.5	47.5	1	0	2	0	0	8	15	11 +/-	16
501.1	355	45	1	3	3	0	0	8	60	0 +/-	27
501.1	352.5	42.5	1	0	2	0	0	8	15	11 +/-	16
501.1	347.5	37.5	1	0	2	0	0	8	15	11 +/-	16
501.1	332.5	32.5	1	0	1	0	0	8	15	6 +/-	11
501.1	332.5	27.5	1	0	1	0	0	8	15	6 +/-	11
501.1	322.5	22.5	1	0	2	0	0	8	15	11 +/-	16
501.1	317.5	22.5	1	0	1	0	0	8	15	6 +/-	11
501.1	292.5	22.5	1	0	2	0	0	8	15	11 +/-	16
501.1	282.5	22.5	1	0	4	0	0	8	15	22 +/-	22
501.1	287.5	22.5	1	0	0	0	0	8	15	0 +/-	0
501.1	272.5	22.5	1	0	3	0	0	8	15	17 +/-	19
501.1	277.5	22.5	1	0	2	0	0	8	15	11 +/-	16
501.1	262.5	22.5	1	0	2	0	0	8	15	11 +/-	16
501.1	267.5	22.5	1	0	0	0	0	8	15	0 +/-	0
501.1	257.5	22.5	1	0	2	0	0	8	15	11 +/-	16
501.1	232.5	17.5	1	0	1	0	0	8	15	6 +/-	11
501.1	237.5	17.5	1	0	0	0	0	8	15	0 +/-	0
501.1	222.5	17.5	1	0	0	0	0	8	15	0 +/-	0
501.1	227.5	17.5	1	0	1	0	0	8	15	6 +/-	11
501.1	217.5	17.5	1	0	1	0	0	8	15	6 +/-	11
501.1	202.5	12.5	1	0	2	0	0	8	15	11 +/-	16
501.1	192.5	12.5	1	0	2	0	0	8	15	11 +/-	16
501.1	197.5	12.5	1	0	1	0	0	8	15	6 +/-	11
501.1	182.5	12.5	1	0	2	0	0	8	15	11 +/-	16
501.1	187.5	12.5	1	0	5	0	0	8	15	28 +/-	25
501.1	172.5	12.5	1	0	1	0	0	8	15	6 +/-	11
501.1	177.5	12.5	1	0	0	0	0	8	15	0 +/-	0
501.1	162.5	12.5	1	0	0	0	0	8	15	0 +/-	0

## TABLE 501.1-3

501.1	167.5	12.5	1	0	4	0	0	8	15	22	+/-	22	NA	0.1784
501.1	152.5	17.5	1	0	3	0	0	8	15	17	+/-	19	NA	0.1784
501.1	152.5	12.5	1	0	2	0	0	8	15	11	+/-	16	NA	0.1784
501.1	157.5	12.5	1	0	1	0	0	8	15	6	+/-	11	NA	0.1784

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.2 survey unit was surveyed on an affected area basis and has a surface area of 750 m<sup>2</sup>. 72 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 72 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the accompanying map.

Measurement and sampling results for the 501.2 survey unit are provided in 3 attached tables as follows:

Table 501.2-1 Road from Boilerhouse to Main Entrance  
gamma exposure rate data

Table 501.2-2 Road from Boilerhouse to Main Entrance  
direct beta/gamma surface contamination data

Table 501.2-3 Road from Boilerhouse to Main Entrance  
direct alpha surface contamination data

FINAL SURVEY  
ROAD FROM BOILER HOUSE  
TO MAIN ENTRANCE  
UNIT 501.2

FENCE LINE

STA 0+00N  
STA 0+10N  
STA 0+20N  
STA 0+30N  
STA 0+40N  
STA 0+50N  
STA 0+60N  
STA 0+70N  
STA 0+80N  
STA 0+90N  
STA 0+00S  
STA 0+10S  
STA 0+20S  
STA 0+30S  
STA 0+40S  
STA 0+50S  
STA 0+60S  
STA 0+70S  
STA 0+80S  
STA 0+90S  
STA 0+00E  
STA 0+10E  
STA 0+20E  
STA 0+30E  
STA 0+40E  
STA 0+50E  
STA 0+60E  
STA 0+70E  
STA 0+80E  
STA 0+90E  
STA 0+00W  
STA 0+10W  
STA 0+20W  
STA 0+30W  
STA 0+40W  
STA 0+50W  
STA 0+60W  
STA 0+70W  
STA 0+80W  
STA 0+90W

12/3/96  
DV/S/3141

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.2

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	430	47
Number of Meas.:	72	72	72
Survey Unit Mean:	1.9	194	6
True Mean;U alpha 95% C.L.:	2.3	241	8
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	6	694	25
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural radioactive material content

M66-6-97

## CINTICHEM DECOMMISSIONING PLAN

06/05/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

ROAD FROM BOILERHOUSE TO MAIN ENTRANCE

AREA 501.2 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 11/25/96

TECHNICIANS: LT/LC/PS/FM MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.2 2=ROCK 6=SOIL

MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT

# OF POINTS: 72 4=METAL 8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR:

## LIMIT

MAX: 6.00 PASS 10

AVG: 1.94 PASS 5

STD X: 1.60

MU SUB ALPHA: 2.26 PASS 5

ID #	GRID POINT	INST.	AREA	BKG	MATER-		
					READING	IAL	NET
			UREM/HR	UREM/HR	UREM/HR	UREM/HR	
S	E						

501.2	22.5 N	17.5 W	A	6	10	8	4
501.2	27.5 N	17.5 W	A	6	7	8	1
501.2	25 N	15 W	A	6	8	8	2
501.2	12.5 N	17.5 W	A	6	9	8	3
501.2	17.5 N	17.5 W	A	6	7	8	1
501.2	15 N	15 W	A	6	7	8	1
501.2	12.5 N	12.5 W	A	6	8	8	2
501.2	17.5 N	17.5 W	A	6	7	8	1
501.2	7.5 N	17.5 W	A	6	7	8	1
501.2	5 N	15 W	A	6	11	8	5
501.2	2.5 N	12.5 W	A	6	11	8	5
501.2	7.5 N	12.5 W	A	6	7	8	1
501.2	5	15 W	A	6	7	8	1
501.2	7.5	12.5 W	A	6	6	8	0
501.2	2.5	12.5 W	A	6	5	8	-1
501.2	12.5	17.5 W	A	6	8	8	2
501.2	15	15 W	A	6	7	8	1
501.2	12.5	12.5 W	A	6	7	8	1
501.2	2.5 N	7.5 W	A	6	8	8	2
501.2	7.5	7.5 W	A	6	7	8	1
501.2	2.5	7.5 W	A	6	8	8	2
501.2	5	5 W	A	6	11	8	5
501.2	7.5	2.5 W	A	6	8	8	2
501.2	2.5	2.5 W	A	6	8	8	2
501.2	7.5	2.5	A	6	9	8	3
501.2	22.5	7.5	A	6	8	8	2
501.2	17.5	12.5	A	6	9	8	3
501.2	22.5	12.5	A	6	6	8	0
501.2	25	15	A	6	6	8	0
501.2	22.5	17.5	A	6	7	8	1

TABLE 501.2-1

501.2	27.5	22.5	A	6	6	8	0
501.2	22.5	22.5	A	6	6	8	0
501.2	25	25	A	6	7	8	1
501.2	27.5	27.5	A	6	9	8	3
501.2	27.5	32.5	A	6	9	8	3
501.2	27.5	37.5	A	6	10	8	4
501.2	37.5	42.5	A	6	10	8	4
501.2	32.5	42.5	A	6	12	8	6
501.2	35	45	A	6	11	8	5
501.2	32.5	47.5	A	6	8	8	2
501.2	55	45	A	6	7	8	1
501.2	52.5	47.5	A	6	8	8	2
501.2	32.5	52.5	A	6	8	8	2
501.2	35	55	A	6	10	8	4
501.2	32.5	57.5	A	6	7	8	1
501.2	27.5	67.5	A	6	11	8	5
501.2	12.5	7.5 W	A	6	6	8	0
501.2	15	5 W	A	6	7	8	1
501.2	17.5	2.5 W	A	6	9	8	3
501.2	12.5	2.5 W	A	6	12	8	6
501.2	17.5	2.5	A	6	7	8	1
501.2	12.5	2.5	A	6	6	8	0
501.2	15	5	A	6	1	8	1
501.2	17.5	7.5	A	6	5	8	-1
501.2	32.5	27.5	A	6	8	8	2
501.2	32.5	32.5	A	6	9	8	3
501.2	35	35	A	6	8	8	2
501.2	37.5	37.5	A	6	10	8	4
501.2	32.5	37.5	A	6	8	8	2
501.2	47.5	42.5	A	6	7	8	1
501.2	42.5	42.5	A	6	8	8	2
501.2	45	45	A	6	7	8	1
501.2	47.5	47.5	A	6	7	8	1
501.2	42.5	47.5	A	6	10	8	4
501.2	27.5	57.5	A	6	7	8	1
501.2	47.5	52.5	A	6	8	8	2
501.2	45	55	A	6	8	8	2
501.2	42.5	57.5	A	6	7	8	1
501.2	37.5	62.5	A	6	7	8	1
501.2	32.5	62.5	A	6	7	8	1
501.2	35	65	A	6	6	8	0
501.2	32.5	67.5	A	6	8	8	2

M66-27-91

## CINTICHEM DECOMMISSIONING PLAN

06/05/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

ROAD FROM BOILERHOUSE TO MAIN ENTRANCE

AREA 501.2 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975  
 COMPLETION

DATE: 11/25/96  
 TECHNICIANS: LT/LC/PS/FM MATERIAL CODE  
 AREA: 501.0 1=CONCRETE 5=PLASTIC  
 UNIT: 501.2 2=ROCK 6=SOIL  
 MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT  
 # of POINTS: 72 4=METAL 8=OTHER(SPECIFY):  
 CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR INDO GRID	694 PASS	1273
Avg - SURVEY UNIT	194 PASS	1273
STD X	242	
MU SUB ALPHA	241 PASS	1273
MAX HOT SPOT	NONE PASS	3818

ID #	GRID ID	LOCATION	INST. ID #	BETA		SCAN AREA COUNTS/ 100 CM^2	TOTAL AREA CODE	CONT. MATER- IAL	MDA DPM/ 100 CM^2	WEIGHTED			
				INST. BKG CPM	BETA MINUTES					AVG. BETA DPM/ TEST CM^2	MAX PER 100 MAX CM^2 TEST	INST. EFF. CPM/DPM	
	S	E											
501.2	22.5	N	17.5	W	7	482	491	0	0	8	430	37 +/- 251	
501.2	27.5	N	17.5	W	7	482	461	0	0	8	430	-86 +/- 247	
501.2	25	N	15	W	7	482	478	0	0	8	430	-16 +/- 249	
501.2	12.5	N	17.5	W	7	482	428	0	0	8	430	-222 +/- 243	
501.2	17.5	N	17.5	W	7	482	511	0	0	8	430	119 +/- 254	
501.2	15	N	15	W	7	482	486	0	0	8	430	16 +/- 250	
501.2	12.5	N	12.5	W	7	482	470	0	0	8	430	-49 +/- 248	
501.2	17.5	N	17.5	W	7	482	458	0	0	8	430	-99 +/- 247	
501.2	7.5	N	17.5	W	7	482	443	0	0	8	430	-160 +/- 245	
501.2	5	N	15	W	7	482	406	0	0	8	430	-312 +/- 240	
501.2	2.5	N	12.5	W	7	482	489	0	0	8	430	29 +/- 251	
501.2	7.5	N	12.5	W	7	482	449	0	0	8	430	-135 +/- 246	
501.2	5	N	15	W	7	482	486	0	0	8	430	16 +/- 250	
501.2	7.5	N	12.5	W	7	482	487	0	0	8	430	21 +/- 251	
501.2	2.5	N	12.5	W	7	482	443	0	0	8	430	-160 +/- 245	
501.2	12.5	N	17.5	W	7	482	449	0	0	8	430	-135 +/- 246	
501.2	15	N	15	W	7	482	455	0	0	8	430	-111 +/- 246	
501.2	12.5	N	12.5	W	7	482	500	0	0	8	430	74 +/- 252	
501.2	2.5	N	7.5	W	7	482	523	0	0	8	430	168 +/- 255	
501.2	7.5	N	7.5	W	7	482	480	0	0	8	430	-8 +/- 250	
501.2	2.5	N	7.5	W	7	482	423	0	0	8	430	-242 +/- 242	
501.2	5	N	5	W	7	482	454	0	0	8	430	-115 +/- 246	
501.2	7.5	N	2.5	W	1	440	477	0	0	8	393	145 +/- 233	
501.2	2.5	N	2.5	W	1	440	457	0	0	8	393	67 +/- 230	
501.2	7.5	N	2.5	W	1	440	546	0	0	8	393	416 +/- 241	
501.2	22.5	N	7.5	W	1	440	514	0	0	8	393	290 +/- 237	
501.2	17.5	N	12.5	W	1	440	470	0	0	8	393	118 +/- 232	
501.2	22.5	N	12.5	W	1	440	476	0	0	8	393	141 +/- 233	
501.2	25	N	15	W	1	440	465	0	0	8	393	98 +/- 231	
501.2	22.5	N	17.5	W	1	440	459	0	0	8	393	75 +/- 230	

TABLE 501.2-2

501.2	27.5	22.5	1	440	495	0	0	8	393	216 +/- 235	NA	0.2615
501.2	22.5	22.5	1	440	514	0	0	8	393	290 +/- 237	NA	0.2615
501.2	25	25	1	440	514	0	0	8	393	290 +/- 237	NA	0.2615
501.2	27.5	27.5	1	440	439	0	0	8	393	-4 +/- 228	NA	0.2615
501.2	27.5	32.5	1	440	481	0	0	8	393	161 +/- 233	NA	0.2615
501.2	27.5	37.5	1	440	558	0	0	8	393	463 +/- 243	NA	0.2615
501.2	37.5	42.5	1	440	605	0	0	8	393	647 +/- 249	NA	0.2615
501.2	32.5	42.5	1	440	584	0	0	8	393	565 +/- 246	NA	0.2615
501.2	35	45	1	440	572	0	0	8	393	518 +/- 245	NA	0.2615
501.2	32.5	47.5	1	440	589	0	0	8	393	584 +/- 247	NA	0.2615
501.2	55	45	1	440	444	0	0	8	393	16 +/- 229	NA	0.2615
501.2	52.5	47.5	1	440	561	0	0	8	393	475 +/- 243	NA	0.2615
501.2	32.5	52.5	1	440	555	0	0	8	393	451 +/- 242	NA	0.2615
501.2	35	55	1	440	492	0	0	8	393	204 +/- 235	NA	0.2615
501.2	32.5	57.5	1	440	453	0	0	8	393	51 +/- 230	NA	0.2615
501.2	27.5	67.5	1	440	490	0	0	8	393	196 +/- 234	NA	0.2615
501.2	12.5	7.5 N	5	439	458	0	0	8	392	74 +/- 230	NA	0.2617
501.2	15	5 N	5	439	438	0	0	8	392	-4 +/- 227	NA	0.2617
501.2	17.5	2.5 N	5	439	538	0	0	8	392	388 +/- 240	NA	0.2617
501.2	12.5	2.5 N	5	439	507	0	0	8	392	267 +/- 236	NA	0.2617
501.2	17.5	2.5	5	439	455	0	0	8	392	63 +/- 230	NA	0.2617
501.2	12.5	2.5	5	439	432	0	0	8	392	-27 +/- 227	NA	0.2617
501.2	15	5	5	439	499	0	0	8	392	235 +/- 235	NA	0.2617
501.2	17.5	7.5	5	439	547	0	0	8	392	423 +/- 241	NA	0.2617
501.2	32.5	27.5	5	439	516	0	0	8	392	302 +/- 237	NA	0.2617
501.2	32.5	32.5	5	439	496	0	0	8	392	223 +/- 235	NA	0.2617
501.2	35	35	5	439	560	0	0	8	392	474 +/- 243	NA	0.2617
501.2	37.5	37.5	5	439	541	0	0	8	392	400 +/- 240	NA	0.2617
501.2	32.5	37.5	5	439	555	0	0	8	392	455 +/- 242	NA	0.2617
501.2	47.5	42.5	5	439	561	0	0	8	392	478 +/- 243	NA	0.2617
501.2	42.5	42.5	5	439	559	0	0	8	392	470 +/- 243	NA	0.2617
501.2	45	45	5	439	533	0	0	8	392	368 +/- 239	NA	0.2617
501.2	47.5	47.5	5	439	612	0	0	8	392	678 +/- 249	NA	0.2617
501.2	42.5	47.5	5	439	559	0	0	8	392	470 +/- 243	NA	0.2617
501.2	27.5	57.5	5	439	560	0	0	8	392	474 +/- 243	NA	0.2617
501.2	47.5	52.5	5	439	528	0	0	8	392	349 +/- 239	NA	0.2617
501.2	45	55	5	439	527	0	0	8	392	345 +/- 239	NA	0.2617
501.2	42.5	57.5	5	439	541	0	0	8	392	400 +/- 240	NA	0.2617
501.2	37.5	62.5	5	439	506	0	0	8	392	263 +/- 236	NA	0.2617
501.2	32.5	62.5	5	439	522	0	0	8	392	325 +/- 238	NA	0.2617
501.2	35	65	5	439	507	0	0	8	392	267 +/- 236	NA	0.2617
501.2	32.5	67.5	5	439	616	0	0	8	392	694 +/- 250	NA	0.2617

FAB 6-4-77

## CINTICHEM DECOMMISSIONING PLAN

06/03/97

## FINAL SURVEY DATA SHEET

DATA FOR AFFECTED AREA DESCRIPTION:  
 ROAD FROM BOILERHOUSE TO MAIN ENTRANCE  
 AREA 501.2 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 11/25/96

TECHNICIANS: LT/LC/PS/FM MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.2 2=ROCK 6=SIL

MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT

# of POINTS: 72 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM<sup>2</sup>

REM.+ FIXED: LIMIT

MAX FOR INO GRID 25 PASS 5000

AVG - SURVEY UNIT 6 PASS 5000

STD X 9

MU SUB ALPHA 8 PASS 5000

MAX HOT SPOT NONE PASS 15000

ID #	GRID COORDINATES	GRID ID LOCATION	INST.	ID #	INST. AREA COUNTS/ BKG CPM	ALPHA COUNTS/ MINUTES	SCAN	TOTAL	WEIGHTED			
									MDA	DPM/100 CM <sup>2</sup>	Avg. DPM/100 CM <sup>2</sup> TEST	MAX PER CM <sup>2</sup> TEST
	S	E							100 CM <sup>2</sup>	100 CM <sup>2</sup>		
501.2	22.5 N	17.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	27.5 N	17.5 W	7	1	1	0	0	8	47	0 +/-	18	NA
501.2	25 N	15 W	7	1	2	0	0	8	47	6 +/-	22	NA
501.2	12.5 N	17.5 W	7	1	5	0	0	8	47	25 +/-	31	NA
501.2	17.5 N	17.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	15 N	15 W	7	1	1	0	0	8	47	0 +/-	18	NA
501.2	12.5 N	12.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	17.5 N	17.5 W	7	1	4	0	0	8	47	19 +/-	28	NA
501.2	7.5 N	17.5 W	7	1	1	0	0	8	47	0 +/-	18	NA
501.2	5 N	15 W	7	1	2	0	0	8	47	6 +/-	22	NA
501.2	2.5 N	12.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	7.5 N	12.5 W	7	1	0	0	0	8	47	-6 +/-	12	NA
501.2	5	15 W	7	1	5	0	0	8	47	25 +/-	31	NA
501.2	7.5	12.5 W	7	1	1	0	0	8	47	0 +/-	18	NA
501.2	2.5	12.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	12.5	17.5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	15	15 W	7	1	2	0	0	8	47	6 +/-	22	NA
501.2	12.5	12.5 W	7	1	0	0	0	8	47	-6 +/-	12	NA
501.2	2.5 N	7.5 W	7	1	0	0	0	8	47	-6 +/-	12	NA
501.2	7.5	7.5 W	7	1	2	0	0	8	47	-6 +/-	22	NA
501.2	2.5	7.5 W	7	1	1	0	0	8	47	-6 +/-	12	NA
501.2	5	5 W	7	1	3	0	0	8	47	13 +/-	25	NA
501.2	7.5	2.5 W	1	0	1	0	0	8	15	6 +/-	11	NA
501.2	2.5	2.5 W	1	0	4	0	0	8	15	22 +/-	22	NA
501.2	7.5	2.5	1	0	2	0	0	8	15	11 +/-	16	NA
501.2	22.5	7.5	1	0	2	0	0	8	15	11 +/-	16	NA
501.2	17.5	12.5	1	0	2	0	0	8	15	11 +/-	16	NA
501.2	22.5	12.5	1	0	2	0	0	8	15	11 +/-	16	NA
501.2	25	15	1	0	0	0	0	8	15	0 +/-	0	NA
501.2	22.5	17.5	1	0	3	0	0	8	15	17 +/-	19	NA

TABLE 501.2-3

501.2	27.5	22.5	1	0	0	0	8	15	0 +/-	0	NA	0.1784	
501.2	22.5	22.5	1	0	1	0	0	8	15	6 +/-	11	NA	0.1784
501.2	25	25	1	0	1	0	0	8	15	6 +/-	11	NA	0.1784
501.2	27.5	27.5	1	0	0	0	0	8	15	0 +/-	0	NA	0.1784
501.2	27.5	32.5	1	0	2	0	0	8	15	11 +/-	16	NA	0.1784
501.2	27.5	37.5	1	0	1	0	0	8	15	6 +/-	11	NA	0.1784
501.2	37.5	42.5	1	0	3	0	0	8	15	17 +/-	19	NA	0.1784
501.2	32.5	42.5	1	0	2	0	0	8	15	11 +/-	16	NA	0.1784
501.2	35	45	1	0	1	0	0	8	15	6 +/-	11	NA	0.1784
501.2	32.5	47.5	1	0	2	0	0	8	15	11 +/-	16	NA	0.1784
501.2	55	45	1	0	2	0	0	8	15	11 +/-	16	NA	0.1784
501.2	52.5	47.5	1	0	3	0	0	8	15	17 +/-	19	NA	0.1784
501.2	32.5	52.5	1	0	4	0	0	8	15	22 +/-	22	NA	0.1784
501.2	35	55	1	0	3	0	0	8	15	17 +/-	19	NA	0.1784
501.2	32.5	57.5	1	0	1	0	0	8	15	6 +/-	11	NA	0.1784
501.2	27.5	67.5	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	12.5	7.5 W	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	15	5 W	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	17.5	2.5 W	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	12.5	2.5 W	5	1	2	0	0	8	43	6 +/-	20	NA	0.1713
501.2	17.5	2.5	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	12.5	2.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	15	5	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	17.5	7.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	32.5	27.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	32.5	32.5	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	35	35	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	37.5	37.5	5	1	3	0	0	8	43	12 +/-	23	NA	0.1713
501.2	32.5	37.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	47.5	42.5	5	1	4	0	0	8	43	18 +/-	26	NA	0.1713
501.2	42.5	42.5	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	45	45	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	47.5	47.5	5	1	2	0	0	8	43	6 +/-	20	NA	0.1713
501.2	42.5	47.5	5	1	3	0	0	8	43	12 +/-	23	NA	0.1713
501.2	27.5	57.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	47.5	52.5	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	45	55	5	1	1	0	0	8	43	0 +/-	16	NA	0.1713
501.2	42.5	57.5	5	1	4	0	0	8	43	18 +/-	26	NA	0.1713
501.2	37.5	62.5	5	1	4	0	0	8	43	18 +/-	26	NA	0.1713
501.2	32.5	62.5	5	1	4	0	0	8	43	18 +/-	26	NA	0.1713
501.2	35	65	5	1	0	0	0	8	43	-6 +/-	11	NA	0.1713
501.2	32.5	67.5	5	1	2	0	0	8	43	6 +/-	20	NA	0.1713

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.3 survey unit was surveyed on an affected area basis and has a surface area of 900 m<sup>2</sup>. 26 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 26 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 501.3 survey unit are provided in 3 attached tables as follows:

Table 501.3-1 Butler Building Laydown Areas  
gamma exposure rate data

Table 501.3-2 Butler Building Laydown Areas  
direct beta/gamma surface contamination data

Table 501.3-3 Butler Building Laydown Areas  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.3

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	407	46
Number of Meas.:	26	26	26
Survey Unit Mean:	1.9	505	7
True Mean; U alpha 95% C.L.:	2.2	545	10
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	4	710	31
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural radioactive material content

QA OK  
Poncel  
6/13/97

CINTICHEM DECOMMISSIONING PLAN  
FINAL SURVEY DATA SHEET  
DATA FOR AFFECTED AREA DESCRIPTION:  
BUTLER BUILDING LAY DOWN AREAS  
AREA 501.3 FOR UR/HR

06/12/97

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 04/14/97

TECHNICIANS: PB/GF MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.3 2=ROCK 6=SCIL

MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT

# of POINTS: 26 4=METAL 8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR:

## LIMIT

MAX: 4.00 PASS 10

AVG: 1.85 PASS 5

STD X: 1.08

MU SUB ALPHA: 2.21 PASS 5

ID #	GRID POINT		INST.	AREA	AREA	IAL	MATER-	
							ID #	BKG
					UREM/HR	UREM/HR	READING	CODE
501.3	375	85	A	6	6	8	0	
501.3	372.5	82.5	A	6	9	8	3	
501.3	365	85	A	6	7	8	1	
501.3	367.5	82.5	A	6	8	8	2	
501.3	355	85	A	6	7	8	1	
501.3	357.5	87.5	A	6	8	8	2	
501.3	372.5	77.5	A	6	6	8	0	
501.3	375	75	A	6	7	8	1	
501.3	372.5	72.5	A	6	7	8	1	
501.3	367.5	77.5	A	6	9	8	3	
501.3	367.5	72.5	A	6	8	8	2	
501.3	372.5	67.5	A	6	6	8	0	
501.3	367.5	67.5	A	6	9	8	3	
501.3	365	65	A	6	8	8	2	
501.3	367.5	62.5	A	6	10	8	4	
501.3	362.5	57.5	A	6	7	8	1	
501.3	365	55	A	6	9	8	3	
501.3	362.5	52.5	A	6	9	8	3	
501.3	352.5	57.5	A	6	9	8	3	
501.3	357.5	57.5	A	6	8	8	2	
501.3	355	55	A	6	8	8	2	
501.3	352.5	52.5	A	6	8	8	2	
501.3	357.5	52.5	A	6	7	8	1	
501.3	362.5	47.5	A	6	7	8	1	
501.3	357.5	47.5	A	6	8	8	2	
501.3	357.5	42.5	A	6	9	8	3	

QAOK

Polar

6/13/97

## CINTICHEM DECOMMISSIONING PLAN

06/12/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

## BUTLER BUILDING LAY DOWN AREAS

## AREA 501.3 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 04/14/97

TECHNICIANS: PB/GF MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.3 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# OF POINTS: 26 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 710 PASS 1273

AVG - SURVEY UNIT 505 PASS 1273

STD X 119

MU SUB ALPHA 545 PASS 1273

MAX HOT SPOT NONE PASS 3818

## WEIGHTED

ID #	GRID COORDINATES	GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	AVG.			INST. EFF.				
				INST.	FIXED AREA COUNTS/	MAX BETA	CONT. AREA	MATER-	BETA	MAX					
				BKG	1 CPM	COUNTS	CM^2	CODE	MOA	DPM/	DPM/	AVG	100 MAX	100 CM^2 TEST CM^2 TEST	CPM/CPM
	N	N													
501.3	375	85	1	440	557	0	0	8	407	475 +/- 251	NA	0.2528			
501.3	372.5	82.5	1	440	591	0	0	8	407	613 +/- 255	NA	0.2528			
501.3	365	85	1	440	562	0	0	8	407	495 +/- 252	NA	0.2528			
501.3	367.5	82.5	1	440	575	0	0	8	407	548 +/- 253	NA	0.2528			
501.3	355	85	1	440	562	0	0	8	407	495 +/- 252	NA	0.2528			
501.3	357.5	87.5	1	440	575	0	0	8	407	548 +/- 253	NA	0.2528			
501.3	372.5	77.5	1	440	612	0	0	8	407	698 +/- 258	NA	0.2528			
501.3	375	75	1	440	559	0	0	8	407	483 +/- 251	NA	0.2528			
501.3	372.5	72.5	1	440	524	0	0	8	407	341 +/- 247	NA	0.2528			
501.3	367.5	77.5	1	440	582	0	0	8	407	576 +/- 254	NA	0.2528			
501.3	367.5	72.5	1	440	549	0	0	8	407	442 +/- 250	NA	0.2528			
501.3	372.5	67.5	1	440	539	0	0	8	407	402 +/- 249	NA	0.2528			
501.3	367.5	67.5	1	440	509	0	0	8	407	280 +/- 245	NA	0.2528			
501.3	365	65	1	440	551	0	0	8	407	450 +/- 250	NA	0.2528			
501.3	367.5	62.5	1	440	500	0	0	8	407	243 +/- 244	NA	0.2528			
501.3	362.5	57.5	1	440	615	0	0	8	407	710 +/- 258	NA	0.2528			
501.3	365	55	1	440	532	0	0	8	407	373 +/- 248	NA	0.2528			
501.3	362.5	52.5	1	440	556	0	0	8	407	471 +/- 251	NA	0.2528			
501.3	352.5	57.5	1	440	614	0	0	8	407	706 +/- 258	NA	0.2528			
501.3	357.5	57.5	1	440	586	0	0	8	407	592 +/- 255	NA	0.2528			
501.3	355	55	1	440	581	0	0	8	407	572 +/- 254	NA	0.2528			
501.3	352.5	52.5	1	440	553	0	0	8	407	458 +/- 251	NA	0.2528			
501.3	357.5	52.5	1	440	560	0	0	8	407	487 +/- 251	NA	0.2528			
501.3	362.5	47.5	1	440	585	0	0	8	407	588 +/- 255	NA	0.2528			
501.3	357.5	47.5	1	440	587	0	0	8	407	596 +/- 255	NA	0.2528			
501.3	357.5	42.5	1	440	558	0	0	8	407	479 +/- 251	NA	0.2528			

## CINTICHEM DECOMMISSIONING PLAN

06/12/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

BUTLER BUILDING LAY DOWN AREAS

AREA 501.3 FOR ALPHA

QA OK  
Brad  
6/13/97

RADIATION TYPE: 2

## COMPLETION

DATE: 04/14/97

TECHNICIANS: PB/GF

## MATERIAL CODE

AREA: 501.0

1:CONCRETE

5:PLASTIC

UNIT: 501.3

2:ROCK

6:SOIL

MEDIA TYPE: ASPHALT

3:WOOD

7:ASPHALT

# of POINTS: 26

4:METAL

8:OTHER(SPECIFY):

CT IN MINUTES: 1

NO MATERIAL BACKGROUND USED

DPM/100CM^2

## REM.+ FIXED:

## LIMIT

MAX FOR IND GRID 31 PASS 5000

AVG - SURVEY UNIT 7 PASS 5000

STD X

9

MU SUB ALPHA 10 PASS 5000

MAX HOT SPOT NOME PASS 15000

## WEIGHTED

ID #	GRID COORDINATES	GRID ID LOCATION	INST.	ALPHA	ALPHA	SCAN	TOTAL	MDA	DPM/100 CM^2	DPM/100 CM^2 TEST	AVG. PER 100 MAX INST EFF.	CPM/DPM
				INST. AREA	BKG COUNTS/	MAX ALPHA	CONT. AREA					
				CPM	MINUTES		CM^2	CODE	100 CM^2	100 CM^2 TEST		
		N W										
501.3	375	85	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	372.5	82.5	1	1	5	0	0	8	46	25 +/- 30	NA	0.1588
501.3	365	85	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	367.5	82.5	1	1	2	0	0	8	46	6 +/- 21	NA	0.1588
501.3	355	85	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	357.5	87.5	1	1	2	0	0	8	46	6 +/- 21	NA	0.1588
501.3	372.5	77.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	375	75	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	372.5	72.5	1	1	2	0	0	8	46	6 +/- 21	NA	0.1588
501.3	367.5	77.5	1	1	0	0	0	8	46	-6 +/- 12	NA	0.1588
501.3	367.5	72.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	372.5	67.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	367.5	67.5	1	1	2	0	0	8	46	6 +/- 21	NA	0.1588
501.3	365	65	1	1	0	0	0	8	46	-6 +/- 12	NA	0.1588
501.3	367.5	62.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	362.5	57.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	365	55	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	362.5	52.5	1	1	0	0	0	8	46	-6 +/- 12	NA	0.1588
501.3	352.5	57.5	1	1	4	0	0	8	46	19 +/- 28	NA	0.1588
501.3	357.5	57.5	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	355	55	1	1	2	0	0	8	46	6 +/- 21	NA	0.1588
501.3	352.5	52.5	1	1	6	0	0	8	46	31 +/- 33	NA	0.1588
501.3	357.5	52.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	362.5	47.5	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588
501.3	357.5	47.5	1	1	1	0	0	8	46	0 +/- 17	NA	0.1588
501.3	357.5	42.5	1	1	3	0	0	8	46	13 +/- 25	NA	0.1588

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.4 survey unit was surveyed on an affected area basis and has a surface area of 5700 m<sup>2</sup>. 339 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 339 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the accompanying map.

Measurement and sampling results for the 501.4 survey unit are provided in 3 attached tables as follows:

Table 501.4-1 Building 4 Parking Lot  
gamma exposure rate data

Table 501.4-2 Building 4 Parking Lot  
direct beta/gamma surface contamination data

Table 501.4-3 Building 4 Parking Log  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.4

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	452	80
Number of Meas.:	339	339	339
Survey Unit Mean:	2.4	386	5
True Mean; U alpha 95% C.L.:	2.6	412	7
Criteria Acceptable Y/N	5 Y	1273 Y	5000 Y
Max Grid Block Wt. Mean	8	1095	60
Criteria Acceptable Y/N	10 Y	1273 Y	5000 Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria Acceptable Y/N	NA NA	NA NA	NA NA

- (a) With a mean site background of 6 uRem/hr subtracted  
 (b) Without subtraction of radioactivity due to natural  
 radioactive material content

Table 501.4-1

11/27/94

## CINTICHEM DECOMMISSIONING PLAN

11/22/96

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

BLDG 4 PARKING LOT

AREA 501.4 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 11/15/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 501.0 1:CONCRETE S:PLASTIC

UNIT: 501.4 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# of POINTS: 339 4:METAL 8:OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR:

## LIMIT

MAX: 8.00 PASS 10

AVG: 2.40 PASS 5

STD X: 1.66

MU SUB ALPHA: 2.55 PASS 5

## MATER-

ID #	GRID POINT	INST.	ID #	MATER-			
				BKG	AREA	AREA	IAL
				UREM/HR	UREM/HR	UREM/HR	UREM/HR
S	W						

501.4	247.5	112.5	A	6	9	8	3
501.4	255	115	A	6	10	8	4
501.4	257.5	112.5	A	6	10	8	4
501.4	252.5	112.5	A	6	10	8	4
501.4	267.5	117.5	A	6	11	8	5
501.4	262.5	117.5	A	6	9	8	3
501.4	265	115	A	6	10	8	4
501.4	267.5	112.5	A	6	12	8	6
501.4	262.5	112.5	A	6	9	8	3
501.4	272.5	117.5	A	6	7	8	1
501.4	275	115	A	6	8	8	2
501.4	277.5	112.5	A	6	11	8	5
501.4	272.5	112.5	A	6	10	8	4
501.4	217.5	102.5	A	6	9	8	3
501.4	212.5	102.5	A	6	10	8	4
501.4	227.5	102.5	A	6	11	8	5
501.4	222.5	102.5	A	6	11	8	5
501.4	237.5	107.5	A	6	11	8	5
501.4	235	105	A	6	9	8	3
501.4	237.5	102.5	A	6	8	8	2
501.4	232.5	102.5	A	6	10	8	4
501.4	247.5	107.5	A	6	10	8	4
501.4	242.5	107.5	A	6	13	8	7
501.4	245	105	A	6	14	8	8
501.4	247.5	102.5	A	6	10	8	4
501.4	242.5	102.5	A	6	10	8	4
501.4	257.5	107.5	A	6	10	8	4
501.4	252.5	107.5	A	6	10	8	4
501.4	255	105	A	6	9	8	3
501.4	257.5	102.5	A	6	9	8	3

Table 501.4-1

501.4	252.5	102.5	A	6	10	8	4
501.4	267.5	107.5	A	6	7	8	1
501.4	262.5	107.5	A	6	10	8	4
501.4	265	105	A	6	8	8	2
501.4	277.5	107.5	A	6	9	8	3
501.4	272.5	107.5	A	6	9	8	3
501.4	275	105	A	6	11	8	5
501.4	277.5	102.5	A	6	9	8	3
501.4	272.5	102.5	A	6	7	8	1
501.4	282.5	107.5	A	6	14	8	8
501.4	285	105	A	6	7	8	1
501.4	287.5	102.5	A	6	11	8	5
501.4	282.5	102.5	A	6	10	8	4
501.4	295	105	A	6	10	8	4
501.4	297.5	102.5	A	6	9	8	3
501.4	292.5	102.5	A	6	10	8	4
501.4	167.5	92.5	A	6	8	8	2
501.4	177.5	92.5	A	6	7	8	1
501.4	175	95	A	6	8	8	2
501.4	172.5	92.5	A	6	6	8	0
501.4	187.5	97.5	A	6	8	8	2
501.4	185	95	A	6	8	8	2
501.4	187.5	92.5	A	6	7	8	1
501.4	182.5	92.5	A	6	6	8	0
501.4	197.5	97.5	A	6	9	8	3
501.4	192.5	97.5	A	6	8	8	2
501.4	195	95	A	6	9	8	3
501.4	197.5	92.5	A	6	8	8	2
501.4	192.5	92.5	A	6	6	8	0
501.4	207.5	97.5	A	6	9	8	3
501.4	202.5	97.5	A	6	8	8	2
501.4	205	95	A	6	8	8	2
501.4	207.5	92.5	A	6	10	8	4
501.4	202.5	92.5	A	6	8	8	2
501.4	217.5	97.5	A	6	14	8	8
501.4	212.5	97.5	A	6	12	8	6
501.4	215	95	A	6	8	8	2
501.4	217.5	92.5	A	6	9	8	3
501.4	212.5	92.5	A	6	8	8	2
501.4	227.5	97.5	A	6	13	8	7
501.4	222.5	97.5	A	6	9	8	3
501.4	225	95	A	6	9	8	3
501.4	227.5	92.5	A	6	10	8	4
501.4	222.5	92.5	A	6	12	8	6
501.4	237.5	97.5	A	6	11	8	5
501.4	232.5	97.5	A	6	11	8	5
501.4	235	95	A	6	8	8	2
501.4	232.5	92.5	A	6	8	8	2
501.4	242.5	97.5	A	6	10	8	4
501.4	277.5	97.5	A	6	8	8	2
501.4	287.5	97.5	A	6	10	8	4
501.4	282.5	97.5	A	6	8	8	2
501.4	285	95	A	6	9	8	3
501.4	282.5	92.5	A	6	7	8	1
501.4	137.5	82.5	A	6	10	8	4
501.4	132.5	82.5	A	6	8	8	2
501.4	145	85	A	6	8	8	2
501.4	147.5	82.5	A	6	9	8	3
501.4	142.5	82.5	A	6	9	8	3
501.4	157.5	87.5	A	6	7	8	1

Table 501.4-1

501.4	155	85	A	6	8	8	2
501.4	157.5	82.5	A	6	8	8	2
501.4	152.5	82.5	A	6	6	8	0
501.4	167.5	87.5	A	6	7	8	1
501.4	162.5	87.5	A	6	7	8	1
501.4	165	85	A	6	10	8	4
501.4	167.5	82.5	A	6	8	8	2
501.4	162.5	82.5	A	6	8	8	2
501.4	177.5	87.5	A	6	7	8	1
501.4	172.5	87.5	A	6	8	8	2
501.4	175	85	A	6	3	8	2
501.4	177.5	82.5	A	6	7	8	1
501.4	172.5	82.5	A	6	7	8	1
501.4	187.5	87.5	A	6	10	8	4
501.4	182.5	87.5	A	6	8	8	2
501.4	185	85	A	6	10	8	4
501.4	167.5	82.5	A	6	7	8	1
501.4	182.5	82.5	A	6	7	8	1
501.4	197.5	87.5	A	6	7	8	1
501.4	192.5	87.5	A	6	7	8	1
501.4	195	85	A	6	7	8	1
501.4	197.5	82.5	A	6	10	8	4
501.4	192.5	82.5	A	6	11	8	5
501.4	207.5	87.5	A	6	8	8	2
501.4	202.5	87.5	A	6	7	8	1
501.4	205	85	A	6	8	8	2
501.4	207.5	82.5	A	6	8	8	2
501.4	202.5	82.5	A	6	8	8	2
501.4	217.5	87.5	A	6	14	8	8
501.4	212.5	87.5	A	6	11	8	5
501.4	215	85	A	6	9	8	3
501.4	217.5	82.5	A	6	11	8	5
501.4	212.5	82.5	A	6	9	8	3
501.4	222.5	87.5	A	6	10	8	4
501.4	107.5	72.5	A	6	6	8	0
501.4	115	75	A	6	9	8	3
501.4	117.5	72.5	A	6	9	8	3
501.4	112.5	72.5	A	6	9	8	3
501.4	127.5	77.5	A	6	7	8	1
501.4	122.5	77.5	A	6	8	8	2
501.4	125	75	A	6	7	8	1
501.4	127.5	72.5	A	6	9	8	3
501.4	122.5	72.5	A	6	8	8	2
501.4	137.5	77.5	A	6	7	8	1
501.4	132.5	77.5	A	6	6	8	0
501.4	135	75	A	6	6	8	0
501.4	137.5	72.5	A	6	8	8	2
501.4	132.5	72.5	A	6	7	8	1
501.4	147.5	77.5	A	6	11	8	5
501.4	142.5	77.5	A	6	8	8	2
501.4	145	75	A	6	8	8	2
501.4	147.5	72.5	A	6	9	8	3
501.4	142.5	72.5	A	6	9	8	3
501.4	157.5	77.5	A	6	7	8	1
501.4	152.5	77.5	A	6	11	8	5
501.4	155	75	A	6	10	8	4
501.4	157.5	72.5	A	6	10	8	4
501.4	152.5	72.5	A	6	10	8	4
501.4	167.5	77.5	A	6	8	8	2
501.4	162.5	77.5	A	6	9	8	3

Table 501.4-1

501.4	165	75	A	6	7	8	1
501.4	167.5	72.5	A	6	10	8	4
501.4	162.5	72.5	A	6	9	8	3
501.4	177.5	77.5	A	6	6	8	0
501.4	172.5	77.5	A	6	9	8	3
501.4	175	75	A	6	9	8	3
501.4	177.5	72.5	A	6	7	8	1
501.4	172.5	72.5	A	6	9	8	1
501.4	187.5	77.5	A	6	6	8	2
501.4	182.5	77.5	A	6	7	8	1
501.4	185	75	A	6	9	8	3
501.4	187.5	72.5	A	6	8	8	2
501.4	182.5	72.5	A	6	9	8	3
501.4	197.5	77.5	A	6	9	8	3
501.4	192.5	77.5	A	6	7	8	1
501.4	195	75	A	6	9	8	3
501.4	197.5	72.5	A	6	8	8	2
501.4	192.5	72.5	A	6	7	8	1
501.4	207.5	77.5	A	6	8	8	2
501.4	202.5	77.5	A	6	10	8	4
501.4	205	75	A	6	7	8	1
501.4	207.5	72.5	A	6	7	8	1
501.4	202.5	72.5	A	6	9	8	3
501.4	212.5	77.5	A	6	12	8	6
501.4	215	75	A	6	9	8	3
501.4	107.5	67.5	A	6	5	8	-1
501.4	102.5	67.5	A	6	7	8	1
501.4	117.5	67.5	A	6	8	8	2
501.4	112.5	67.5	A	6	8	8	2
501.4	115	65	A	6	10	8	4
501.4	117.5	62.5	A	6	8	8	2
501.4	112.5	62.5	A	6	7	8	1
501.4	127.5	67.5	A	6	9	8	3
501.4	122.5	67.5	A	6	7	8	1
501.4	125	65	A	6	7	8	1
501.4	127.5	62.5	A	6	7	8	1
501.4	122.5	62.5	A	6	8	8	2
501.4	137.5	67.5	A	6	8	8	2
501.4	132.5	67.5	A	6	9	8	3
501.4	135	65	A	6	8	8	2
501.4	137.5	62.5	A	6	6	8	0
501.4	132.5	62.5	A	6	6	8	0
501.4	147.5	67.5	A	6	8	8	2
501.4	142.5	67.5	A	6	7	8	1
501.4	145	65	A	6	7	8	1
501.4	147.5	62.5	A	6	8	8	2
501.4	142.5	62.5	A	6	6	8	0
501.4	157.5	67.5	A	6	10	8	4
501.4	152.5	67.5	A	6	9	8	3
501.4	155	65	A	6	8	8	2
501.4	157.5	62.5	A	6	6	8	0
501.4	152.5	62.5	A	6	11	8	5
501.4	167.5	67.5	A	6	7	8	1
501.4	162.5	67.5	A	6	10	8	4
501.4	165	65	A	6	8	8	2
501.4	167.5	62.5	A	6	8	8	2
501.4	162.5	62.5	A	6	8	8	2

Table 501.4-1

501.4	177.5	67.5	A	6	8	8	2
501.4	172.5	67.5	A	6	8	8	2
501.4	175	65	A	6	11	8	5
501.4	177.5	62.5	A	6	10	8	4
501.4	172.5	62.5	A	6	8	8	2
501.4	187.5	67.5	A	6	11	8	5
501.4	182.5	67.5	A	6	10	8	4
501.4	185	65	A	6	10	8	4
501.4	187.5	62.5	A	6	9	8	3
501.4	182.5	62.5	A	6	9	8	3
501.4	197.5	67.5	A	6	9	8	3
501.4	192.5	67.5	A	6	9	8	3
501.4	195	65	A	6	9	8	3
501.4	197.5	62.5	A	6	8	8	2
501.4	192.5	62.5	A	6	9	8	3
501.4	207.5	67.5	A	6	8	8	2
501.4	202.5	67.5	A	6	10	8	4
501.4	205	65	A	6	8	8	2
501.4	202.5	62.5	A	6	9	8	3
501.4	97.5	57.5	A	6	11	8	5
501.4	95	55	A	6	11	8	5
501.4	97.5	52.5	A	6	7	8	1
501.4	107.5	57.5	A	6	8	8	2
501.4	102.5	57.5	A	6	8	8	2
501.4	105	55	A	6	7	8	3
501.4	107.5	52.5	A	6	11	8	5
501.4	102.5	52.5	A	6	3	8	2
501.4	117.5	57.5	A	6	8	8	2
501.4	112.5	57.5	A	6	8	8	2
501.4	115	55	A	6	7	8	1
501.4	117.5	52.5	A	6	7	8	1
501.4	112.5	52.5	A	6	9	8	3
501.4	127.5	57.5	A	6	8	8	2
501.4	122.5	57.5	A	6	8	8	2
501.4	125	55	A	6	7	8	1
501.4	127.5	52.5	A	6	8	8	2
501.4	122.5	52.5	A	6	10	8	4
501.4	137.5	57.5	A	6	6	8	0
501.4	132.5	57.5	A	6	7	8	1
501.4	135	55	A	6	8	8	2
501.4	137.5	52.5	A	6	6	8	0
501.4	132.5	52.5	A	6	5	8	-1
501.4	147.5	57.5	A	6	8	8	2
501.4	142.5	57.5	A	6	6	8	0
501.4	145	55	A	6	10	8	4
501.4	147.5	52.5	A	6	7	8	1
501.4	142.5	52.5	A	6	8	8	2
501.4	157.5	57.5	A	6	9	8	3
501.4	152.5	57.5	A	6	8	8	2
501.4	155	55	A	6	9	8	3
501.4	157.5	52.5	A	6	9	8	3
501.4	152.5	52.5	A	6	8	8	2
501.4	167.5	57.5	A	6	11	8	5
501.4	162.5	57.5	A	6	10	8	4
501.4	165	55	A	6	7	8	1
501.4	167.5	52.5	A	6	8	8	2
501.4	162.5	52.5	A	6	8	8	2
501.4	177.5	57.5	A	6	8	8	2
501.4	172.5	57.5	A	6	8	8	2
501.4	175	55	A	6	8	8	2

Table 501.4-1

501.4	177.5	52.5	A	6	7	8	1
501.4	172.5	52.5	A	6	6	8	0
501.4	187.5	57.5	A	6	9	8	3
501.4	182.5	57.5	A	6	10	8	4
501.4	185	55	A	6	10	8	4
501.4	192.5	57.5	A	6	8	8	2
501.4	97.5	47.5	A	6	10	8	4
501.4	107.5	47.5	A	6	7	8	1
501.4	102.5	47.5	A	6	10	8	4
501.4	105	45	A	6	7	8	1
501.4	107.5	42.5	A	6	11	8	5
501.4	102.5	42.5	A	6	5	8	-1
501.4	117.5	47.5	A	6	7	8	1
501.4	112.5	47.5	A	6	9	8	3
501.4	115	45	A	6	6	8	0
501.4	117.5	42.5	A	6	7	8	1
501.4	112.5	42.5	A	6	9	8	3
501.4	127.5	47.5	A	6	7	8	1
501.4	122.5	47.5	A	6	5	8	-1
501.4	125	45	A	6	7	8	1
501.4	127.5	42.5	A	6	5	8	-1
501.4	122.5	42.5	A	6	7	8	1
501.4	137.5	47.5	A	6	5	8	-1
501.4	132.5	47.5	A	6	8	8	2
501.4	135	45	A	6	8	8	2
501.4	137.5	42.5	A	6	7	8	1
501.4	132.5	42.5	A	6	6	8	0
501.4	147.5	47.5	A	6	7	8	1
501.4	142.5	47.5	A	6	8	8	2
501.4	145	45	A	6	8	8	2
501.4	147.5	42.5	A	6	9	8	3
501.4	142.5	42.5	A	6	9	8	3
501.4	157.5	47.5	A	6	6	8	0
501.4	152.5	47.5	A	6	8	8	2
501.4	155	45	A	6	6	8	0
501.4	152.5	42.5	A	6	10	8	4
501.4	167.5	47.5	A	6	9	8	3
501.4	162.5	47.5	A	6	8	8	2
501.4	95	35	A	6	9	8	3
501.4	97.5	32.5	A	6	9	8	3
501.4	92.5	32.5	A	6	11	8	5
501.4	107.5	37.5	A	6	9	8	3
501.4	102.5	37.5	A	6	8	8	2
501.4	105	35	A	6	7	8	1
501.4	107.5	32.5	A	6	8	8	2
501.4	102.5	32.5	A	6	7	8	1
501.4	117.5	37.5	A	6	8	8	2
501.4	112.5	37.5	A	6	9	8	3
501.4	115	35	A	6	7	8	1
501.4	117.5	32.5	A	6	5	8	-1
501.4	112.5	32.5	A	6	7	8	1
501.4	127.5	37.5	A	6	6	8	0
501.4	122.5	37.5	A	6	7	8	1
501.4	125	35	A	6	6	8	0
501.4	127.5	32.5	A	6	6	8	0
501.4	122.5	32.5	A	6	9	8	3
501.4	137.5	37.5	A	6	9	8	3
501.4	132.5	37.5	A	6	7	8	1
501.4	135	35	A	6	7	8	1
501.4	132.5	32.5	A	6	5	8	-1

Table 501.4-1

501.4	142.5	37.5	A	6	6	8	0
501.4	97.5	27.5	A	6	7	8	1
501.4	107.5	27.5	A	6	6	8	0
501.4	102.5	27.5	A	6	9	8	3
501.4	105	25	A	6	8	8	2
501.4	107.5	22.5	A	6	11	8	5
501.4	102.5	22.5	A	6	8	8	2
501.4	112.5	27.5	A	6	5	8	-1
501.4	115	25	A	6	7	8	1

## CINTICHEM DECOMMISSIONING PLAN

11/22/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

BLDG 4 PARKING LOT

AREA 501.4 FOR BETA

RADIAITON TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 11/15/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.4 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# of POINTS: 339 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM. + FIXED: LIMIT

MAX FOR IND GRID 1095 PASS 1273

AVG - SURVEY UNIT 386 PASS 1273

STD X 290

MU SUB ALPHA 412 PASS

MAX HOT SPOT 0 PASS 3818

ID #	GRID COORDINATES	GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	WEIGHTED				
				INST.	FIXED	MAX	CONT. MATER-	BETA	AVG.	MAX	INST. EFF.	
				AREA	COUNTS/	BETA	AREA	IAL	MDA	FIXED	PER	
S	W			BKG	1	COUNTS	CM^2	CODE	DPM/	100 CM^2	100 CM^2 TEST	CPM/DPM
CPM	MINUTES						100 CM^2					
501.4	247.5	112.5	2	393	526	0	0	8	373	523 +/- 234	NA	0.2608
501.4	255	115	2	393	551	0	0	8	373	621 +/- 237	NA	0.2608
501.4	257.5	112.5	2	393	495	0	0	8	373	401 +/- 230	NA	0.2608
501.4	252.5	112.5	2	393	482	0	0	8	373	350 +/- 228	NA	0.2608
501.4	267.5	117.5	2	393	472	0	0	8	373	311 +/- 227	NA	0.2608
501.4	262.5	117.5	2	393	493	0	0	8	373	393 +/- 229	NA	0.2608
501.4	265	115	2	393	552	0	0	8	373	625 +/- 237	NA	0.2608
501.4	267.5	112.5	2	393	595	0	0	8	373	794 +/- 242	NA	0.2608
501.4	262.5	112.5	2	393	562	0	0	8	373	665 +/- 238	NA	0.2608
501.4	272.5	117.5	6	402	672	0	0	8	385	1083 +/- 258	NA	0.2557
501.4	275	115	6	542	667	0	0	8	439	495 +/- 270	NA	0.2591
501.4	277.5	112.5	6	402	621	0	0	8	385	878 +/- 251	NA	0.2557
501.4	272.5	112.5	6	402	604	0	0	8	385	810 +/- 249	NA	0.2557
501.4	217.5	102.5	2	393	523	0	0	8	373	511 +/- 233	NA	0.2608
501.4	212.5	102.5	2	393	575	0	0	8	373	716 +/- 240	NA	0.2608
501.4	227.5	102.5	2	393	573	0	0	8	373	708 +/- 240	NA	0.2608
501.4	222.5	102.5	2	393	538	0	0	6	373	570 +/- 235	NA	0.2608
501.4	237.5	107.5	9	462	581	0	0	8	411	476 +/- 253	NA	0.2563
501.4	235	105	9	462	562	0	0	8	411	400 +/- 251	NA	0.2563
501.4	237.5	102.5	9	462	557	0	0	8	411	380 +/- 250	NA	0.2563
501.4	232.5	102.5	9	462	629	0	0	8	411	668 +/- 259	NA	0.2563
501.4	247.5	107.5	9	422	514	0	0	8	393	368 +/- 240	NA	0.2563
501.4	242.5	107.5	9	422	511	0	0	8	393	356 +/- 240	NA	0.2563
501.4	245	105	9	422	526	0	0	8	393	416 +/- 241	NA	0.2563
501.4	247.5	102.5	9	422	537	0	0	8	393	460 +/- 243	NA	0.2563
501.4	242.5	102.5	9	422	497	0	0	8	393	300 +/- 238	NA	0.2563
501.4	257.5	107.5	9	422	516	0	0	8	393	376 +/- 240	NA	0.2563
501.4	252.5	107.5	9	422	497	0	0	8	393	300 +/- 238	NA	0.2563
501.4	255	105	9	422	574	0	0	8	393	608 +/- 248	NA	0.2563

Table 501.4-2

501.4	257.5	102.5	9	422	505	0	0	8	393	332 +/- 239	NA	0.2563
501.4	252.5	102.5	9	422	502	0	0	8	393	320 +/- 238	NA	0.2563
501.4	267.5	107.5	2	393	537	0	0	8	373	566 +/- 235	NA	0.2608
501.4	262.5	107.5	2	393	544	0	0	8	373	594 +/- 236	NA	0.2608
501.4	265	105	2	393	546	0	0	8	373	602 +/- 236	NA	0.2608
501.4	277.5	107.5	6	402	675	0	0	8	385	1095 +/- 258	NA	0.2557
501.4	272.5	107.5	6	402	617	0	0	8	385	862 +/- 251	NA	0.2557
501.4	275	105	6	402	612	0	0	8	385	842 +/- 250	NA	0.2557
501.4	277.5	102.5	6	402	622	0	0	8	385	882 +/- 252	NA	0.2557
501.4	272.5	102.5	6	402	628	0	0	8	385	907 +/- 252	NA	0.2557
501.4	282.5	107.5	7	427	550	0	0	8	406	505 +/- 252	NA	0.2498
501.4	285	105	7	427	687	0	0	8	406	1068 +/- 269	NA	0.2498
501.4	287.5	102.5	7	427	509	0	0	8	406	337 +/- 246	NA	0.2498
501.4	282.5	102.5	7	427	686	0	0	8	406	1063 +/- 268	NA	0.2498
501.4	295	105	6	526	662	0	0	8	433	538 +/- 267	NA	0.2591
501.4	297.5	102.5	7	427	508	0	0	8	406	333 +/- 246	NA	0.2498
501.4	292.5	102.5	7	427	580	0	0	8	406	628 +/- 255	NA	0.2498
501.4	167.5	92.5	12	410	531	0	0	8	389	486 +/- 242	NA	0.2551
501.4	177.5	97.5	6	492	557	0	0	8	425	261 +/- 255	NA	0.2557
501.4	175	95	6	492	578	0	0	8	425	345 +/- 257	NA	0.2557
501.4	172.5	92.5	6	492	609	0	0	8	425	469 +/- 261	NA	0.2557
501.4	187.5	97.5	6	492	528	0	0	8	425	144 +/- 251	NA	0.2557
501.4	185	95	6	492	561	0	0	8	425	277 +/- 255	NA	0.2557
501.4	187.5	92.5	6	492	564	0	0	8	425	289 +/- 255	NA	0.2557
501.4	182.5	92.5	6	492	591	0	0	8	425	397 +/- 259	NA	0.2557
501.4	197.5	97.5	9	469	642	0	0	8	414	692 +/- 261	NA	0.2563
501.4	192.5	97.5	9	469	557	0	0	8	414	352 +/- 251	NA	0.2563
501.4	195	95	9	469	587	0	0	8	414	472 +/- 255	NA	0.2563
501.4	197.5	92.5	9	469	559	0	0	8	414	360 +/- 251	NA	0.2563
501.4	192.5	92.5	9	469	587	0	0	8	414	472 +/- 255	NA	0.2563
501.4	207.5	97.5	9	469	613	0	0	8	414	576 +/- 258	NA	0.2563
501.4	202.5	97.5	9	469	656	0	0	8	414	748 +/- 263	NA	0.2563
501.4	205	95	9	469	569	0	0	8	414	400 +/- 253	NA	0.2563
501.4	207.5	92.5	9	469	551	0	0	8	414	328 +/- 250	NA	0.2563
501.4	202.5	92.5	9	469	670	0	0	8	414	804 +/- 265	NA	0.2563
501.4	217.5	97.5	2	393	537	0	0	8	373	566 +/- 235	NA	0.2608
501.4	212.5	97.5	2	393	547	0	0	8	373	606 +/- 236	NA	0.2608
501.4	215	95	2	393	576	0	0	8	373	720 +/- 240	NA	0.2608
501.4	217.5	92.5	2	393	588	0	0	8	373	767 +/- 241	NA	0.2608
501.4	212.5	92.5	2	393	612	0	0	8	373	861 +/- 244	NA	0.2608
501.4	227.5	97.5	2	393	569	0	0	8	373	692 +/- 239	NA	0.2608
501.4	222.5	97.5	2	393	463	0	0	8	373	275 +/- 226	NA	0.2608
501.4	225	95	2	393	567	0	0	8	373	684 +/- 239	NA	0.2608
501.4	227.5	92.5	2	393	636	0	0	8	373	956 +/- 247	NA	0.2608
501.4	222.5	92.5	2	393	560	0	0	8	373	657 +/- 238	NA	0.2608
501.4	237.5	97.5	9	462	587	0	0	8	411	500 +/- 254	NA	0.2563
501.4	232.5	97.5	9	462	596	0	0	8	411	536 +/- 255	NA	0.2563
501.4	235	95	9	462	597	0	0	8	411	540 +/- 255	NA	0.2563
501.4	232.5	92.5	9	462	611	0	0	8	411	596 +/- 257	NA	0.2563
501.4	242.5	97.5	2	393	558	0	0	8	373	649 +/- 238	NA	0.2608
501.4	277.5	97.5	7	427	619	0	0	8	406	788 +/- 260	NA	0.2498
501.4	287.5	97.5	7	427	542	0	0	8	406	472 +/- 251	NA	0.2498
501.4	282.5	97.5	7	427	650	0	0	8	406	916 +/- 264	NA	0.2498
501.4	285	95	7	427	444	0	0	8	406	70 +/- 238	NA	0.2498
501.4	287.5	97.5	7	427	630	0	0	8	406	833 +/- 262	NA	0.2498
501.4	137.5	87.5	6	526	525	0	0	8	433	-4 +/- 252	NA	0.2591
501.4	132.5	82.5	9	422	509	0	0	8	393	348 +/- 239	NA	0.2563
501.4	145	85	9	423	565	0	0	8	394	568 +/- 247	NA	0.2563
501.4	147.5	82.5	9	423	572	0	0	8	394	596 +/- 247	NA	0.2563
501.4	142.5	82.5	9	423	535	0	0	8	394	448 +/- 243	NA	0.2563

Table 501.4-2

501.4	157.5	87.5	9	423	616	0	0	8	394	772 +/- 253	NA	0.2563
501.4	155	85	9	423	555	0	0	8	394	528 +/- 245	NA	0.2563
501.4	157.5	82.5	9	423	591	0	0	8	394	672 +/- 250	NA	0.2563
501.4	152.5	82.5	9	423	486	0	0	8	394	252 +/- 236	NA	0.2563
501.4	167.5	87.5	12	410	521	0	0	8	389	446 +/- 240	NA	0.2551
501.4	162.5	87.5	12	410	565	0	0	8	389	623 +/- 246	NA	0.2551
501.4	165	85	12	410	525	0	0	8	389	462 +/- 241	NA	0.2551
501.4	167.5	82.5	12	410	552	0	0	8	389	571 +/- 244	NA	0.2551
501.4	162.5	82.5	12	410	593	0	0	8	389	736 +/- 250	NA	0.2551
501.4	177.5	87.5	6	492	576	0	0	8	425	337 +/- 257	NA	0.2557
501.4	172.5	87.5	6	492	566	0	0	8	425	297 +/- 256	NA	0.2557
501.4	175	85	6	492	563	0	0	8	425	285 +/- 255	NA	0.2557
501.4	177.5	82.5	6	492	565	0	0	8	425	293 +/- 256	NA	0.2557
501.4	172.5	82.5	6	492	565	0	0	8	425	293 +/- 256	NA	0.2557
501.4	187.5	87.5	6	492	589	0	0	8	425	389 +/- 258	NA	0.2557
501.4	182.5	87.5	6	492	585	0	0	8	425	373 +/- 258	NA	0.2557
501.4	185	85	6	492	527	0	0	8	425	140 +/- 251	NA	0.2557
501.4	187.5	82.5	6	492	593	0	0	8	425	405 +/- 259	NA	0.2557
501.4	182.5	82.5	6	492	550	0	0	8	425	233 +/- 254	NA	0.2557
501.4	197.5	87.5	9	469	585	0	0	8	414	464 +/- 255	NA	0.2563
501.4	192.5	87.5	9	469	607	0	0	8	414	552 +/- 257	NA	0.2563
501.4	195	85	9	469	638	0	0	8	414	676 +/- 261	NA	0.2563
501.4	197.5	82.5	9	469	596	0	0	8	414	508 +/- 256	NA	0.2563
501.4	192.5	82.5	9	469	564	0	0	8	414	380 +/- 252	NA	0.2563
501.4	207.5	87.5	9	462	541	0	0	8	411	316 +/- 248	NA	0.2563
501.4	202.5	87.5	9	462	587	0	0	8	411	500 +/- 254	NA	0.2563
501.4	205	85	9	462	623	0	0	8	411	644 +/- 258	NA	0.2563
501.4	207.5	82.5	9	462	610	0	0	8	411	592 +/- 257	NA	0.2563
501.4	202.5	82.5	9	462	504	0	0	8	411	168 +/- 244	NA	0.2563
501.4	217.5	87.5	2	393	562	0	0	8	373	665 +/- 238	NA	0.2608
501.4	212.5	87.5	2	393	518	0	0	8	373	492 +/- 233	NA	0.2608
501.4	215	85	2	393	572	0	0	8	373	704 +/- 239	NA	0.2608
501.4	217.5	82.5	2	393	571	0	0	8	373	700 +/- 239	NA	0.2608
501.4	212.5	82.5	2	393	556	0	0	8	373	641 +/- 237	NA	0.2608
501.4	222.5	87.5	2	393	561	0	0	8	373	661 +/- 238	NA	0.2608
501.4	107.5	72.5	5	562	527	0	0	8	452	-140 +/- 259	NA	0.2565
501.4	115	75	5	562	497	0	0	8	452	-260 +/- 255	NA	0.2565
501.4	117.5	72.5	5	562	453	0	0	8	452	-436 +/- 250	NA	0.2565
501.4	112.5	72.5	5	562	457	0	0	8	452	-420 +/- 250	NA	0.2565
501.4	127.5	77.5	6	492	470	0	0	8	425	-88 +/- 244	NA	0.2557
501.4	122.5	77.5	6	492	461	0	0	8	425	-124 +/- 243	NA	0.2557
501.4	125	75	6	492	500	0	0	8	425	32 +/- 248	NA	0.2557
501.4	127.5	72.5	6	492	509	0	0	8	425	68 +/- 249	NA	0.2557
501.4	122.5	72.5	6	492	545	0	0	8	425	213 +/- 253	NA	0.2557
501.4	137.5	77.5	9	422	546	0	0	8	393	496 +/- 244	NA	0.2563
501.4	132.5	77.5	9	422	564	0	0	8	393	568 +/- 246	NA	0.2563
501.4	135	75	9	422	589	0	0	8	393	668 +/- 249	NA	0.2563
501.4	137.5	72.5	9	422	590	0	0	8	393	672 +/- 250	NA	0.2563
501.4	132.5	72.5	9	422	540	0	0	8	393	472 +/- 243	NA	0.2563
501.4	147.5	77.5	9	423	610	0	0	8	394	748 +/- 252	NA	0.2563
501.4	142.5	77.5	9	423	571	0	0	8	394	592 +/- 247	NA	0.2563
501.4	145	75	9	423	605	0	0	8	394	728 +/- 251	NA	0.2563
501.4	147.5	72.5	9	423	642	0	0	8	394	876 +/- 256	NA	0.2563
501.4	142.5	72.5	9	423	572	0	0	8	394	596 +/- 247	NA	0.2563
501.4	157.5	77.5	9	423	543	0	0	8	394	480 +/- 244	NA	0.2563
501.4	152.5	77.5	9	423	555	0	0	8	394	528 +/- 245	NA	0.2563
501.4	155	75	9	423	616	0	0	8	394	772 +/- 253	NA	0.2563
501.4	157.5	72.5	9	423	619	0	0	8	394	784 +/- 253	NA	0.2563
501.4	152.5	72.5	9	423	598	0	0	8	394	700 +/- 251	NA	0.2563
501.4	167.5	77.5	9	423	575	0	0	8	394	608 +/- 248	NA	0.2563

Table 501.4-2

501.4	162.5	77.5	9	423	602	0	0	8	394	716 +/- 251	NA	0.2563
501.4	165	75	9	423	590	0	0	8	394	668 +/- 250	NA	0.2563
501.4	167.5	72.5	9	423	587	0	0	8	394	656 +/- 249	NA	0.2563
501.4	162.5	72.5	9	423	577	0	0	8	394	616 +/- 248	NA	0.2563
501.4	177.5	77.5	6	492	601	0	0	8	424	436 +/- 259	NA	0.2563
501.4	172.5	77.5	6	492	556	0	0	8	424	256 +/- 254	NA	0.2563
501.4	175	75	6	492	538	0	0	8	425	135 +/- 252	NA	0.2557
501.4	177.5	72.5	6	492	538	0	0	8	425	185 +/- 252	NA	0.2557
501.4	172.5	72.5	6	492	567	0	0	8	425	301 +/- 256	NA	0.2557
501.4	187.5	77.5	6	492	559	0	0	8	425	269 +/- 255	NA	0.2557
501.4	182.5	77.5	6	492	547	0	0	8	425	221 +/- 253	NA	0.2557
501.4	185	75	6	492	532	0	0	8	425	160 +/- 252	NA	0.2557
501.4	187.5	72.5	6	492	588	0	0	8	425	385 +/- 258	NA	0.2557
501.4	182.5	72.5	6	492	597	0	0	8	425	421 +/- 259	NA	0.2557
501.4	197.5	77.5	9	469	592	0	0	8	415	493 +/- 256	NA	0.2557
501.4	192.5	77.5	9	469	610	0	0	8	415	566 +/- 258	NA	0.2557
501.4	195	75	9	469	573	0	0	8	414	416 +/- 253	NA	0.2563
501.4	197.5	72.5	9	469	532	0	0	8	414	252 +/- 248	NA	0.2563
501.4	192.5	72.5	9	469	562	0	0	8	414	372 +/- 252	NA	0.2563
501.4	207.5	77.5	9	462	547	0	0	8	411	340 +/- 249	NA	0.2563
501.4	202.5	77.5	9	462	560	0	0	8	411	392 +/- 251	NA	0.2563
501.4	205	75	9	462	560	0	0	8	411	392 +/- 251	NA	0.2563
501.4	207.5	72.5	9	462	557	0	0	8	411	380 +/- 250	NA	0.2563
501.4	202.5	72.5	9	462	555	0	0	8	411	372 +/- 250	NA	0.2563
501.4	212.5	77.5	2	393	499	0	0	8	373	417 +/- 230	NA	0.2608
501.4	215	75	2	393	555	0	0	8	373	637 +/- 237	NA	0.2608
501.4	107.5	67.5	5	562	456	0	0	8	452	-424 +/- 250	NA	0.2565
501.4	102.5	67.5	5	562	468	0	0	8	452	-376 +/- 252	NA	0.2565
501.4	105	65	5	562	491	0	0	8	452	-284 +/- 254	NA	0.2565
501.4	107.5	62.5	5	562	488	0	0	8	452	-296 +/- 254	NA	0.2565
501.4	102.5	62.5	5	562	419	0	0	8	452	-572 +/- 245	NA	0.2565
501.4	117.5	67.5	5	562	493	0	0	8	452	-276 +/- 255	NA	0.2565
501.4	112.5	67.5	5	562	482	0	0	8	452	-320 +/- 253	NA	0.2565
501.4	115	65	5	562	529	0	0	8	452	-132 +/- 259	NA	0.2565
501.4	117.5	62.5	5	562	533	0	0	8	452	-116 +/- 259	NA	0.2565
501.4	112.5	62.5	5	562	460	0	0	8	452	-408 +/- 251	NA	0.2565
501.4	127.5	67.5	6	492	565	0	0	8	425	293 +/- 256	NA	0.2557
501.4	122.5	67.5	6	492	536	0	0	8	425	176 +/- 252	NA	0.2557
501.4	125	65	6	492	592	0	0	8	425	401 +/- 259	NA	0.2557
501.4	127.5	62.5	6	492	521	0	0	8	425	116 +/- 250	NA	0.2557
501.4	122.5	62.5	6	492	514	0	0	8	425	88 +/- 249	NA	0.2557
501.4	137.5	67.5	9	422	490	0	0	8	393	272 +/- 237	NA	0.2563
501.4	132.5	67.5	9	422	519	0	0	8	393	388 +/- 241	NA	0.2563
501.4	135	65	9	422	533	0	0	8	393	444 +/- 242	NA	0.2563
501.4	137.5	62.5	9	422	579	0	0	8	393	628 +/- 248	NA	0.2563
501.4	132.5	62.5	9	422	547	0	0	8	393	500 +/- 244	NA	0.2563
501.4	147.5	67.5	9	423	581	0	0	8	394	632 +/- 249	NA	0.2563
501.4	142.5	67.5	9	423	590	0	0	8	394	668 +/- 250	NA	0.2563
501.4	145	65	9	423	560	0	0	8	394	548 +/- 246	NA	0.2563
501.4	147.5	62.5	9	423	564	0	0	8	394	564 +/- 246	NA	0.2563
501.4	142.5	62.5	9	423	609	0	0	8	394	744 +/- 252	NA	0.2563
501.4	157.5	67.5	12	410	577	0	0	8	389	671 +/- 248	NA	0.2551
501.4	152.5	67.5	12	410	518	0	0	8	389	434 +/- 240	NA	0.2551
501.4	155	65	12	410	586	0	0	8	389	708 +/- 249	NA	0.2551
501.4	157.5	62.5	12	410	576	0	0	8	389	667 +/- 247	NA	0.2551
501.4	152.5	62.5	12	410	474	0	0	8	389	257 +/- 234	NA	0.2551
501.4	167.5	67.5	9	423	589	0	0	8	394	664 +/- 250	NA	0.2563
501.4	162.5	67.5	9	423	563	0	0	8	394	560 +/- 246	NA	0.2563
501.4	165	65	9	423	568	0	0	8	394	580 +/- 247	NA	0.2563
501.4	167.5	62.5	9	423	557	0	0	8	394	536 +/- 246	NA	0.2563

Table 501.4-2

501.4	162.5	62.5	9	423	511	0	0	8	394	352 +/- 240	NA	0.2563
501.4	177.5	67.5	6	492	503	0	0	8	425	44 +/- 248	NA	0.2557
501.4	172.5	67.5	6	492	537	0	0	8	425	180 +/- 252	NA	0.2557
501.4	175	65	6	492	482	0	0	8	425	-40 +/- 245	NA	0.2557
501.4	177.5	62.5	6	492	553	0	0	8	425	265 +/- 255	NA	0.2557
501.4	172.5	62.5	6	492	522	0	0	8	425	120 +/- 250	NA	0.2557
501.4	187.5	67.5	7	379	538	0	0	8	383	653 +/- 244	NA	0.2498
501.4	182.5	67.5	7	379	494	0	0	8	383	472 +/- 238	NA	0.2498
501.4	185	65	7	379	590	0	0	8	383	866 +/- 251	NA	0.2498
501.4	187.5	62.5	7	379	585	0	0	8	383	846 +/- 250	NA	0.2498
501.4	182.5	62.5	7	379	475	0	0	8	383	394 +/- 235	NA	0.2498
501.4	197.5	67.5	9	469	558	0	0	8	414	356 +/- 251	NA	0.2563
501.4	192.5	67.5	9	469	632	0	0	8	414	652 +/- 250	NA	0.2563
501.4	195	65	9	469	616	0	0	8	414	588 +/- 258	NA	0.2563
501.4	197.5	62.5	9	469	579	0	0	8	414	440 +/- 254	NA	0.2563
501.4	192.5	62.5	9	469	540	0	0	8	414	284 +/- 249	NA	0.2563
501.4	207.5	67.5	9	462	476	0	0	8	411	56 +/- 240	NA	0.2563
501.4	202.5	67.5	9	462	585	0	0	8	411	492 +/- 254	NA	0.2563
501.4	205	65	9	462	488	0	0	8	411	104 +/- 242	NA	0.2563
501.4	202.5	62.5	9	462	552	0	0	8	411	360 +/- 250	NA	0.2563
501.4	97.5	57.5	5	562	551	0	0	8	452	-44 +/- 261	NA	0.2565
501.4	95	55	5	562	515	0	0	8	452	-188 +/- 257	NA	0.2565
501.4	97.5	52.5	5	562	555	0	0	8	452	-28 +/- 262	NA	0.2565
501.4	107.5	57.5	5	519	535	0	0	8	434	64 +/- 254	NA	0.2565
501.4	102.5	57.5	5	519	480	0	0	8	434	-156 +/- 248	NA	0.2565
501.4	105	55	5	519	555	0	0	8	434	144 +/- 257	NA	0.2565
501.4	107.5	52.5	5	519	554	0	0	8	434	140 +/- 257	NA	0.2565
501.4	102.5	52.5	5	519	628	0	0	8	434	436 +/- 265	NA	0.2565
501.4	117.5	57.5	5	562	513	0	0	8	452	-196 +/- 257	NA	0.2565
501.4	112.5	57.5	5	562	438	0	0	8	452	-496 +/- 248	NA	0.2565
501.4	115	55	5	562	588	0	0	8	452	104 +/- 266	NA	0.2565
501.4	117.5	52.5	5	562	581	0	0	8	452	76 +/- 265	NA	0.2565
501.4	112.5	52.5	5	562	632	0	0	8	452	280 +/- 271	NA	0.2565
501.4	127.5	57.5	5	417	494	0	0	8	391	308 +/- 237	NA	0.2565
501.4	122.5	57.5	5	417	535	0	0	8	391	472 +/- 242	NA	0.2565
501.4	125	55	5	417	485	0	0	8	391	272 +/- 235	NA	0.2565
501.4	127.5	52.5	5	417	478	0	0	8	391	244 +/- 234	NA	0.2565
501.4	122.5	52.5	5	417	523	0	0	8	391	424 +/- 240	NA	0.2565
501.4	137.5	57.5	9	423	503	0	0	8	394	320 +/- 239	NA	0.2563
501.4	132.5	57.5	9	423	575	0	0	8	394	608 +/- 248	NA	0.2563
501.4	135	55	9	423	551	0	0	8	394	512 +/- 245	NA	0.2563
501.4	137.5	52.5	9	423	511	0	0	8	394	352 +/- 240	NA	0.2563
501.4	132.5	52.5	9	423	577	0	0	8	394	616 +/- 248	NA	0.2563
501.4	147.5	57.5	9	423	549	0	0	8	394	504 +/- 245	NA	0.2563
501.4	142.5	57.5	9	423	527	0	0	8	394	416 +/- 242	NA	0.2563
501.4	145	55	9	423	567	0	0	8	394	576 +/- 247	NA	0.2563
501.4	147.5	52.5	9	423	531	0	0	8	394	432 +/- 242	NA	0.2563
501.4	142.5	52.5	9	423	508	0	0	8	394	340 +/- 239	NA	0.2563
501.4	137.5	57.5	12	410	507	0	0	8	389	390 +/- 239	NA	0.2551
501.4	152.5	57.5	12	410	513	0	0	8	389	414 +/- 239	NA	0.2551
501.4	155	55	12	410	495	0	0	8	389	342 +/- 237	NA	0.2551
501.4	157.5	52.5	12	410	471	0	0	8	389	245 +/- 234	NA	0.2551
501.4	152.5	52.5	12	410	501	0	0	8	389	366 +/- 238	NA	0.2551
501.4	167.5	57.5	9	423	509	0	0	8	394	344 +/- 239	NA	0.2563
501.4	162.5	57.5	9	423	553	0	0	8	394	520 +/- 245	NA	0.2563
501.4	165	55	9	423	551	0	0	8	394	512 +/- 245	NA	0.2563
501.4	167.5	52.5	9	423	526	0	0	8	394	412 +/- 242	NA	0.2563
501.4	162.5	52.5	9	423	536	0	0	8	394	452 +/- 243	NA	0.2563
501.4	177.5	57.5	6	492	524	0	0	8	425	128 +/- 251	NA	0.2557
501.4	172.5	57.5	6	492	520	0	0	8	425	112 +/- 250	NA	0.2557

Table 501.4-2

501.4	175	55	6	492	534	0	0	8	425	168 +/- 252	NA	0.2557
501.4	177.5	52.5	6	492	563	0	0	8	425	285 +/- 255	NA	0.2557
501.4	172.5	52.5	6	492	497	0	0	8	425	20 +/- 247	NA	0.2557
501.4	187.5	57.5	7	379	519	0	0	8	383	575 +/- 241	NA	0.2498
501.4	182.5	57.5	7	379	499	0	0	8	383	493 +/- 238	NA	0.2498
501.4	185	55	7	379	432	0	0	8	383	218 +/- 229	NA	0.2498
501.4	192.5	57.5	9	469	537	0	0	8	414	272 +/- 249	NA	0.2563
501.4	97.5	47.5	5	562	495	0	0	8	452	-268 +/- 255	NA	0.2565
501.4	107.5	47.5	5	519	525	0	0	8	434	24 +/- 253	NA	0.2565
501.4	102.5	47.5	5	519	573	0	0	8	434	216 +/- 259	NA	0.2565
501.4	105	45	5	519	524	0	0	8	434	20 +/- 253	NA	0.2565
501.4	107.5	42.5	5	519	505	0	0	8	434	-56 +/- 251	NA	0.2565
501.4	102.5	42.5	5	519	386	0	0	8	434	-532 +/- 236	NA	0.2565
501.4	117.5	47.5	5	417	537	0	0	8	391	480 +/- 242	NA	0.2565
501.4	112.5	47.5	5	417	534	0	0	8	391	468 +/- 242	NA	0.2565
501.4	115	45	5	417	530	0	0	8	391	452 +/- 241	NA	0.2565
501.4	117.5	42.5	5	417	481	0	0	8	391	256 +/- 235	NA	0.2565
501.4	112.5	42.5	5	417	501	0	0	8	391	336 +/- 237	NA	0.2565
501.4	127.5	47.5	5	417	474	0	0	8	391	228 +/- 234	NA	0.2565
501.4	122.5	47.5	5	417	492	0	0	8	391	300 +/- 236	NA	0.2565
501.4	125	45	5	417	457	0	0	8	391	160 +/- 232	NA	0.2565
501.4	127.5	42.5	5	417	469	0	0	8	391	208 +/- 233	NA	0.2565
501.4	122.5	42.5	5	417	527	0	0	8	391	440 +/- 241	NA	0.2565
501.4	137.5	47.5	9	423	518	0	0	8	394	380 +/- 241	NA	0.2563
501.4	132.5	47.5	9	423	521	0	0	8	394	392 +/- 241	NA	0.2563
501.4	135	45	9	423	493	0	0	8	394	280 +/- 237	NA	0.2563
501.4	137.5	42.5	9	423	475	0	0	8	394	208 +/- 235	NA	0.2563
501.4	132.5	42.5	9	423	545	0	0	8	394	488 +/- 244	NA	0.2563
501.4	147.5	47.5	9	423	579	0	0	8	394	624 +/- 248	NA	0.2563
501.4	142.5	47.5	9	423	509	0	0	8	394	344 +/- 239	NA	0.2563
501.4	145	45	9	423	550	0	0	8	394	508 +/- 245	NA	0.2563
501.4	147.5	42.5	9	423	571	0	0	8	394	592 +/- 247	NA	0.2563
501.4	142.5	42.5	9	423	538	0	0	8	394	460 +/- 243	NA	0.2563
501.4	157.5	47.5	12	410	493	0	0	8	389	334 +/- 237	NA	0.2551
501.4	152.5	47.5	12	410	490	0	0	8	389	322 +/- 236	NA	0.2551
501.4	155	45	12	410	552	0	0	8	389	571 +/- 244	NA	0.2551
501.4	152.5	42.5	12	410	483	0	0	8	389	293 +/- 235	NA	0.2551
501.4	167.5	47.5	9	423	526	0	0	8	394	412 +/- 242	NA	0.2563
501.4	162.5	47.5	9	423	545	0	0	8	394	488 +/- 244	NA	0.2563
501.4	95	35	5	519	497	0	0	8	434	-88 +/- 250	NA	0.2565
501.4	97.5	32.5	6	526	581	0	0	8	433	218 +/- 258	NA	0.2591
501.4	92.5	32.5	6	526	655	0	0	8	433	511 +/- 267	NA	0.2591
501.4	107.5	37.5	5	519	508	0	0	8	434	-44 +/- 251	NA	0.2565
501.4	102.5	37.5	5	519	544	0	0	8	434	100 +/- 256	NA	0.2565
501.4	105	35	5	519	522	0	0	8	434	12 +/- 253	NA	0.2565
501.4	107.5	32.5	5	519	529	0	0	8	434	40 +/- 254	NA	0.2565
501.4	102.5	32.5	5	519	532	0	0	8	434	52 +/- 254	NA	0.2565
501.4	117.5	37.5	5	417	508	0	0	8	391	364 +/- 238	NA	0.2565
501.4	112.5	37.5	5	417	511	0	0	8	391	376 +/- 239	NA	0.2565
501.4	115	35	5	417	507	0	0	8	391	360 +/- 238	NA	0.2565
501.4	117.5	32.5	5	417	472	0	0	8	391	220 +/- 234	NA	0.2565
501.4	112.5	32.5	5	417	502	0	0	8	391	340 +/- 238	NA	0.2565
501.4	127.5	37.5	5	417	493	0	0	8	391	304 +/- 236	NA	0.2565
501.4	122.5	37.5	5	417	532	0	0	8	391	460 +/- 241	NA	0.2565
501.4	125	35	5	417	487	0	0	8	391	280 +/- 236	NA	0.2565
501.4	127.5	32.5	5	417	512	0	0	8	391	380 +/- 239	NA	0.2565
501.4	122.5	32.5	5	17	497	0	0	8	391	320 +/- 237	NA	0.2565
501.4	137.5	37.5	5	423	548	0	0	8	394	500 +/- 244	NA	0.2563
501.4	132.5	37.5	9	423	562	0	0	8	394	556 +/- 246	NA	0.2563
501.4	135	35	9	423	539	0	0	8	394	464 +/- 243	NA	0.2563

Table 501.4-2

501.4	132.5	32.5	6	526	572	0	0	8	433	182 +/- 257	NA	0.2591
501.4	142.5	37.5	9	423	519	0	0	8	394	384 +/- 241	NA	0.2563
501.4	97.5	27.5	6	526	584	0	0	8	433	230 +/- 258	NA	0.2591
501.4	107.5	27.5	5	519	511	0	0	8	434	-32 +/- 252	NA	0.2565
501.4	102.5	27.5	5	519	505	0	0	8	434	-56 +/- 251	NA	0.2565
501.4	105	25	5	519	497	0	0	8	434	-88 +/- 250	NA	0.2565
501.4	107.5	22.5	5	519	471	0	0	8	434	-192 +/- 247	NA	0.2565
501.4	102.5	22.5	5	519	466	0	0	8	434	-212 +/- 246	NA	0.2565
501.4	112.5	27.5	5	417	525	0	0	8	391	432 +/- 241	NA	0.2565
501.4	115	25	5	417	492	0	0	8	391	300 +/- 236	NA	0.2565

Table 501.4-3

MAG-2747

## CIN-ICHEM DECOMMISSIONING PLAN

11/22/96

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

BLDG 4 PARKING LOT

AREA 501.4 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 11/15/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.4 2=ROCK 6=SOIL

MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT

# of POINTS: 339 4=METAL B=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 60 PASS 5000

AVG - SURVEY UNIT 5 PASS 5000

STD X 14

MU SUB ALPHA 7 PASS 5000

MAX HOT SPOT 0 PASS 15000

ID #	GRID ID	COORDINATES	INST.	TOTAL						WEIGHTED			
				INST.	ALPHA AREA COUNTS/	SCAN 1 COUNTS	TOTAL AREA CM^2	CONT. IAL CODE	MDA DPM/100 CM^2	AVG. DPM/100 CM^2 TEST	MAX PER CM^2 TEST	INST. EFF. CPM/OPM	
					BKG CPM	MINUTES	100 CM^2						
S	W												
501.4	247.5	112.5	2	3	3	0	0	8	64	0 +/- 28	NA	0.1685	
501.4	255	115	2	3	2	0	0	8	64	-6 +/- 26	NA	0.1685	
501.4	257.5	112.5	2	3	1	0	0	8	64	-12 +/- 23	NA	0.1685	
501.4	252.5	112.5	2	3	1	0	0	8	64	-12 +/- 23	NA	0.1685	
501.4	267.5	117.5	2	3	3	0	0	8	64	0 +/- 28	NA	0.1685	
501.4	262.5	117.5	2	3	0	0	0	8	64	-18 +/- 20	NA	0.1685	
501.4	265	115	2	3	2	0	0	8	64	-6 +/- 26	NA	0.1685	
501.4	267.5	112.5	2	3	6	0	0	8	64	18 +/- 35	NA	0.1685	
501.4	262.5	112.5	2	3	0	0	0	8	64	-18 +/- 20	NA	0.1685	
501.4	272.5	117.5	6	1	1	0	0	8	46	0 +/- 17	NA	0.1596	
501.4	275	115	6	2	2	0	0	8	52	0 +/- 22	NA	0.1776	
501.4	277.5	112.5	6	1	1	0	0	8	46	0 +/- 17	NA	0.1596	
501.4	272.5	112.5	6	1	3	0	0	8	46	13 +/- 25	NA	0.1596	
501.4	217.5	102.5	2	3	3	0	0	8	64	0 +/- 28	NA	0.1685	
501.4	212.5	102.5	2	3	0	0	0	8	64	-18 +/- 20	NA	0.1685	
501.4	227.5	102.5	2	3	0	0	0	8	64	-18 +/- 20	NA	0.1685	
501.4	222.5	102.5	2	3	6	0	0	8	64	18 +/- 35	NA	0.1685	
501.4	237.5	107.5	9	1	3	0	0	8	44	12 +/- 23	NA	0.1677	
501.4	235	105	9	1	0	0	0	8	44	-6 +/- 12	NA	0.1677	
501.4	237.5	102.5	9	1	2	0	0	8	44	6 +/- 20	NA	0.1677	
501.4	232.5	102.5	9	1	1	0	0	8	44	0 +/- 17	NA	0.1677	
501.4	247.5	107.5	9	1	1	0	0	8	44	0 +/- 17	NA	0.1677	
501.4	242.5	107.5	9	1	2	0	0	8	44	6 +/- 20	NA	0.1677	
501.4	245	105	9	1	1	0	0	8	44	0 +/- 17	NA	0.1677	
501.4	247.5	102.5	9	1	3	0	0	8	44	12 +/- 23	NA	0.1677	
501.4	242.5	102.5	9	1	2	0	0	8	44	6 +/- 20	NA	0.1677	
501.4	257.5	107.5	9	1	2	0	0	8	44	6 +/- 20	NA	0.1677	
501.4	252.5	107.5	9	1	3	0	0	8	44	12 +/- 23	NA	0.1677	
501.4	255	105	9	1	3	0	0	8	44	12 +/- 23	NA	0.1677	

Table 501.4-3

501.4	257.5	102.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	252.5	102.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	267.5	107.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	262.5	107.5	2	3	0	0	0	8	64	-18 +/-	20	NA	0.1685
501.4	265	105	2	3	1	0	0	8	64	-12 +/-	23	NA	0.1685
501.4	277.5	107.5	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	272.5	107.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	275	105	6	1	5	0	0	8	46	25 +/-	30	NA	0.1596
501.4	277.5	102.5	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	272.5	102.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	282.5	107.5	7	4	2	0	0	8	76	-13 +/-	31	NA	0.1573
501.4	285	105	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	287.5	102.5	7	4	2	0	0	8	76	-13 +/-	31	NA	0.1573
501.4	282.5	102.5	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	295	105	6	0	1	0	0	8	15	6 +/-	11	NA	0.1776
501.4	297.5	102.5	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	292.5	102.5	7	4	0	0	0	8	76	-25 +/-	25	NA	0.1573
501.4	167.5	92.5	12	1	3	0	0	8	46	12 +/-	24	NA	0.1619
501.4	177.5	92.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	175	95	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	172.5	92.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	187.5	97.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	185	95	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	187.5	92.5	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	182.5	92.5	6	1	7	0	0	8	46	38 +/-	35	NA	0.1596
501.4	197.5	97.5	9	2	1	0	0	8	55	-5 +/-	20	NA	0.1677
501.4	192.5	97.5	9	2	4	0	0	8	55	12 +/-	29	NA	0.1677
501.4	195	95	9	2	5	0	0	8	55	18 +/-	31	NA	0.1677
501.4	197.5	92.5	9	2	4	0	0	8	55	12 +/-	29	NA	0.1677
501.4	192.5	92.5	9	2	0	0	0	8	55	-12 +/-	17	NA	0.1677
501.4	207.5	97.5	9	2	5	0	0	8	55	18 +/-	31	NA	0.1677
501.4	202.5	97.5	9	2	4	0	0	8	55	12 +/-	29	NA	0.1677
501.4	205	95	9	2	12	0	0	8	55	60 +/-	44	NA	0.1677
501.4	207.5	92.5	9	2	4	0	0	8	55	12 +/-	29	NA	0.1677
501.4	202.5	92.5	9	2	6	0	0	8	55	24 +/-	33	NA	0.1677
501.4	217.5	97.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	212.5	97.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	215	95	2	3	0	0	0	8	64	-18 +/-	20	NA	0.1685
501.4	217.5	92.5	2	3	1	0	0	8	64	-12 +/-	23	NA	0.1685
501.4	212.5	92.5	2	3	2	0	0	8	64	-6 +/-	26	NA	0.1685
501.4	227.5	97.5	2	3	2	0	0	8	64	-6 +/-	26	NA	0.1685
501.4	222.5	97.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	225	95	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	227.5	92.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	222.5	92.5	2	3	3	0	0	8	64	0 +/-	28	NA	0.1685
501.4	237.5	97.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	232.5	97.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	235	95	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	232.5	92.5	9	1	7	0	0	8	44	36 +/-	33	NA	0.1677
501.4	242.5	97.5	2	3	5	0	0	8	64	12 +/-	33	NA	0.1685
501.4	277.5	97.5	7	4	5	0	0	8	76	6 +/-	37	NA	0.1573
501.4	287.5	97.5	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	282.5	97.5	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	285	95	7	4	1	0	0	8	76	-19 +/-	28	NA	0.1573
501.4	287.5	97.5	7	4	4	0	0	8	76	0 +/-	35	NA	0.1573
501.4	137.5	87.5	6	0	2	0	0	8	15	11 +/-	16	NA	0.1776
501.4	132.5	82.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	145	85	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	147.5	82.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	142.5	82.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677

Table 501.4-3

501.4	157.5	87.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	155	85	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	157.5	82.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	152.5	82.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	167.5	87.5	12	1	1	0	0	8	45	0 +/-	17	NA	0.1619
501.4	162.5	87.5	12	1	3	0	0	8	45	12 +/-	24	NA	0.1619
501.4	165	85	12	1	4	0	0	8	45	19 +/-	27	NA	0.1619
501.4	167.5	82.5	12	1	2	0	0	8	45	6 +/-	21	NA	0.1619
501.4	162.5	82.5	12	1	2	0	0	8	45	6 +/-	21	NA	0.1619
501.4	177.5	87.5	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	172.5	87.5	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	175	85	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	177.5	82.5	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	172.5	82.5	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	187.5	87.5	6	1	1	0	0	8	46	0 +/-	17	NA	0.1596
501.4	182.5	87.5	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	185	85	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	187.5	82.5	6	1	1	0	0	8	46	0 +/-	17	NA	0.1596
501.4	182.5	82.5	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	197.5	87.5	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	192.5	87.5	9	2	4	0	0	8	55	12 +/-	29	NA	0.1677
501.4	195	85	9	2	5	0	0	8	55	18 +/-	31	NA	0.1677
501.4	197.5	82.5	9	2	1	0	0	8	55	-6 +/-	20	NA	0.1677
501.4	192.5	82.5	9	2	2	0	0	8	55	0 +/-	23	NA	0.1677
501.4	207.5	87.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	202.5	87.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	205	85	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	207.5	82.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	202.5	82.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	217.5	87.5	2	3	2	0	0	8	64	-6 +/-	26	NA	0.1685
501.4	212.5	87.5	2	3	1	0	0	8	64	-12 +/-	23	NA	0.1685
501.4	215	85	2	3	2	0	0	8	64	-6 +/-	26	NA	0.1685
501.4	217.5	82.5	2	3	2	0	0	8	64	-6 +/-	26	NA	0.1685
501.4	212.5	82.5	2	3	1	0	0	8	64	-12 +/-	23	NA	0.1685
501.4	222.5	87.5	2	3	0	0	0	8	64	-18 +/-	20	NA	0.1685
501.4	107.5	72.5	5	3	0	0	0	8	66	-18 +/-	21	NA	0.1642
501.4	115	75	5	3	7	0	0	8	66	24 +/-	38	NA	0.1642
501.4	117.5	72.5	5	3	3	0	0	8	66	0 +/-	29	NA	0.1642
501.4	112.5	72.5	5	3	5	0	0	8	66	12 +/-	34	NA	0.1642
501.4	127.5	77.5	6	3	2	0	0	8	67	-6 +/-	27	NA	0.1596
501.4	122.5	77.5	6	3	0	0	0	8	67	-19 +/-	21	NA	0.1596
501.4	125	75	6	3	0	0	0	8	67	-19 +/-	21	NA	0.1596
501.4	127.5	72.5	6	3	7	0	0	8	67	25 +/-	39	NA	0.1596
501.4	122.5	72.5	6	3	3	0	0	8	67	0 +/-	30	NA	0.1596
501.4	137.5	77.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	132.5	77.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	135	75	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	137.5	72.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	132.5	72.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	147.5	77.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	142.5	77.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	145	75	9	1	7	0	0	8	44	36 +/-	33	NA	0.1677
501.4	147.5	72.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	142.5	72.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	157.5	77.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	152.5	77.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	155	75	9	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	157.5	72.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	152.5	72.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	167.5	77.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677

Table 501.4-3

501.4	162.5	77.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	165	75	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	167.5	72.5	9	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	162.5	72.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	177.5	77.5	6	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	172.5	77.5	6	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	175	75	6	1	4	0	0	8	46	19 +/-	27	NA	0.1596
501.4	177.5	72.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	172.5	72.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	187.5	77.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	182.5	77.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	185	75	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	187.5	72.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	182.5	72.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	197.5	77.5	9	2	3	0	0	8	58	6 +/-	27	NA	0.1596
501.4	192.5	77.5	9	2	2	0	0	8	58	0 +/-	25	NA	0.1596
501.4	195	75	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	197.5	72.5	9	2	2	0	0	8	55	0 +/-	23	NA	0.1677
501.4	192.5	72.5	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	207.5	77.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	202.5	77.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	205	75	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	207.5	72.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	202.5	72.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	212.5	77.5	2	3	5	0	0	8	64	12 +/-	33	NA	0.1685
501.4	215	75	2	3	1	0	0	8	64	-12 +/-	23	NA	0.1685
501.4	107.5	67.5	5	3	7	0	0	8	66	24 +/-	38	NA	0.1642
501.4	102.5	67.5	5	3	1	0	0	8	66	-12 +/-	24	NA	0.1642
501.4	105	65	5	3	0	0	0	8	66	-18 +/-	21	NA	0.1642
501.4	107.5	62.5	5	3	4	0	0	8	66	6 +/-	32	NA	0.1642
501.4	102.5	62.5	5	3	3	0	0	8	66	0 +/-	29	NA	0.1642
501.4	117.5	67.5	5	3	6	0	0	8	66	18 +/-	36	NA	0.1642
501.4	112.5	67.5	5	3	3	0	0	8	66	0 +/-	29	NA	0.1642
501.4	115	65	5	3	1	0	0	8	66	-12 +/-	24	NA	0.1642
501.4	117.5	62.5	5	3	0	0	0	8	66	-18 +/-	21	NA	0.1642
501.4	112.5	62.5	5	3	5	0	0	8	66	12 +/-	34	NA	0.1642
501.4	127.5	67.5	6	3	2	0	0	8	67	-6 +/-	27	NA	0.1596
501.4	122.5	67.5	6	3	3	0	0	8	67	0 +/-	30	NA	0.1596
501.4	125	65	6	3	4	0	0	8	67	6 +/-	32	NA	0.1596
501.4	127.5	62.5	6	3	2	0	0	8	67	-6 +/-	27	NA	0.1596
501.4	122.5	62.5	6	3	0	0	0	8	67	-19 +/-	21	NA	0.1596
501.4	137.5	67.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	132.5	67.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	135	65	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	137.5	62.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	132.5	62.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	147.5	67.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	142.5	67.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	145	65	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	147.5	62.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	142.5	62.5	9	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	157.5	67.5	12	1	4	0	0	8	45	19 +/-	27	NA	0.1619
501.4	152.5	67.5	12	1	1	0	0	8	45	0 +/-	17	NA	0.1619
501.4	155	65	12	1	3	0	0	8	45	12 +/-	24	NA	0.1619
501.4	157.5	62.5	12	1	5	0	0	8	45	25 +/-	30	NA	0.1619
501.4	152.5	62.5	12	1	4	0	0	8	45	19 +/-	27	NA	0.1619
501.4	167.5	67.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	162.5	67.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	165	65	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	167.5	62.5	9	1	6	0	0	8	44	30 +/-	31	NA	0.1677

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501.4	162.5	62.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	177.5	67.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	172.5	67.5	6	1	5	0	0	8	46	25 +/-	30	NA	0.1596
501.4	175	65	6	1	5	0	0	8	46	25 +/-	30	NA	0.1596
501.4	177.5	62.5	6	1	1	0	0	8	46	0 +/-	17	NA	0.1596
501.4	172.5	62.5	6	1	1	0	0	8	46	0 +/-	17	NA	0.1596
501.4	187.5	67.5	..	1	5	0	0	8	47	25 +/-	31	NA	0.1573
501.4	182.5	67.5	7	1	2	0	0	8	47	6 +/-	22	NA	0.1573
501.4	185	65	7	1	7	0	0	8	47	38 +/-	35	NA	0.1573
501.4	187.5	62.5	7	1	2	0	0	8	47	6 +/-	22	NA	0.1573
501.4	182.5	62.5	7	1	2	0	0	8	47	6 +/-	22	NA	0.1573
501.4	197.5	67.5	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	192.5	67.5	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	195	65	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	197.5	62.5	9	2	3	0	0	8	55	6 +/-	26	NA	0.1677
501.4	192.5	62.5	9	2	2	0	0	8	55	0 +/-	23	NA	0.1677
501.4	207.5	67.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	202.5	67.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	205	65	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	202.5	62.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	97.5	57.5	5	3	8	0	0	8	66	30 +/-	40	NA	0.1642
501.4	95	55	5	3	3	0	0	8	66	0 +/-	29	NA	0.1642
501.4	97.5	52.5	5	3	4	0	0	8	66	6 +/-	32	NA	0.1642
501.4	107.5	57.5	5	5	8	0	0	8	80	18 +/-	43	NA	0.1642
501.4	102.5	57.5	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	105	55	5	5	5	0	0	8	80	0 +/-	38	NA	0.1642
501.4	107.5	52.5	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	102.5	52.5	5	5	7	0	0	8	80	12 +/-	41	NA	0.1642
501.4	117.5	57.5	5	3	1	0	0	8	66	-12 +/-	24	NA	0.1642
501.4	112.5	57.5	5	3	2	0	0	8	66	-6 +/-	27	NA	0.1642
501.4	115	55	5	3	4	0	0	8	66	6 +/-	32	NA	0.1642
501.4	117.5	52.5	5	3	0	0	0	8	66	-18 +/-	21	NA	0.1642
501.4	112.5	52.5	5	3	3	0	0	8	66	0 +/-	29	NA	0.1642
501.4	127.5	57.5	5	2	1	0	0	8	57	-6 +/-	21	NA	0.1642
501.4	122.5	57.5	5	2	5	0	0	8	57	18 +/-	32	NA	0.1642
501.4	125	55	5	2	5	0	0	8	57	18 +/-	32	NA	0.1642
501.4	127.5	52.5	5	2	1	0	0	8	57	-6 +/-	21	NA	0.1642
501.4	122.5	52.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	137.5	57.5	9	1	6	0	0	8	44	30 +/-	31	NA	0.1677
501.4	132.5	57.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	135	55	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	137.5	52.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	132.5	52.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	147.5	57.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	142.5	57.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	145	55	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	147.5	52.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	142.5	52.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	157.5	57.5	12	1	1	0	0	8	45	0 +/-	17	NA	0.1619
501.4	152.5	57.5	12	1	3	0	0	8	45	12 +/-	24	NA	0.1619
501.4	155	55	12	1	2	0	0	8	45	6 +/-	21	NA	0.1619
501.4	157.5	52.5	12	1	0	0	0	8	45	-6 +/-	12	NA	0.1619
501.4	152.5	52.5	12	1	0	0	0	8	45	-6 +/-	12	NA	0.1619
501.4	167.5	57.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	162.5	57.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	165	55	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	167.5	52.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	162.5	52.5	9	1	2	0	0	8	44	6 +/-	20	NA	0.1677
501.4	177.5	57.5	6	1	2	0	0	8	46	6 +/-	21	NA	0.1596
501.4	172.5	57.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596

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501.4	175	55	6	1	6	0	0	8	46	31 +/-	32	NA	0.1596
501.4	177.5	52.5	6	1	0	0	0	8	46	-6 +/-	12	NA	0.1596
501.4	172.5	52.5	6	1	3	0	0	8	46	13 +/-	25	NA	0.1596
501.4	187.5	57.5	7	1	5	0	0	8	47	25 +/-	31	NA	0.1573
501.4	182.5	57.5	7	1	5	0	0	8	47	25 +/-	31	NA	0.1573
501.4	185	55	7	1	5	0	0	8	47	25 +/-	31	NA	0.1573
501.4	192.5	57.5	9	2	2	0	0	8	55	0 +/-	23	NA	0.1677
501.4	97.5	47.5	5	3	4	0	0	8	66	6 +/-	32	NA	0.1642
501.4	107.5	47.5	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	102.5	47.5	5	5	7	0	0	8	80	12 +/-	41	NA	0.1642
501.4	105	45	5	5	1	0	0	8	80	-24 +/-	29	NA	0.1642
501.4	107.5	42.5	5	5	1	0	0	8	80	-24 +/-	29	NA	0.1642
501.4	102.5	42.5	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	117.5	47.5	5	2	5	0	0	8	57	18 +/-	32	NA	0.1642
501.4	112.5	47.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	115	45	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	117.5	42.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	112.5	42.5	5	2	5	0	0	8	57	18 +/-	32	NA	0.1642
501.4	127.5	47.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	122.5	47.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	125	45	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	127.5	42.5	5	2	5	0	0	8	57	18 +/-	32	NA	0.1642
501.4	122.5	42.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	137.5	47.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	132.5	47.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	135	45	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	137.5	42.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	132.5	42.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	147.5	47.5	9	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	142.5	47.5	9	1	0	0	0	8	44	-6 +/-	12	NA	0.1677
501.4	145	45	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	147.5	42.5	9	1	7	0	0	8	44	36 +/-	33	NA	0.1677
501.4	142.5	42.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	157.5	47.5	12	1	2	0	0	8	45	6 +/-	21	NA	0.1619
501.4	152.5	47.5	12	1	3	0	0	8	45	12 +/-	24	NA	0.1619
501.4	155	45	12	1	1	0	0	8	45	0 +/-	17	NA	0.1619
501.4	152.5	42.5	12	1	5	0	0	8	45	25 +/-	30	NA	0.1619
501.4	167.5	47.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	162.5	47.5	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677
501.4	95	35	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	97.5	32.5	6	0	4	0	0	8	15	23 +/-	22	NA	0.1776
501.4	92.5	32.5	6	0	8	0	0	8	15	45 +/-	31	NA	0.1776
501.4	107.5	37.5	5	5	1	0	0	8	80	-24 +/-	29	NA	0.1642
501.4	102.5	37.5	5	5	3	0	0	8	80	-12 +/-	34	NA	0.1642
501.4	105	35	5	5	3	0	0	8	80	-12 +/-	34	NA	0.1642
501.4	107.5	32.5	5	5	5	0	0	8	80	0 +/-	38	NA	0.1642
501.4	102.5	32.5	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	117.5	37.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	112.5	37.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	115	35	5	2	4	0	0	8	57	12 +/-	29	NA	0.1642
501.4	117.5	32.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	112.5	32.5	5	2	4	0	0	8	57	12 +/-	29	NA	0.1642
501.4	127.5	37.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	122.5	37.5	5	2	8	0	0	8	57	37 +/-	38	NA	0.1642
501.4	125	35	5	2	4	0	0	8	57	12 +/-	29	NA	0.1642
501.4	127.5	32.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	122.5	32.5	5	2	2	0	0	8	57	0 +/-	24	NA	0.1642
501.4	137.5	37.5	9	1	1	0	0	8	44	0 +/-	17	NA	0.1677
501.4	132.5	37.5	9	1	4	0	0	8	44	18 +/-	26	NA	0.1677
501.4	135	35	9	1	5	0	0	8	44	24 +/-	29	NA	0.1677

Table 501.4-3

501.4	132.5	32.5	6	0	3	0	0	8	15	17 +/-	19	NA	0.1776
501.4	142.5	37.5	9	1	3	0	0	8	44	12 +/-	23	NA	0.1677
501.4	97.5	27.5	6	0	2	0	0	8	15	11 +/-	16	NA	0.1776
501.4	107.5	27.5	5	5	1	0	0	8	80	-24 +/-	29	NA	0.1642
501.4	102.5	27.5	5	5	0	0	0	8	80	-30 +/-	27	NA	0.1642
501.4	105	25	5	5	2	0	0	8	80	-18 +/-	32	NA	0.1642
501.4	107.5	22.5	5	5	5	0	0	8	80	0 +/-	38	NA	0.1642
501.4	102.5	22.5	5	5	4	0	0	8	80	-6 +/-	36	NA	0.1642
501.4	112.5	27.5	5	2	3	0	0	8	57	6 +/-	27	NA	0.1642
501.4	115	25	5	2	4	0	0	8	57	12 +/-	29	NA	0.1642

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.5 survey unit was surveyed on an affected area basis and has a surface area of 120 m<sup>2</sup>. 20 measurement locations were placed approximately evenly spaced due to geometry considerations in lieu of a 10m x 10m grid. In addition a 100% scan was performed over the entire survey area. The location of these measurements is shown in the accompanying map.

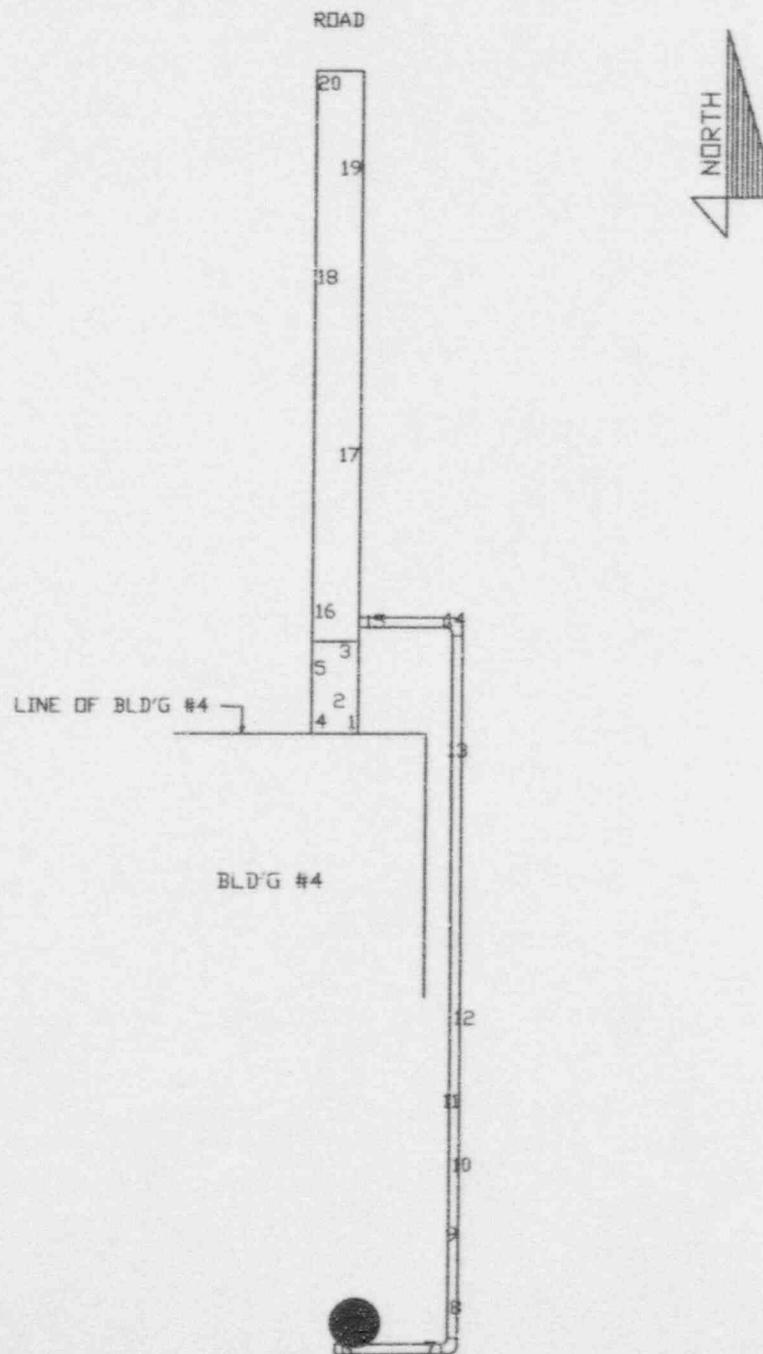
Measurement and sampling results for the 501.5 survey unit are provided in 3 attached tables as follows:

Table 501.5-1 Building 4 Sidewalks  
gamma exposure rate data

Table 501.5-2 Building 4 Sidewalks  
direct beta/gamma surface contamination data

Table 501.5-3 Building 4 Sidewalks  
direct alpha surface contamination data

BLD'G #4 OUTSIDE  
CONCRETE PADS & WALKWAYS  
UNIT 501.5



## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.5

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	404	59
Number of Meas:	20	20	20
Survey Unit Mean:	-0.1	539	10
True Mean;U alpha 95% C.L.:	0.3	663	15
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Grid Block Wt. Mean	2	1127	45
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural  
radioactive material content

MAG 6-27-97

CINTICHEM DECOMMISSIONING PLAN                    06/26/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

BLDG 4 SIDEWALKS

AREA 501.5 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

COMPLETION

DATE: 05/21/97

TECHNICIANS: PG                    MATERIAL CODE

AREA: 501.0                    1=CONCRETE                    5=PLASTIC

UNIT: 501.5                    2=ROCK                    6=SOIL

MEDIA TYPE: CONCRETE                    3=WOOD                    7=ASPHALT

# of POINTS: 20                    4=METAL                    8=OTHER(SPECIFY):  
NO MATERIAL BACKGROUND USED

MICRO REM

PER HOUR:                    LIMIT

MAX: 2.00 PASS                    10

AVG: -0.10 PASS                    5

STD X: 0.97

MU SUB ALPHA: 0.27 PASS                    5

MATER-

ID #	GRID POINT	INST.	ID #	AREA	AREA	IAL	NET
				BKG	READING	CODE	UREM/HR
				UREM/HR	UREM/HR		
501.5	1	A	6	6	8	0	
501.5	2	A	6	6	8	0	
501.5	3	A	6	7	8	1	
501.5	4	A	6	6	8	0	
501.5	5	A	6	5	8	-1	
501.5	6	A	6	7	8	1	
501.5	7	A	6	5	8	-1	
501.5	8	A	6	6	8	0	
501.5	9	A	6	7	8	1	
501.5	10	A	6	8	8	2	
501.5	11	A	6	7	8	1	
501.5	12	A	6	6	8	0	
501.5	13	A	6	6	8	0	
501.5	14	A	6	6	8	0	
501.5	15	A	6	5	8	-1	
501.5	16	A	6	4	8	-2	
501.5	17	A	6	5	8	-1	
501.5	18	A	6	6	8	0	
501.5	19	A	6	5	8	-1	
501.5	20	A	6	5	8	-1	

TA66-27-9.7

## CINTICHEM DECOMMISSIONING PLAN

06/26/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

BLDG 4 SIDEWALKS

AREA 501.5 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 05/21/97

TECHNICIANS: PG MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.5 2=ROCK 6=SOIL

MEDIA TYPE: CONCRETE 3=WOOD 7=ASPHALT

# of POINTS: 20 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 1127 PASS 1273

AVG - SURVEY UNIT 539 PASS 1273

STD X 320

MU SUB ALPHA 663 PASS 1273

MAX HOT SPOT NONE PASS 3818

## WEIGHTED

ID #	GRID	COORDINATES	INST.	BETA	BETA	SCAN	TOTAL	WEIGHTED			INST EFF.	
				INST. AREA COUNTS/	FIXED AREA	MAX BETA	CONT. AREA	MATER-	BETA	MAX		
			ID #	BKG	1 COUNTS	CM^2	CODE	MDA	DPM/	DPM/	100 MAX	CPM/DPM
				CPM	MINUTES		100 CM^2		100 CM^2 TEST	TEST	CM^2	
501.5	1	14	375	375	449	0	0	8	404	322 +/- 245	NA	0.2357
501.5	2	14	375	375	378	0	0	8	404	13 +/- 234	NA	0.2357
501.5	3	14	375	375	374	0	0	8	404	-4 +/- 233	NA	0.2357
501.5	4	14	375	375	411	0	0	8	404	157 +/- 239	NA	0.2357
501.5	5	14	375	375	405	0	0	8	404	131 +/- 238	NA	0.2357
501.5	6	14	375	375	634	0	0	8	404	1127 +/- 271	NA	0.2357
501.5	7	14	375	375	583	0	0	8	404	905 +/- 264	NA	0.2357
501.5	8	14	375	375	583	0	0	8	404	905 +/- 264	NA	0.2357
501.5	9	14	375	375	609	0	0	8	404	1018 +/- 268	NA	0.2357
501.5	10	14	375	375	586	0	0	8	404	918 +/- 264	NA	0.2357
501.5	11	14	375	375	520	0	0	8	404	631 +/- 255	NA	0.2357
501.5	12	14	375	375	497	0	0	8	404	531 +/- 252	NA	0.2357
501.5	13	14	375	375	494	0	0	8	404	518 +/- 251	NA	0.2357
501.5	14	14	375	375	506	0	0	8	404	570 +/- 253	NA	0.2357
501.5	15	14	375	375	496	0	0	8	404	527 +/- 252	NA	0.2357
501.5	16	14	375	375	501	0	0	8	404	548 +/- 252	NA	0.2357
501.5	17	14	375	375	474	0	0	8	404	431 +/- 249	NA	0.2357
501.5	18	14	375	375	484	0	0	8	404	474 +/- 250	NA	0.2357
501.5	19	14	375	375	509	0	0	8	404	583 +/- 254	NA	0.2357
501.5	20	14	375	375	486	0	0	8	404	483 +/- 250	NA	0.2357

## CINTICHEM DECOMMISSIONING PLAN

06/26/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

BLDG 4 SIDEWALKS

AREA 501.5 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 05/21/97

TECHNICIANS: PG MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.5 2:ROCK 6:SOIL

MEDIA TYPE: CONCRETE 3:WOOD 7:ASPHALT

# of POINTS: 20 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR INDO GRID 45 PASS 5000

AVG - SURVEY UNIT 10 PASS 5000

STD X 14

MU SUB ALPHA 15 PASS 5000

MAX HOT SPOT NONE PASS 15000

## WEIGHTED

ID #	GRID	COORDINATES	INST.	ALPHA		SCAN	TOTAL		MDA	AVG.		MAX	
				BKG	INST. COUNTS/		MAX	CONT.		ALPHA	PER		
			ID #	CPM	MINUTES		CM^2	CODE	DPM/	100 CM^2 TEST	100 CM^2 TEST	CPM/DPM	
	501.5	1	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	2	14	2	5	0	0	8	59	19 +/-	33	NA	0.1564
	501.5	3	14	2	4	0	0	8	59	13 +/-	31	NA	0.1564
	501.5	4	14	2	0	0	0	8	59	-13 +/-	18	NA	0.1564
	501.5	5	14	2	4	0	0	8	59	13 +/-	31	NA	0.1564
	501.5	6	14	2	4	0	0	8	59	13 +/-	31	NA	0.1564
	501.5	7	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	8	14	2	0	0	0	8	59	-13 +/-	18	NA	0.1564
	501.5	9	14	2	1	0	0	8	59	-6 +/-	22	NA	0.1564
	501.5	10	14	2	4	0	0	8	59	13 +/-	31	NA	0.1564
	501.5	11	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	12	14	2	6	0	0	8	59	26 +/-	35	NA	0.1564
	501.5	13	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	14	14	2	1	0	0	8	59	-6 +/-	22	NA	0.1564
	501.5	15	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	16	14	2	5	0	0	8	59	19 +/-	33	NA	0.1564
	501.5	17	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564
	501.5	18	14	2	6	0	0	8	59	26 +/-	35	NA	0.1564
	501.5	19	14	2	9	0	0	8	59	45 +/-	42	NA	0.1564
	501.5	20	14	2	3	0	0	8	59	6 +/-	28	NA	0.1564

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.6 survey unit was surveyed on an affected area basis and has a surface area of 1900 m<sup>2</sup>. 67 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 67 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 501.6 survey unit are provided in 3 attached tables as follows:

Table 501.6-1 Roadway Behind Bldg. 4 Parking Lot  
gamma exposure rate data

Table 501.6-2 Roadway Behind Bldg. 4 Parking Lot  
direct beta/gamma surface contamination data

Table 501.6-3 Roadway Behind Bldg. 4 Parking Lot  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.6

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	431	45
Number of Meas:	67	67	67
Survey Unit Mean:	3.6	564	18
True Mean; U alpha 95% C.L.:	4.0	599	22
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	7	1008	58
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural radioactive material content

MAG-27-97

## CINTICHEM DECOMMISSIONING PLAN

11/26/96

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

ROADWAY BEHIND BLDG 4 PARKING LOT

AREA 501.6 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 11/15/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.6 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# of POINTS: 67 4:METAL 8:OTHER(SPECIFY):  
NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX: 7.00 PASS 10

AVG: 3.61 PASS 5

STD X: 1.75

MU SUB ALPHA: 3.97 PASS 5

ID #	GRID POINT	INST.	ID #	MATER-			
				BKG	READING	CODE	UREM/HR
	S	W		UREM/HR	UREM/HR		
501.6	137.5	112.5	A	6	9	8	3
501.6	137.5	117.5	A	6	8	8	2
501.6	140	115	A	6	-	8	3
501.6	142.5	112.5	A	6	-	8	2
501.6	142.5	117.5	A	6	9	8	3
501.6	147.5	112.5	A	6	9	8	3
501.6	147.5	117.5	A	6	7	8	1
501.6	150	115	A	6	10	8	4
501.6	152.5	115	A	6	9	8	3
501.6	152.5	117.5	A	6	9	8	3
501.6	157.5	117.5	A	6	7	8	1
501.6	157.5	122.5	A	6	9	8	3
501.6	160	125	A	6	8	8	2
501.6	162.5	122.5	A	6	11	8	5
501.6	167.5	117.5	A	6	10	8	4
501.6	167.5	127.5	A	6	9	8	3
501.6	170	125	A	6	7	8	1
501.6	172.5	122.5	A	6	11	8	5
501.6	172.5	127.5	A	6	10	8	4
501.6	177.5	122.5	A	6	12	8	6
501.6	177.5	127.5	A	6	13	8	7
501.6	180	125	A	6	9	8	3
501.6	182.5	125	A	6	12	8	6
501.6	182.5	127.5	A	6	13	8	7
501.6	187.5	127.5	A	6	12	8	6
501.6	190	125	A	6	13	8	7
501.6	192.5	127.5	A	6	11	8	5
501.6	192.5	132.5	A	6	9	8	3
501.6	197.5	127.5	A	6	10	8	4
501.6	197.5	132.5	A	6	9	8	3

TABLE 501.6-1

501.6	200	135	A	6	11	8	5
501.6	202.5	127.5	A	6	11	8	5
501.6	202.5	132.5	A	6	10	8	4
501.6	207.5	132.5	A	6	12	8	6
501.6	207.5	135	A	6	11	8	5
501.6	210	135	A	6	11	8	5
501.6	212.5	132.5	A	6	12	8	6
501.6	212.5	135	A	6	13	8	7
501.6	217.5	132.5	A	6	9	8	3
501.6	220	135	A	6	10	8	4
501.6	222.5	132.5	A	6	12	8	6
501.6	222.5	137.5	A	6	9	8	3
501.6	227.5	132.5	A	6	9	8	3
501.6	227.5	137.5	A	6	8	8	2
501.6	230	135	A	6	8	8	2
501.6	232.5	132.5	A	6	9	8	3
501.6	232.5	137.5	A	6	8	8	2
501.6	237.5	137.5	A	6	8	8	2
501.6	240	135	A	6	9	8	3
501.6	242.5	137.5	A	6	8	8	2
501.6	247.5	132.5	A	6	9	8	3
501.6	247.5	137.5	A	6	8	8	2
501.6	250	135	A	6	10	8	4
501.6	252.5	132.5	A	6	8	8	2
501.6	252.5	137.5	A	6	7	8	1
501.6	257.5	132.5	A	6	9	8	3
501.6	257.5	137.5	A	6	8	8	2
501.6	260	135	A	6	7	8	1
501.6	262.5	132.5	A	6	9	8	3
501.6	265	130	A	6	10	8	4
501.6	265	132.5	A	6	12	8	6
501.6	265	125	A	6	12	8	6
501.6	265	127.5	A	6	9	8	3
501.6	267.5	132.5	A	6	13	8	7
501.6	267.5	125	A	6	7	8	1
501.6	267.5	127.5	A	6	7	8	1
501.6	270	122.5	A	6	9	8	3

## CINTICHEM DECOMMISSIONING PLAN

06/24/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

ROADWAY BEHIND BLDG 4 PARKING LOT

AREA 501.6 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 11/15/96

TECHNICIANS: MANY MATERIAL CODE

AREA: 501.0 1:CONCRETE 5:PLASTIC

UNIT: 501.6 2:ROCK 6:SOIL

MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT

# of POINTS: 67 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 1008 PASS 1273

AVG - SURVEY UNIT 564 PASS 1273

STD X 174

MU SUB ALPHA 599 PASS 1273

MAX HOT SPOT NONE PASS 3818

ID #	GRID	COORDINATES	LOCATION	INST.	BETA	BETA	SCAN	TOTAL	WEIGHTED			
					INST.	FIXED	MAX	CONT.	MATER-	BETA	AVG.	MAX
					ID #	BKG	AREA COUNTS/	BETA	AREA	IAL	MDA	FIXED
						CPM	MINUTES		CM^2	CODE	DPM/	DPM/
								100	CM^2	100	CM^2 TEST	100 CM^2 TEST
	S		W									
501.6	137.5	112.5	10	477	561	0	0	8	431	347 +/- 261	NA	0.248
501.6	137.5	117.5	10	477	629	0	0	8	431	629 +/- 270	NA	0.248
501.6	140	115	10	477	577	0	0	8	431	414 +/- 263	NA	0.248
501.6	142.5	112.5	10	477	624	0	0	8	431	608 +/- 269	NA	0.248
501.6	142.5	117.5	10	477	602	0	0	8	431	517 +/- 266	NA	0.248
501.6	147.5	112.5	5	368	525	0	0	8	368	628 +/- 234	NA	0.2565
501.6	147.5	117.5	5	368	567	0	0	8	368	796 +/- 240	NA	0.2565
501.6	150	115	5	368	547	0	0	8	368	716 +/- 237	NA	0.2565
501.6	152.5	115	5	463	600	0	0	8	403	537 +/- 250	NA	0.2617
501.6	152.5	117.5	5	368	534	0	0	8	368	664 +/- 235	NA	0.2565
501.6	157.5	117.5	5	368	554	0	0	8	368	744 +/- 238	NA	0.2565
501.6	157.5	122.5	10	477	617	0	0	8	431	579 +/- 268	NA	0.248
501.6	160	125	10	477	594	0	0	8	431	484 +/- 265	NA	0.248
501.6	162.5	122.5	5	463	591	0	0	8	403	502 +/- 249	NA	0.2617
501.6	167.5	117.5	5	368	530	0	0	8	368	648 +/- 235	NA	0.2565
501.6	167.5	127.5	5	368	600	0	0	8	368	928 +/- 244	NA	0.2565
501.6	170	125	5	368	555	0	0	8	368	748 +/- 238	NA	0.2565
501.6	172.5	122.5	5	368	612	0	0	8	368	976 +/- 245	NA	0.2565
501.6	172.5	127.5	5	368	620	0	0	8	368	1008 +/- 246	NA	0.2565
501.6	177.5	122.5	10	477	628	0	0	8	431	624 +/- 269	NA	0.248
501.6	177.5	127.5	10	477	603	0	0	8	431	521 +/- 266	NA	0.248
501.6	180	125	10	477	669	0	0	8	431	794 +/- 274	NA	0.248
501.6	182.5	125	10	477	570	0	0	8	431	385 +/- 262	NA	0.248
501.6	182.5	127.5	10	477	617	0	0	8	431	579 +/- 268	NA	0.248
501.6	187.5	127.5	10	477	629	0	0	8	431	629 +/- 270	NA	0.248
501.6	190	125	10	477	640	0	0	8	431	674 +/- 271	NA	0.248
501.6	192.5	127.5	10	477	646	0	0	8	431	699 +/- 272	NA	0.248
501.6	192.5	132.5	10	477	653	0	0	8	431	728 +/- 272	NA	0.248
501.6	197.5	127.5	10	477	665	0	0	8	431	778 +/- 274	NA	0.248
501.6	197.5	132.5	10	477	609	0	0	8	431	546 +/- 267	NA	0.248

TABLE 501.6-2

501.6	200	135	10	477	638	0	0	8	431	666 +/- 271	NA	0.248
501.6	202.5	127.5	10	477	584	0	0	8	431	443 +/- 264	NA	0.248
501.6	202.5	132.5	5	463	619	0	0	8	403	611 +/- 253	NA	0.2617
501.6	207.5	132.5	10	477	614	0	0	8	431	567 +/- 268	NA	0.248
501.6	207.5	135	10	477	485	0	0	8	431	33 +/- 251	NA	0.248
501.6	210	135	10	477	617	0	0	8	431	579 +/- 268	NA	0.248
501.6	212.5	132.5	10	477	632	0	0	8	431	641 +/- 270	NA	0.248
501.6	212.5	135	10	477	600	0	0	8	431	509 +/- 266	NA	0.248
501.6	217.5	132.5	10	477	652	0	0	8	431	724 +/- 272	NA	0.248
501.6	220	135	10	477	613	0	0	8	431	562 +/- 268	NA	0.248
501.6	222.5	132.5	10	477	587	0	0	8	431	455 +/- 264	NA	0.248
501.6	222.5	137.5	10	477	555	0	0	8	431	323 +/- 260	NA	0.248
501.6	227.5	132.5	10	477	645	0	0	8	431	695 +/- 272	NA	0.248
501.6	227.5	137.5	10	477	569	0	0	8	431	380 +/- 262	NA	0.248
501.6	230	135	10	477	609	0	0	8	431	546 +/- 267	NA	0.248
501.6	232.5	132.5	10	477	648	0	0	8	431	707 +/- 272	NA	0.248
501.6	232.5	137.5	10	477	582	0	0	8	431	434 +/- 264	NA	0.248
501.6	237.5	137.5	10	477	626	0	0	8	431	616 +/- 269	NA	0.248
501.6	240	135	10	477	593	0	0	8	431	480 +/- 265	NA	0.248
501.6	242.5	137.5	10	477	619	0	0	8	431	587 +/- 268	NA	0.248
501.6	247.5	132.5	10	477	556	0	0	8	431	327 +/- 261	NA	0.248
501.6	247.5	137.5	10	477	564	0	0	8	431	360 +/- 262	NA	0.248
501.6	250	135	10	477	597	0	0	8	431	496 +/- 266	NA	0.248
501.6	252.5	132.5	10	477	588	0	0	8	431	459 +/- 265	NA	0.248
501.6	252.5	137.5	10	477	591	0	0	8	431	471 +/- 265	NA	0.248
501.6	257.5	132.5	5	463	588	0	0	8	403	490 +/- 249	NA	0.2617
501.6	257.5	137.5	5	463	536	0	0	8	403	286 +/- 243	NA	0.2617
501.6	260	135	5	463	533	0	0	8	403	274 +/- 242	NA	0.2617
501.6	262.5	132.5	5	463	594	0	0	8	403	513 +/- 250	NA	0.2617
501.6	265	130	5	463	529	0	0	8	403	259 +/- 242	NA	0.2617
501.6	265	132.5	5	463	639	0	0	8	403	690 +/- 255	NA	0.2617
501.6	265	125	5	463	520	0	0	8	403	223 +/- 241	NA	0.2617
501.6	265	127.5	5	463	614	0	0	8	403	592 +/- 252	NA	0.2617
501.6	267.5	132.5	5	463	616	0	0	8	403	600 +/- 252	NA	0.2617
501.6	267.5	125	5	463	628	0	0	8	403	647 +/- 254	NA	0.2617
501.6	267.5	127.5	5	463	582	0	0	8	403	466 +/- 248	NA	0.2617
501.6	270	122.5	5	463	627	0	0	8	403	643 +/- 254	NA	0.2617

1A66-27-9+

## CINTICHEM DECOMMISSIONING PLAN

06/24/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

ROADWAY BEHIND BLDG 4 PARKING LOT

AREA 501.6 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 11/15/96

TECHNICIANS:	MANY	MATERIAL CODE
AREA:	501.0	1=CONCRETE
UNIT:	501.6	2=ROCK
MEDIA TYPE:	ASPHALT	3=WOOD
# OF POINTS:	67	4=METAL
CT IN MINUTES:	1	8=OTHER(SPECIFY): NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID	58 PASS	5000
Avg - SURVEY UNIT	18 PASS	5000
STD X	15	
MU SUB ALPHA	22 PASS	5000
MAX HOT SPOT NONE	PASS	15000

ID #	GRID ID	LOCATION	INST. ID #	ALPHA			SCAN AREA COUNTS/	TOTAL	WEIGHTED			
				INST.	BKG	ALPHA			AVG.			
				CPM	MINUTES	CPM	AREA	IAL	MDA	ALPHA	MAX	
S	W							100 CM^2	100 CM^2	100 CM^2 TEST	INST EFF.	
501.6	137.5	112.5	10	0	4	0	0	8	20	29 +/- 29	NA	0.1368
501.6	137.5	117.5	10	0	3	0	0	8	20	22 +/- 25	NA	0.1368
501.6	140	115	10	0	3	0	0	8	20	22 +/- 25	NA	0.1368
501.6	142.5	112.5	10	0	2	0	0	8	20	15 +/- 20	NA	0.1368
501.6	142.5	117.5	10	0	4	0	0	8	20	29 +/- 29	NA	0.1368
501.6	147.5	112.5	5	1	4	0	0	8	45	18 +/- 27	NA	0.1642
501.6	147.5	117.5	5	1	4	0	0	8	45	18 +/- 27	NA	0.1642
501.6	150	115	5	1	6	0	0	8	45	30 +/- 32	NA	0.1642
501.6	152.5	115	5	1	2	0	0	8	45	6 +/- 21	NA	0.1642
501.6	152.5	117.5	5	1	5	0	0	8	45	24 +/- 29	NA	0.1642
501.6	157.5	117.5	5	1	4	0	0	8	45	18 +/- 27	NA	0.1642
501.6	157.5	122.5	10	0	5	0	0	8	20	37 +/- 32	NA	0.1368
501.6	160	125	10	0	2	0	0	8	20	15 +/- 20	NA	0.1368
501.6	162.5	122.5	5	0	2	0	0	8	17	12 +/- 17	NA	0.1642
501.6	167.5	117.5	5	1	2	0	0	8	45	6 +/- 21	NA	0.1642
501.6	167.5	127.5	5	1	4	0	0	8	45	18 +/- 27	NA	0.1642
501.6	170	125	5	1	1	0	0	8	45	0 +/- 17	NA	0.1642
501.6	172.5	122.5	5	1	3	0	0	8	45	12 +/- 24	NA	0.1642
501.6	172.5	127.5	5	1	6	0	0	8	45	30 +/- 32	NA	0.1642
501.6	177.5	122.5	10	0	7	0	0	8	20	51 +/- 38	NA	0.1368
501.6	177.5	127.5	10	0	6	0	0	8	20	44 +/- 35	NA	0.1368
501.6	180	125	10	0	4	0	0	8	20	29 +/- 29	NA	0.1368
501.6	182.5	125	10	0	4	0	0	8	20	29 +/- 29	NA	0.1368
501.6	182.5	127.5	10	0	1	0	0	8	20	7 +/- 14	NA	0.1368
501.6	187.5	127.5	10	0	2	0	0	8	20	15 +/- 20	NA	0.1368
501.6	190	125	10	0	8	0	0	8	20	58 +/- 41	NA	0.1368
501.6	192.5	127.5	10	0	3	0	0	8	20	22 +/- 25	NA	0.1368
501.6	192.5	132.5	10	0	3	0	0	8	20	22 +/- 25	NA	0.1368
501.6	197.5	127.5	10	0	5	0	0	8	20	37 +/- 32	NA	0.1368
501.6	197.5	132.5	10	0	6	0	0	8	20	44 +/- 35	NA	0.1368

TABLE 501.6-3

501.6	200	135	10	0	4	0	0	8	20	29 +/-	29	NA	0.1368
501.6	202.5	127.5	10	0	8	0	0	8	20	58 +/-	41	NA	0.1368
501.6	202.5	132.5	5	1	4	0	0	8	45	18 +/-	27	NA	0.1642
501.6	207.5	132.5	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	207.5	135	10	0	4	0	0	8	20	29 +/-	29	NA	0.1368
501.6	210	135	10	0	4	0	0	8	20	29 +/-	29	NA	0.1368
501.6	212.5	132.5	10	0	0	0	0	8	20	0 +/-	0	NA	0.1368
501.6	212.5	135	10	0	3	0	0	8	20	22 +/-	25	NA	0.1368
501.6	217.5	132.5	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	220	135	10	0	1	0	0	8	20	7 +/-	14	NA	0.1368
501.6	222.5	132.5	10	0	5	0	0	8	20	37 +/-	32	NA	0.1368
501.6	222.5	137.5	10	0	4	0	0	8	20	29 +/-	29	NA	0.1368
501.6	227.5	132.5	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	227.5	137.5	10	0	6	0	0	8	20	44 +/-	35	NA	0.1368
501.6	230	135	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	232.5	132.5	10	0	4	0	0	8	20	29 +/-	29	NA	0.1368
501.6	232.5	137.5	10	0	3	0	0	8	20	22 +/-	25	NA	0.1368
501.6	237.5	137.5	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	240	135	10	0	3	0	0	8	20	22 +/-	25	NA	0.1368
501.6	242.5	137.5	10	0	1	0	0	8	20	7 +/-	14	NA	0.1368
501.6	247.5	132.5	10	0	1	0	0	8	20	7 +/-	14	NA	0.1368
501.6	247.5	137.5	10	0	0	0	0	8	20	0 +/-	0	NA	0.1368
501.6	250	135	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	252.5	132.5	10	0	2	0	0	8	20	15 +/-	20	NA	0.1368
501.6	252.5	137.5	10	0	0	0	0	8	20	0 +/-	0	NA	0.1368
501.6	257.5	132.5	5	1	1	0	0	8	45	0 +/-	17	NA	0.1642
501.6	257.5	137.5	5	1	2	0	0	8	45	6 +/-	21	NA	0.1642
501.6	260	135	5	1	0	0	1	8	45	-6 +/-	12	NA	0.1642
501.6	262.5	132.5	5	1	1	0	0	8	45	0 +/-	17	NA	0.1642
501.6	265	130	5	1	0	0	0	8	45	-6 +/-	12	NA	0.1642
501.6	265	132.5	5	1	1	0	0	8	45	0 +/-	17	NA	0.1642
501.6	265	125	5	0	0	0	0	8	17	0 +/-	0	NA	0.1642
501.6	265	127.5	5	0	3	0	0	8	17	18 +/-	21	NA	0.1642
501.6	267.5	132.5	5	1	3	0	0	8	45	12 +/-	24	NA	0.1642
501.6	267.5	125	5	1	0	0	0	8	45	-6 +/-	12	NA	0.1642
501.6	267.5	127.5	5	1	1	0	0	8	45	0 +/-	17	NA	0.1642
501.6	270	122.5	5	1	2	0	0	8	45	6 +/-	21	NA	0.1642

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 501.7 survey unit was surveyed on an affected area basis and has a surface area of 2995 m<sup>2</sup>. 145 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 10m by 10m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 145 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 501.7 survey unit are provided in 3 attached tables as follows:

Table 501.7-1 Roadway From Boilerhouse to North Gate  
gamma exposure rate data

Table 501.7-2 Roadway From Boilerhouse to North Gate  
direct beta/gamma surface contamination data

Table 501.7-3 Roadway From Boilerhouse to North Gate  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 501.7

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	391	57
Number of Meas.:	145	145	145
Survey Unit Mean:	0.6	524	2
True Mean:U alpha 95% C.L.:	0.7	559	3
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	4	1082	40
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural  
radioactive material content

M66-497

DINTICHEM DECOMMISSIONING PLAN  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 ASPHALT: BOILER HOUSE TO NORTH GATE  
 AREA 501.7 FOR UR/HR  
 RADIATION TYPE: GAMMA SURVEY IN UREM/HR  
 COMPLETION  
 DATE: 04/13/97  
 TECHNICIANS: JB MATERIAL CODE  
 AREA: 501.0 1:CONCRETE 5:PLASTIC  
 UNIT: 501.7 2:ROCK 6:SOIL  
 MEDIA TYPE: ASPHALT 3:WOOD 7:ASPHALT  
 # of POINTS: 145 4:METAL 8:OTHER(SPECIFY):  
 NO MATERIAL BACKGROUND USED

MICRO REM  
 PER HOUR: LIMIT  
 MAX: 4.00 PASS 10  
 AVG: 0.57 PASS 5  
 STD X: 1.27  
 MU SUB ALPHA: 0.74 PASS 5

ID #	GRID POINT	INST.	MATER-				
			ID #	AREA BKG	AREA READING	IAL CODE	NET UREM/HR
	N	%					
501.7	67.5	42.5	A	6	6	8	0
501.7	65	45	A	6	8	8	2
501.7	77.5	42.5	A	6	6	8	0
501.7	75	45	A	6	7	8	1
501.7	72.5	42.5	A	6	7	8	1
501.7	87.5	42.5	A	6	7	8	1
501.7	85	45	A	6	6	8	0
501.7	82.5	42.5	A	6	8	8	2
501.7	97.5	42.5	A	6	8	8	2
501.7	95	45	A	6	6	8	0
501.7	92.5	42.5	A	6	8	8	2
501.7	47.5	37.5	A	6	9	8	3
501.7	47.5	32.5	A	6	7	8	1
501.7	57.5	37.5	A	6	5	8	-1
501.7	57.5	32.5	A	6	7	8	1
501.7	55	35	A	6	5	8	-1
501.7	52.5	37.5	A	6	7	8	1
501.7	52.5	32.5	A	6	7	8	1
501.7	67.5	37.5	A	6	3	8	-3
501.7	67.5	32.5	A	6	5	8	-1
501.7	65	35	A	6	5	8	-1
501.7	62.5	37.5	A	6	6	8	0
501.7	62.5	32.5	A	6	6	8	0
501.7	77.5	37.5	A	6	7	8	1
501.7	77.5	32.5	A	6	3	8	-2
501.7	75	35	A	6	8	8	2
501.7	72.5	37.5	A	6	6	8	0
501.7	72.5	32.5	A	6	7	8	1
501.7	87.5	37.5	A	6	7	8	1
501.7	87.5	32.5	A	6	8	8	2

TABLE 501.7-1

501.7	85	35	A	6	6	8	0
501.7	82.5	37.5	A	6	5	8	-1
501.7	82.5	32.5	A	6	7	8	-1
501.7	97.5	37.5	A	6	7	8	-1
501.7	97.5	32.5	A	6	7	8	-1
501.7	95	35	A	6	9	8	-2
501.7	92.5	37.5	A	6	7	8	-1
501.7	92.5	32.5	A	6	7	8	-1
501.7	197.5	32.5	A	6	7	8	-1
501.7	195	35	A	6	6	8	0
501.7	192.5	32.5	A	6	7	8	-1
501.7	47.5	27.5	A	6	4	8	-2
501.7	47.5	22.5	A	6	5	8	-1
501.7	57.5	27.5	A	6	5	8	-1
501.7	57.5	22.5	A	6	6	8	0
501.7	55	25	A	6	6	8	0
501.7	52.5	27.5	A	6	8	8	2
501.7	52.5	22.5	A	6	7	8	-1
501.7	67.5	27.5	A	6	6	8	0
501.7	67.5	22.5	A	6	5	8	-1
501.7	65	25	A	6	6	8	0
501.7	62.5	27.5	A	6	7	8	-1
501.7	62.5	22.5	A	6	5	8	-1
501.7	77.5	27.5	A	6	6	8	0
501.7	77.5	22.5	A	6	6	8	0
501.7	75	25	A	6	7	8	1
501.7	72.5	27.5	A	6	6	8	0
501.7	72.5	22.5	A	6	8	8	2
501.7	87.5	27.5	A	6	9	8	3
501.7	87.5	22.5	A	6	6	8	0
501.7	85	25	A	6	3	8	2
501.7	82.5	27.5	A	6	7	8	-1
501.7	82.5	22.5	A	6	7	8	-1
501.7	97.5	27.5	A	6	8	8	-2
501.7	97.5	22.5	A	6	4	8	-2
501.7	95	25	A	6	6	8	0
501.7	92.5	27.5	A	6	7	8	-1
501.7	92.5	22.5	A	6	4	8	-2
501.7	107.5	22.5	A	6	5	8	-1
501.7	102.5	22.5	A	6	6	8	0
501.7	117.5	22.5	A	6	8	8	-2
501.7	112.5	22.5	A	6	4	8	-2
501.7	127.5	22.5	A	6	7	8	-1
501.7	122.5	22.5	A	6	7	8	-1
501.7	137.5	27.5	A	6	8	8	-2
501.7	137.5	22.5	A	6	6	8	0
501.7	135	25	A	6	8	8	-2
501.7	132.5	22.5	A	6	7	8	-1
501.7	147.5	27.5	A	6	6	8	0
501.7	147.5	22.5	A	6	7	8	-1
501.7	145	25	A	6	7	8	-1
501.7	142.5	27.5	A	6	5	8	-1
501.7	142.5	22.5	A	6	7	8	-1
501.7	157.5	27.5	A	6	7	8	-1
501.7	157.5	22.5	A	6	6	8	0
501.7	155	25	A	6	8	8	-2
501.7	152.5	27.5	A	6	6	8	0
501.7	152.5	22.5	A	6	8	8	-2
501.7	167.5	22.5	A	6	8	8	-2
501.7	165	25	A	6	5	8	-1

TABLE 501.7-1

501.7	162.5	22.5	A	6	6	8	0
501.7	177.5	27.5	A	6	6	8	0
501.7	177.5	22.5	A	6	7	8	1
501.7	75	25	A	6	7	8	1
501.7	172.5	22.5	A	6	6	8	0
501.7	187.5	27.5	A	6	6	8	0
501.7	185	25	A	6	5	8	-1
501.7	182.5	27.5	A	6	8	8	-2
501.7	37.5	17.5	A	6	7	8	1
501.7	35	15	A	6	5	8	-1
501.7	32.5	17.5	A	6	5	8	-1
501.7	47.5	17.5	A	6	7	8	1
501.7	47.5	12.5	A	6	7	8	1
501.7	45	15	A	6	7	8	1
501.7	42.5	17.5	A	6	8	8	-2
501.7	57.5	17.5	A	6	6	8	0
501.7	55	15	A	6	6	8	0
501.7	52.5	17.5	A	6	8	8	-2
501.7	52.5	12.5	A	6	4	8	-2
501.7	67.5	17.5	A	6	5	8	-1
501.7	65	15	A	6	5	8	-1
501.7	62.5	17.5	A	6	8	8	-2
501.7	62.5	12.5	A	6	8	8	-2
501.7	77.5	17.5	A	6	8	8	-2
501.7	75	15	A	6	6	8	0
501.7	72.5	17.5	A	6	5	8	-1
501.7	87.5	17.5	A	6	6	8	0
501.7	85	15	A	6	7	8	1
501.7	82.5	17.5	A	6	8	8	-2
501.7	97.5	17.5	A	6	9	8	-3
501.7	95	15	A	6	7	8	1
501.7	92.5	17.5	A	6	6	8	0
501.7	107.5	17.5	A	6	7	8	1
501.7	105	15	A	6	8	8	-2
501.7	102.5	17.5	A	6	6	8	0
501.7	117.5	17.5	A	6	5	8	-1
501.7	117.5	12.5	A	6	6	8	0
501.7	115	15	A	6	7	8	1
501.7	112.5	17.5	A	6	5	8	-1
501.7	112.5	12.5	A	6	7	8	1
501.7	127.5	17.5	A	6	7	8	1
501.7	127.5	12.5	A	6	5	8	-1
501.7	125	15	A	6	5	8	-1
501.7	122.5	17.5	A	6	6	8	0
501.7	122.5	12.5	A	6	5	8	-1
501.7	137.5	17.5	A	6	6	8	0
501.7	137.5	12.5	A	6	8	8	-2
501.7	135	15	A	6	10	8	4
501.7	132.5	17.5	A	6	8	8	-2
501.7	132.5	12.5	A	6	9	8	-3
501.7	147.5	17.5	A	6	9	8	-3
501.7	147.5	12.5	A	6	5	8	-1
501.7	145	15	A	6	6	8	0
501.7	142.5	17.5	A	6	8	8	-2
501.7	142.5	12.5	A	6	5	8	-1

QA OK

6/17/97

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AffECTED AREA DESCRIPTION:

ASPHALT: BOILER HOUSE TO NORTH GATE

AREA 501.7 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 04/13/97

TECHNICIANS: JB MATERIAL CODE

AREA: 501.0 1=CONCRETE 5=PLASTIC

UNIT: 501.7 2=ROCK 6=SOIL

MEDIA TYPE: ASPHALT 3=WOOD 7=ASPHALT

# OF POINTS: 145 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 1082 PASS 1273

AVG - SURVEY UNIT 524 PASS 1273

STD X 259

MU SUB ALPHA 559 PASS 1273

MAX HOT SPOT NONE PASS 3818

## WEIGHTED

ID #	GRID COORDINATES	GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	CONT. AREA	MATER-	BETA	AVG.	
				INST. AREA COUNTS/ BKG	FIXED 1 CPM	MAX COUNTS	CM^2					
	N	W										
501.7	67.5	42.5	3	392	342	0	0	8	379	599 +/- 239	NA	0.2567
501.7	65	45	3	392	637	0	0	8	379	979 +/- 251	NA	0.2567
501.7	77.5	42.5	3	392	543	0	0	8	379	603 +/- 239	NA	0.2567
501.7	75	45	3	392	573	0	0	8	379	723 +/- 243	NA	0.2567
501.7	72.5	42.5	3	392	601	0	0	8	379	835 +/- 247	NA	0.2567
501.7	87.5	42.5	3	392	576	0	0	8	379	735 +/- 244	NA	0.2567
501.7	85	45	3	392	555	0	0	8	379	651 +/- 241	NA	0.2567
501.7	82.5	42.5	3	392	581	0	0	8	379	755 +/- 244	NA	0.2567
501.7	97.5	42.5	3	392	642	0	0	8	379	999 +/- 252	NA	0.2567
501.7	95	45	3	392	651	0	0	8	379	1035 +/- 253	NA	0.2567
501.7	92.5	42.5	3	392	618	0	0	8	379	903 +/- 249	NA	0.2567
501.7	47.5	37.5	3	392	614	0	0	8	379	887 +/- 248	NA	0.2567
501.7	47.5	32.5	15	606	655	0	0	8	481	201 +/- 286	NA	0.2497
501.7	57.5	37.5	16	447	515	0	0	8	391	263 +/- 235	NA	0.2653
501.7	57.5	32.5	16	447	682	0	0	8	391	909 +/- 255	NA	0.2653
501.7	55	35	16	447	546	0	0	8	391	383 +/- 239	NA	0.2653
501.7	52.5	37.5	16	447	518	0	0	8	391	274 +/- 235	NA	0.2653
501.7	52.5	32.5	16	447	509	0	0	8	391	240 +/- 234	NA	0.2653
501.7	67.5	37.5	16	447	636	0	0	8	391	731 +/- 249	NA	0.2653
501.7	67.5	32.5	16	447	683	0	0	8	391	912 +/- 255	NA	0.2653
501.7	65	35	16	447	534	0	0	8	391	375 +/- 237	NA	0.2653
501.7	62.5	37.5	16	447	621	0	0	8	391	673 +/- 248	NA	0.2653
501.7	62.5	32.5	16	447	669	0	0	8	391	858 +/- 253	NA	0.2653
501.7	77.5	37.5	16	447	678	0	0	8	391	893 +/- 254	NA	0.2653
501.7	77.5	32.5	16	447	628	0	0	8	391	700 +/- 248	NA	0.2653
501.7	75	35	16	447	643	0	0	8	391	758 +/- 250	NA	0.2653
501.7	72.5	37.5	16	447	609	0	0	8	391	626 +/- 246	NA	0.2653
501.7	72.5	32.5	16	447	656	0	0	8	391	808 +/- 252	NA	0.2653
501.7	87.5	37.5	16	447	631	0	0	8	391	711 +/- 249	NA	0.2653
501.7	87.5	32.5	16	447	655	0	0	8	391	804 +/- 252	NA	0.2653

TABLE 501.7-2

501.7	85	35	16	447	563	0	0	8	391	448 +/- 241	NA	0.2653
501.7	82.5	37.5	16	447	659	0	0	8	391	820 +/- 252	NA	0.2653
501.7	82.5	32.5	16	447	713	0	0	8	391	1028 +/- 258	NA	0.2653
501.7	97.5	37.5	16	447	596	0	0	8	391	576 +/- 245	NA	0.2653
501.7	97.5	32.5	16	447	710	0	0	8	391	1017 +/- 258	NA	0.2653
501.7	95	35	16	447	580	0	0	8	391	514 +/- 243	NA	0.2653
501.7	92.5	37.5	16	447	664	0	0	8	391	839 +/- 253	NA	0.2653
501.7	92.5	32.5	16	447	688	0	0	8	391	932 +/- 255	NA	0.2653
501.7	197.5	32.5	16	447	513	0	0	8	391	255 +/- 235	NA	0.2653
501.7	195	35	16	447	490	0	0	8	391	166 +/- 232	NA	0.2653
501.7	192.5	32.5	16	447	473	0	0	8	391	101 +/- 230	NA	0.2653
501.7	47.5	27.5	16	447	540	0	0	8	391	360 +/- 238	NA	0.2653
501.7	47.5	22.5	16	447	693	0	0	8	391	951 +/- 256	NA	0.2653
501.7	57.5	27.5	16	447	625	0	0	8	391	688 +/- 248	NA	0.2653
501.7	57.5	22.5	16	447	641	0	0	8	391	750 +/- 250	NA	0.2653
501.7	55	25	16	447	578	0	0	8	391	506 +/- 243	NA	0.2653
501.7	52.5	27.5	16	447	552	0	0	8	391	406 +/- 239	NA	0.2653
501.7	52.5	22.5	16	447	549	0	0	8	391	394 +/- 239	NA	0.2653
501.7	67.5	27.5	16	447	599	0	0	8	391	588 +/- 245	NA	0.2653
501.7	67.5	22.5	16	447	603	0	0	8	391	603 +/- 246	NA	0.2653
501.7	65	25	16	447	590	0	0	8	391	553 +/- 244	NA	0.2653
501.7	62.5	27.5	16	447	615	0	0	8	391	649 +/- 247	NA	0.2653
501.7	62.5	22.5	16	447	625	0	0	8	391	688 +/- 248	NA	0.2653
501.7	77.5	27.5	16	447	564	0	0	8	391	452 +/- 241	NA	0.2653
501.7	77.5	22.5	16	447	552	0	0	8	391	406 +/- 239	NA	0.2653
501.7	75	25	16	447	546	0	0	8	391	383 +/- 239	NA	0.2653
501.7	72.5	27.5	16	447	618	0	0	8	391	661 +/- 247	NA	0.2653
501.7	72.5	22.5	16	447	611	0	0	8	391	634 +/- 246	NA	0.2653
501.7	87.5	27.5	16	447	647	0	0	8	391	773 +/- 251	NA	0.2653
501.7	87.5	22.5	16	447	545	0	0	8	391	379 +/- 239	NA	0.2653
501.7	85	25	16	447	609	0	0	8	391	626 +/- 246	NA	0.2653
501.7	82.5	27.5	16	447	589	0	0	8	391	549 +/- 244	NA	0.2653
501.7	82.5	22.5	16	447	608	0	0	8	391	622 +/- 246	NA	0.2653
501.7	97.5	27.5	16	447	676	0	0	8	391	885 +/- 254	NA	0.2653
501.7	97.5	22.5	16	447	623	0	0	8	391	680 +/- 248	NA	0.2653
501.7	95	25	16	447	496	0	0	8	391	189 +/- 233	NA	0.2653
501.7	92.5	27.5	16	447	553	0	0	8	391	410 +/- 240	NA	0.2653
501.7	92.5	22.5	16	447	523	0	0	8	391	294 +/- 236	NA	0.2653
501.7	107.5	22.5	16	447	664	0	0	8	391	839 +/- 253	NA	0.2653
501.7	102.5	22.5	16	447	590	0	0	8	391	553 +/- 244	NA	0.2653
501.7	117.5	22.5	16	447	602	0	0	8	391	599 +/- 245	NA	0.2653
501.7	112.5	22.5	16	447	564	0	0	8	391	452 +/- 241	NA	0.2653
501.7	127.5	22.5	16	447	564	0	0	8	391	452 +/- 241	NA	0.2653
501.7	122.5	22.5	16	447	617	0	0	8	391	657 +/- 247	NA	0.2653
501.7	137.5	27.5	16	447	417	0	0	8	391	-116 +/- 223	NA	0.2653
501.7	137.5	22.5	16	447	611	0	0	8	391	634 +/- 246	NA	0.2653
501.7	135	25	16	447	638	0	0	8	391	738 +/- 250	NA	0.2653
501.7	132.5	22.5	16	447	686	0	0	8	391	924 +/- 255	NA	0.2653
501.7	147.5	27.5	16	447	511	0	0	8	391	247 +/- 235	NA	0.2653
501.7	147.5	22.5	16	447	588	0	0	8	391	545 +/- 244	NA	0.2653
501.7	145	25	16	447	505	0	0	8	391	224 +/- 234	NA	0.2653
501.7	142.5	27.5	16	447	445	0	0	8	391	-8 +/- 226	NA	0.2653
501.7	142.5	22.5	16	447	606	0	0	8	391	615 +/- 246	NA	0.2653
501.7	157.5	27.5	16	447	619	0	0	8	391	665 +/- 247	NA	0.2653
501.7	157.5	22.5	16	447	532	0	0	8	391	329 +/- 237	NA	0.2653
501.7	155	25	16	447	603	0	0	8	391	603 +/- 246	NA	0.2653
501.7	152.5	27.5	16	447	505	0	0	8	391	224 +/- 234	NA	0.2653
501.7	152.5	22.5	16	447	617	0	0	8	391	657 +/- 247	NA	0.2653
501.7	167.5	22.5	16	447	528	0	0	8	391	313 +/- 237	NA	0.2653
501.7	165	25	16	447	557	0	0	8	391	425 +/- 240	NA	0.2653

TABLE S01.7-2

501.7	162.5	22.5	16	447	558	0	0	8	391	429 +/- 240	NA	0.2653
501.7	177.5	27.5	16	447	455	0	0	8	391	31 +/- 228	NA	0.2653
501.7	177.5	22.5	16	447	656	0	0	8	391	808 +/- 252	NA	0.2653
501.7	75	25	16	447	466	0	0	8	391	73 +/- 229	NA	0.2653
501.7	172.5	22.5	16	447	515	0	0	8	391	263 +/- 235	NA	0.2653
501.7	187.5	27.5	16	447	534	0	0	8	391	336 +/- 237	NA	0.2653
501.7	185	25	16	447	421	0	0	8	391	-101 +/- 223	NA	0.2653
501.7	182.5	27.5	16	447	487	0	0	8	391	155 +/- 232	NA	0.2653
501.7	37.5	17.5	16	447	526	0	0	8	391	305 +/- 236	NA	0.2653
501.7	35	15	16	447	570	0	0	8	391	476 +/- 242	NA	0.2653
501.7	32.5	17.5	16	447	583	0	0	8	391	526 +/- 243	NA	0.2653
501.7	47.5	17.5	16	447	577	0	0	8	391	503 +/- 242	NA	0.2653
501.7	47.5	12.5	16	447	554	0	0	8	391	414 +/- 240	NA	0.2653
501.7	45	15	16	447	565	0	0	8	391	456 +/- 241	NA	0.2653
501.7	42.5	17.5	16	447	647	0	0	8	391	773 +/- 251	NA	0.2653
501.7	57.5	17.5	16	447	553	0	0	8	391	410 +/- 240	NA	0.2653
501.7	55	15	16	447	536	0	0	8	391	344 +/- 238	NA	0.2653
501.7	52.5	17.5	16	447	542	0	0	8	391	367 +/- 238	NA	0.2653
501.7	52.5	12.5	16	447	581	0	0	8	391	518 +/- 243	NA	0.2653
501.7	67.5	17.5	16	447	552	0	0	8	391	406 +/- 239	NA	0.2653
501.7	65	15	16	447	598	0	0	8	391	584 +/- 245	NA	0.2653
501.7	62.5	17.5	16	447	579	0	0	8	391	510 +/- 243	NA	0.2653
501.7	62.5	12.5	16	447	626	0	0	8	391	692 +/- 248	NA	0.2653
501.7	77.5	17.5	16	447	532	0	0	8	391	329 +/- 237	NA	0.2653
501.7	75	15	16	447	585	0	0	8	391	534 +/- 243	NA	0.2653
501.7	72.5	17.5	16	447	580	0	0	8	391	514 +/- 243	NA	0.2653
501.7	87.5	17.5	16	447	564	0	0	8	391	452 +/- 241	NA	0.2653
501.7	85	15	16	447	564	0	0	8	391	452 +/- 241	NA	0.2653
501.7	82.5	17.5	16	447	585	0	0	8	391	534 +/- 243	NA	0.2653
501.7	97.5	17.5	16	447	587	0	0	8	391	541 +/- 244	NA	0.2653
501.7	95	15	16	447	727	0	0	8	391	1082 +/- 260	NA	0.2653
501.7	92.5	17.5	16	447	560	0	0	8	391	437 +/- 240	NA	0.2653
501.7	107.5	17.5	16	447	572	0	0	8	391	483 +/- 242	NA	0.2653
501.7	105	15	16	447	547	0	0	8	391	387 +/- 239	NA	0.2653
501.7	102.5	17.5	16	447	547	0	0	8	391	387 +/- 239	NA	0.2653
501.7	117.5	17.5	16	447	597	0	0	8	391	580 +/- 245	NA	0.2653
501.7	117.5	12.5	16	447	597	0	0	8	391	580 +/- 245	NA	0.2653
501.7	115	15	16	447	515	0	0	8	391	263 +/- 235	NA	0.2653
501.7	112.5	17.5	16	447	643	0	0	8	391	758 +/- 250	NA	0.2653
501.7	112.5	12.5	16	447	515	0	0	8	391	263 +/- 235	NA	0.2653
501.7	127.5	17.5	16	447	631	0	0	8	391	711 +/- 249	NA	0.2653
501.7	127.5	12.5	16	447	453	0	0	8	391	23 +/- 227	NA	0.2653
501.7	125	15	16	447	506	0	0	8	391	228 +/- 234	NA	0.2653
501.7	122.5	17.5	16	447	624	0	0	8	391	684 +/- 248	NA	0.2653
501.7	122.5	12.5	16	447	491	0	0	8	391	170 +/- 232	NA	0.2653
501.7	137.5	17.5	16	447	592	0	0	8	391	561 +/- 244	NA	0.2653
501.7	137.5	12.5	16	447	472	0	0	8	391	97 +/- 230	NA	0.2653
501.7	135	15	16	447	521	0	0	8	391	286 +/- 236	NA	0.2653
501.7	132.5	17.5	16	447	638	0	0	8	391	738 +/- 250	NA	0.2653
501.7	132.5	12.5	16	447	462	0	0	8	391	58 +/- 228	NA	0.2653
501.7	147.5	17.5	16	447	576	0	0	8	391	499 +/- 242	NA	0.2653
501.7	147.5	12.5	16	447	445	0	0	8	391	-8 +/- 226	NA	0.2653
501.7	145	15	16	447	481	0	0	8	391	131 +/- 231	NA	0.2653
501.7	142.5	17.5	16	447	599	0	0	8	391	588 +/- 245	NA	0.2653
501.7	142.5	12.5	16	447	488	0	0	8	391	159 +/- 232	NA	0.2653

TABLE 501.7-C

CINTICHEM DECOMMISSIONING PLAN  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 ASPHALT: BOILER HOUSE TO NORTH GATE  
 AREA 501.7 FOR ALPHA

05/27/97

QA OK  
 PShel  
 6/17/97

RADIATION TYPE: 2

## COMPLETION

DATE:	04/13/97	MATERIAL CODE
TECHNICIANS:	J8	
AREA:	501.0	
UNIT:	501.7	
MEDIA TYPE:	ASPHALT	
# OF POINTS:	145	1:CONCRETE
CT IN MINUTES:	1	2:ROCK
		3:WOOD
		4:METAL
		5:PLASTIC
		6:SOIL
		7:ASPHALT
		8:OTHER(SPECIFY): NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM. + FIXED:

LIMIT

MAX FOR IND GRID	40 PASS	5000
Avg - SURVEY UNIT	2 PASS	5000
STD X	9	
MU SUB ALPHA	3 PASS	5000
MAX HOT SPOT	NONE PASS	15000

ID #	GRID ID	LOCATION	COORDINATES	INST.	ALPHA		SCAN	TOTAL			WEIGHTED			
					INST.	AREA		ALPHA	AREA	IAL	MDA	AVG.	MAX	
								BKG	1 CPM	COUNTS	CM^2	CODE	DPM/	DPM/
											100 CM^2	100 CM^2 TEST	INST EFF	CPM/DPM
					N	W								
501.7	67.5	42.5	3	2	3	0		0	8	57	6 +/-	27	NA	0.1626
501.7	65	45	3	2	4	0		0	8	57	12 +/-	30	NA	0.1626
501.7	77.5	42.5	3	2	5	0		0	8	57	18 +/-	32	NA	0.1626
501.7	75	45	3	2	2	0		0	8	57	0 +/-	24	NA	0.1626
501.7	72.5	42.5	3	2	0	0		0	8	57	-12 +/-	17	NA	0.1626
501.7	87.5	42.5	3	2	3	0		0	8	57	6 +/-	27	NA	0.1626
501.7	85	45	3	2	2	0		0	8	57	0 +/-	24	NA	0.1626
501.7	82.5	42.5	3	2	2	0		0	8	57	0 +/-	24	NA	0.1626
501.7	97.5	42.5	3	2	7	0		0	8	57	31 +/-	36	NA	0.1626
501.7	95	45	3	2	4	0		0	8	57	12 +/-	30	NA	0.1626
501.7	92.5	42.5	3	2	1	0		0	8	57	-6 +/-	21	NA	0.1626
501.7	47.5	37.5	3	2	0	0		0	8	57	-12 +/-	17	NA	0.1626
501.7	47.5	32.5	3	2	3	0		0	8	57	6 +/-	27	NA	0.1626
501.7	57.5	37.5	16	2	1	0		0	8	46	-5 +/-	17	NA	0.2021
501.7	57.5	32.5	16	2	1	0		0	8	46	-5 +/-	17	NA	0.2021
501.7	55	35	16	2	3	0		0	8	46	5 +/-	22	NA	0.2021
501.7	52.5	37.5	16	2	0	0		0	8	46	-10 +/-	14	NA	0.2021
501.7	52.5	32.5	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	67.5	37.5	16	2	6	0		0	8	46	20 +/-	27	NA	0.2021
501.7	67.5	32.5	16	2	5	0		0	8	46	15 +/-	26	NA	0.2021
501.7	65	35	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	62.5	37.5	16	2	0	0		0	8	46	-10 +/-	14	NA	0.2021
501.7	62.5	32.5	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	77.5	37.5	16	2	4	0		0	8	46	10 +/-	24	NA	0.2021
501.7	77.5	32.5	16	2	8	0		0	8	46	30 +/-	31	NA	0.2021
501.7	75	35	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	72.5	37.5	16	2	1	0		0	8	46	-5 +/-	17	NA	0.2021
501.7	72.5	32.5	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	87.5	37.5	16	2	2	0		0	8	46	0 +/-	19	NA	0.2021
501.7	87.5	32.5	16	2	0	0		0	8	46	-10 +/-	14	NA	0.2021

TABLE 501.7-3

501.7	35	35	16	2	3	0	0	3	46	5 +/-	22	NA	0.2021
501.7	82.5	37.5	16	2	5	0	0	8	46	15 +/-	26	NA	0.2021
501.7	32.5	32.5	16	2	0	0	0	3	46	-10 +/-	14	NA	0.2021
501.7	97.5	37.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	97.5	32.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	95	35	16	2	2	0	0	8	46	5 +/-	22	NA	0.2021
501.7	92.5	37.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	92.5	32.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	197.5	32.5	16	2	2	0	0	3	46	0 +/-	19	NA	0.2021
501.7	195	35	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	192.5	32.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	47.5	27.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	47.5	22.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	57.5	27.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	57.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	55	25	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	52.5	27.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	52.5	22.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	67.5	27.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	67.5	22.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	65	25	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	62.5	27.5	16	2	5	0	0	8	46	15 +/-	26	NA	0.2021
501.7	62.5	22.5	16	2	5	0	0	8	46	15 +/-	26	NA	0.2021
501.7	77.5	27.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	77.5	22.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	75	25	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	72.5	27.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	72.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	87.5	27.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	87.5	22.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	85	25	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	82.5	27.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	82.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	97.5	27.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	97.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	95	25	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	92.5	27.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	92.5	22.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	107.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	102.5	22.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	117.5	22.5	16	2	4	0	0	8	46	10 +/-	24	NA	0.2021
501.7	112.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	127.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	122.5	22.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	137.5	27.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	137.5	22.5	16	2	6	0	0	8	46	20 +/-	27	NA	0.2021
501.7	135	25	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	132.5	22.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	147.5	27.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	147.5	22.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	145	25	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	142.5	27.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	142.5	22.5	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	157.5	27.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	157.5	22.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	155	25	16	2	0	0	0	8	46	-10 +/-	14	NA	0.2021
501.7	152.5	27.5	16	2	2	0	0	8	46	0 +/-	19	NA	0.2021
501.7	152.5	22.5	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021
501.7	167.5	22.5	16	2	3	0	0	8	46	5 +/-	22	NA	0.2021
501.7	165	25	16	2	1	0	0	8	46	-5 +/-	17	NA	0.2021

TABLE 501.7-3

501.7	162.5	22.5	16	2	0	0	8	46	-10 +/- 14	NA	0.2021
501.7	177.5	27.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	177.5	22.5	16	2	0	0	8	46	0 +/- 19	NA	0.2021
501.7	75	25	16	2	0	0	8	46	0 +/- 19	NA	0.2021
501.7	172.5	22.5	16	2	0	0	8	46	0 +/- 19	NA	0.2021
501.7	187.5	27.5	16	2	0	0	8	46	-5 +/- 17	NA	0.2021
501.7	185	25	16	2	0	0	8	46	5 +/- 22	NA	0.2021
501.7	182.5	27.5	16	2	4	0	8	46	10 +/- 24	NA	0.2021
501.7	37.5	17.5	16	2	4	0	8	46	10 +/- 24	NA	0.2021
501.7	35	15	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	32.5	17.5	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	47.5	17.5	16	2	5	0	8	46	15 +/- 26	NA	0.2021
501.7	47.5	12.5	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	45	15	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	42.5	17.5	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	57.5	17.5	16	2	2	0	8	46	5 +/- 22	NA	0.2021
501.7	55	15	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	52.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	52.5	12.5	16	2	5	0	8	46	15 +/- 26	NA	0.2021
501.7	67.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	65	15	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	62.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	62.5	12.5	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	77.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	75	15	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	72.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	87.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	85	15	16	2	4	0	8	46	10 +/- 24	NA	0.2021
501.7	82.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	97.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	95	15	16	2	0	0	8	46	-10 +/- 14	NA	0.2021
501.7	92.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	107.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	105	15	16	2	3	0	8	46	5 +/- 22	NA	0.2021
501.7	102.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	117.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	117.5	12.5	16	2	0	0	8	46	-10 +/- 14	NA	0.2021
501.7	115	15	16	2	8	0	8	46	30 +/- 31	NA	0.2021
501.7	112.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	112.5	12.5	16	2	8	0	8	46	30 +/- 31	NA	0.2021
501.7	127.5	17.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	127.5	12.5	16	2	10	0	8	46	40 +/- 34	NA	0.2021
501.7	125	15	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	122.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	122.5	12.5	16	2	1	0	8	46	-5 +/- 17	NA	0.2021
501.7	137.5	17.5	16	2	0	0	8	46	-10 +/- 14	NA	0.2021
501.7	137.5	12.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	135	15	16	2	2	0	8	46	5 +/- 22	NA	0.2021
501.7	132.5	17.5	16	2	0	0	8	46	0 +/- 19	NA	0.2021
501.7	132.5	12.5	16	2	0	0	8	46	5 +/- 22	NA	0.2021
501.7	147.5	17.5	16	2	4	0	8	46	10 +/- 24	NA	0.2021
501.7	147.5	12.5	16	2	0	0	8	46	0 +/- 19	NA	0.2021
501.7	145	15	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	142.5	17.5	16	2	2	0	8	46	0 +/- 19	NA	0.2021
501.7	142.5	12.5	16	2	0	0	8	46	-10 +/- 14	NA	0.2021

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.1 survey unit was surveyed on an affected area basis and has a surface area of 300 m<sup>2</sup>. 307 surface soil contamination measurement locations were placed in this area using 5 samples per 10m by 10m grid. One sample was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 306 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.1 survey unit are provided in 2 attached tables as follows:

Table 502.1-1 Yard Pipe Soils - Lower Trench by Bldg. 3  
gamma exposure rate data

Table 502.1-2 Yard Pipe Soils - Lower Trench by Bldg. 3  
surface soil contamination data

7/14/96 26 97

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

YARD PIPE SOILS - LOWER TRENCH BY BLDG 3

AREA 502.1 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 06/12/96

TECHNICIANS: TA/LC

## MATERIAL CODE

AREA: 502.0

1=CONCRETE

5=PLASTIC

UNIT: 502.1

2=ROCK

6=SOIL

MEDIA TYPE: SOIL

3=WOOD

7=ASPHALT

# of POINTS: 306

4=METAL

8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

## PER HOUR:

## LIMIT

MAX 7.00 PASS 10

AVG 2.81 PASS 5

STD X 1.81

MU SUB ALPHA 2.98 PASS 5

GRID POINT LETTER N W	#	INST. ID #	MATER-	NET			
			INST. ID #	AREA BKG UREM/HR	AREA READING UREM/HR	IAL CODE	UREM/HR
502.1 02(S)	21	763	A	6	5	8	-1
502.1 02(S)	22	763	A	6	5	8	-1
502.1 01(S)	20	763	A	6	4	8	-2
502.1 01(S)	21	763	A	6	5	8	-1
502.1 01(S)	22	763	A	6	6	8	0
502.1 00	20	763	A	6	4	8	-2
502.1 00	21	763	A	6	4	8	-2
502.1 00	22	763	A	6	4	8	-2
502.1 01	20	763	A	6	4	8	-2
502.1 01	21	763	A	6	4	8	-2
502.1 01	22	763	A	6	6	8	0
502.1 02	20	763	A	6	7	8	1
502.1 02	21	763	A	6	5	8	-1
502.1 02	22	763	A	6	4	8	-2
502.1 03	20	763	A	6	5	8	-1
502.1 03	21	763	A	6	6	8	0
502.1 03	22	763	A	6	6	8	0
502.1 04	20	763	A	6	6	8	0
502.1 04	21	763	A	6	7	8	1
502.1 04	22	763	A	6	6	8	0
502.1 05	20	763	A	6	10	8	4
502.1 05	21	763	A	6	11	8	5
502.1 05	22	763	A	6	10	8	4
502.1 06	20	763	A	6	8	8	2
502.1 06	21	763	A	6	9	8	3
502.1 06	22	763	A	6	10	8	4
502.1 07	20	763	A	5	9	8	3
502.1 07	21	763	A	6	9	8	3
502.1 07	22	763	A	6	8	8	2

TABLE 502.1-1

502.1 08	20	763	A	6	9	8	3
502.1 08	21	763	A	6	12	8	6
502.1 08	22	763	A	6	10	8	4
502.1 09	20	763	A	6	8	8	2
502.1 09	21	763	A	6	7	8	1
502.1 09	22	763	A	6	7	8	1
502.1 10	20	763	A	6	9	8	3
502.1 10	21	763	A	6	8	8	2
502.1 10	22	763	A	6	8	8	2
502.1 11	20	763	A	6	9	8	3
502.1 11	21	763	A	6	9	8	3
502.1 11	22	763	A	6	9	8	3
502.1 12	20	763	A	6	9	8	3
502.1 12	21	763	A	6	8	8	2
502.1 12	22	763	A	6	8	8	2
502.1 13	20	763	A	6	10	8	4
502.1 13	21	763	A	6	12	8	6
502.1 13	22	763	A	6	11	8	5
502.1 14	20	763	A	6	9	8	3
502.1 14	21	763	A	6	11	8	5
502.1 14	22	763	A	6	11	8	5
502.1 15	20	763	A	6	10	8	4
502.1 15	21	763	A	6	11	8	5
502.1 15	22	763	A	6	11	8	5
502.1 16	20	763	A	6	12	8	6
502.1 16	21	763	A	6	13	8	7
502.1 16	22	763	A	6	12	8	6
502.1 17	11	766	A	6	12	8	6
502.1 17	20	763	A	6	10	8	4
502.1 17	21	763	A	6	10	8	4
502.1 17	22	763	A	6	10	8	4
502.1 18	10	766	A	6	12	8	6
502.1 18	11	766	A	6	11	8	5
502.1 18	12	766	A	6	11	8	5
502.1 19	09	766	A	6	11	8	5
502.1 19	10	766	A	6	11	8	5
502.1 19	11	766	A	6	11	8	5
502.1 20	09	766	A	6	10	8	4
502.1 18	13	766	A	6	10	8	4
502.1 18	14	766	A	6	11	8	5
502.1 18	15	766	A	6	12	8	6
502.1 18	16	766	A	6	11	8	5
502.1 18	17	766	A	6	10	8	4
502.1 18	18	766	A	6	9	8	3
502.1 19	19	766	A	6	10	8	4
502.1 18	20	763	A	6	11	8	5
502.1 18	21	763	A	6	10	8	4
502.1 18	22	763	A	6	10	8	4
502.1 19	11	766	A	6	9	8	3
502.1 19	12	766	A	6	10	8	4
502.1 19	13	766	A	6	11	8	5
502.1 19	14	766	A	6	10	8	4
502.1 19	15	766	A	6	11	8	5
502.1 19	16	766	A	6	10	8	4
502.1 19	17	766	A	6	10	8	4
502.1 19	18	766	A	6	10	8	4
502.1 19	19	766	A	6	11	8	5
502.1 19	20	763	A	6	9	8	3
502.1 19	21	766	A	6	8	8	2
502.1 19	22	763	A	6	8	8	2

TABLE 502.1-1

502.1 20	11	766	A	6	10	8	4
502.1 20	12	766	A	6	10	8	4
502.1 20	13	766	A	6	11	8	5
502.1 20	14	766	A	6	10	8	4
502.1 20	15	766	A	6	10	8	4
502.1 20	16	766	A	6	8	8	2
502.1 20	17	766	A	6	10	8	4
502.1 20	18	766	A	6	9	8	3
502.1 20	19	766	A	6	8	8	2
502.1 20	20	763	A	6	10	8	4
502.1 20	21	763	A	6	9	8	3
502.1 20	22	763	A	6	10	8	4
502.1 21	20	763	A	6	7	8	1
502.1 21	21	763	A	6	9	8	3
502.1 21	22	763	A	6	8	8	2
502.1 22	20	763	A	6	9	8	3
502.1 22	21	763	A	6	10	8	4
502.1 22	22	763	A	6	11	8	5
502.1 23	20	763	A	6	8	8	2
502.1 23	21	763	A	6	7	8	1
502.1 23	22	763	A	6	6	8	0
502.1 24	20	763	A	6	9	8	3
502.1 24	21	763	A	6	8	8	2
502.1 24	22	763	A	6	8	8	2
502.1 24	23	767	A	6	9	8	3
502.1 25	20	763	A	6	6	8	0
502.1 25	21	763	A	6	7	8	1
502.1 25	22	763	A	6	7	8	1
502.1 25	23	767	A	6	8	8	2
502.1 26	20	763	A	6	7	8	1
502.1 26	21	763	A	6	6	8	0
502.1 25	22	763	A	6	7	8	1
502.1 26	23	767	A	6	5	8	0
502.1 27	20	763	A	6	7	6	1
502.1 27	21	763	A	6	7	8	1
502.1 27	22	763	A	6	7	8	1
502.1 27	23	767	A	6	8	8	2
502.1 28	20	763	A	6	8	8	2
502.1 28	21	763	A	6	9	8	3
502.1 28	22	763	A	6	11	8	5
502.1 28	23	767	A	6	6	8	0
502.1 29	20	763	A	6	10	8	4
502.1 29	21	763	A	6	7	8	1
502.1 29	22	763	A	6	11	8	5
502.1 29	23	767	A	6	7	8	1
502.1 30	20	763	A	6	9	8	3
502.1 30	21	763	A	6	10	8	4
502.1 30	22	763	A	6	11	8	5
502.1 31	20	763	A	6	10	8	4
502.1 31	21	763	A	6	9	8	3
502.1 31	22	763	A	6	11	8	5
502.1 32	20	763	A	6	8	8	2
502.1 32	21	763	A	6	7	8	1
502.1 32	22	763	A	6	7	8	1
502.1 33	20	763	A	6	8	8	2
502.1 33	21	763	A	6	9	8	3
502.1 33	22	763	A	6	7	8	1
502.1 34	20	763	A	6	8	8	2
502.1 34	21	763	A	6	8	8	1
502.1 34	22	763	A	6	8	8	2

TABLE 502.1-1

502.1 35	20	763	A	6	7	8	1
502.1 35	21	763	A	6	7	8	1
502.1 35	22	763	A	6	8	8	2
502.1 36	20	763	A	6	9	8	3
502.1 36	21	763	A	6	8	8	2
502.1 36	22	763	A	6	8	8	2
502.1 37	20	763	A	6	7	8	1
502.1 37	21	763	A	6	7	8	1
502.1 37	22	763	A	6	7	8	1
502.1 38	20	763	A	6	8	8	2
502.1 38	21	763	A	6	9	8	3
502.1 38	22	763	A	6	9	8	3
502.1 39	20	763	A	6	8	8	2
502.1 39	21	763	A	6	10	8	4
502.1 39	22	763	A	6	11	8	5
502.1 40	20	763	A	6	11	8	5
502.1 40	21	763	A	6	10	8	4
502.1 40	22	763	A	6	11	8	5
502.1 41	20	763	A	6	9	8	3
502.1 41	21	763	A	6	9	8	3
502.1 41	22	763	A	6	11	8	5
502.1 100	24	755	A	6	8	8	2
502.1 100	25	755	A	6	8	8	2
502.1 101	24	755	A	6	10	8	4
502.1 101	25	755	A	6	7	8	1
502.1 102	23	755	A	6	10	8	4
502.1 102	24	755	A	6	8	8	2
502.1 102	25	755	A	6	10	8	4
502.1 103	23	755	A	6	9	8	3
502.1 103	24	755	A	6	10	8	4
502.1 104	23	755	A	6	11	8	5
502.1 104	24	755	A	6	9	8	3
502.1 105	23	755	A	6	8	8	2
502.1 105	24	755	A	6	8	8	2
502.1 105	25	755	A	6	11	8	5
502.1 105	26	755	A	6	10	8	4
502.1 105	27	755	A	6	11	8	5
502.1 106	25	755	A	6	12	8	6
502.1 106	26	755	A	6	13	8	7
502.1 106	27	755	A	6	11	8	5
502.1 107	23	760	A	6	5	8	-1
502.1 107	24	760	A	6	9	8	3
502.1 107	25	760	A	6	8	8	2
502.1 107	26	760	A	6	13	8	7
502.1 107	27	760	A	6	10	8	4
502.1 108	23	760	A	6	10	8	4
502.1 108	24	760	A	6	9	8	3
502.1 108	25	760	A	6	7	8	1
502.1 108	26	760	A	6	6	8	0
502.1 108	27	760	A	6	8	8	2
502.1 109	23	760	A	6	9	8	3
502.1 109	24	760	A	6	9	8	3
502.1 109	25	760	A	6	8	8	2
502.1 109	26	760	A	6	6	8	0
502.1 109	27	760	A	6	10	8	4
502.1 110	23	760	A	6	6	8	0
502.1 110	24	760	A	6	8	8	2
502.1 110	25	760	A	6	9	8	3
502.1 110	26	760	A	6	9	8	3
502.1 110	27	760	A	6	10	8	4

TABLE 502.1-1

502.1 111	23	760	A	6	8	8	2
502.1 111	24	760	A	6	8	8	2
502.1 111	25	760	A	6	9	8	3
502.1 111	26	760	A	6	9	8	3
502.1 111	27	760	A	6	10	8	4
502.1 112	23	760	A	6	7	8	1
502.1 112	24	760	A	6	7	8	1
502.1 112	25	760	A	6	10	8	4
502.1 112	26	760	A	6	9	8	3
502.1 112	27	760	A	6	11	8	5
502.1 113	23	760	A	6	5	8	-1
502.1 113	24	760	A	6	10	8	4
502.1 113	25	760	A	6	8	8	2
502.1 113	26	760	A	6	11	8	5
502.1 113	27	760	A	6	12	8	6
502.1 114	23	760	A	6	7	8	1
502.1 114	24	760	A	6	9	8	3
502.1 114	25	760	A	6	9	8	3
502.1 114	26	760	A	6	11	8	5
502.1 114	27	760	A	6	11	8	5
502.1 115	23	760	A	6	7	8	1
502.1 115	24	760	A	6	11	8	5
502.1 115	25	760	A	6	9	8	3
502.1 115	26	760	A	6	9	8	3
502.1 115	27	760	A	6	11	8	5
502.1 116	23	760	A	6	9	8	3
502.1 116	24	760	A	6	7	8	1
502.1 116	25	760	A	6	9	8	3
502.1 116	26	760	A	6	9	8	3
502.1 116	27	760	A	6	9	8	3
502.1 117	23	760	A	6	8	8	2
502.1 117	24	760	A	6	8	8	2
502.1 117	25	760	A	6	10	8	4
502.1 117	26	760	A	6	10	8	4
502.1 117	27	760	A	6	11	8	5
502.1 118	23	760	A	6	8	8	2
502.1 118	24	760	A	6	7	8	1
502.1 118	25	760	A	6	9	8	3
502.1 118	26	760	A	6	9	8	3
502.1 118	27	760	A	6	10	8	4
502.1 119	23	760	A	6	7	8	1
502.1 119	24	760	A	6	10	8	4
502.1 119	25	760	A	6	8	8	2
502.1 119	26	760	A	6	8	8	2
502.1 119	27	760	A	6	10	8	4
502.1 120	23	760	A	6	7	8	1
502.1 120	24	760	A	6	7	8	1
502.1 120	25	760	A	6	10	8	4
502.1 120	26	760	A	6	8	8	2
502.1 120	27	760	A	6	9	8	3
502.1 120	28	760	A	6	8	8	2
502.1 121	23	760	A	6	6	8	0
502.1 121	24	760	A	6	8	8	2
502.1 121	25	760	A	6	10	8	4
502.1 121	26	760	A	6	7	8	1
502.1 121	27	760	A	6	9	8	3
502.1 121	28	760	A	6	9	8	3
502.1 122	23	760	A	6	7	8	1
502.1 122	24	760	A	6	8	8	2
502.1 122	25	760	A	6	9	8	3

TABLE 502.1-1

502.1 122	26	760	A	6	8	9	2
502.1 122	27	760	A	6	10	8	4
502.1 122	28	760	A	6	9	8	3
502.1 123	23	760	A	6	7	8	1
502.1 123	24	760	A	6	7	8	1
502.1 123	25	760	A	6	9	8	3
502.1 123	26	760	A	6	7	8	1
502.1 123	27	760	A	6	9	8	3
502.1 123	28	760	A	6	9	8	3
502.1 124	25	760	A	6	9	8	3
502.1 124	26	760	A	6	8	8	2
502.1 124	27	760	A	6	10	8	4
502.1 124	28	760	A	6	8	8	2
502.1 125	25	760	A	6	9	8	3
502.1 125	26	760	A	6	7	8	1
502.1 125	27	760	A	6	10	8	4
502.1 125	28	760	A	6	8	8	2
502.1 126	25	760	A	6	11	8	5
502.1 126	26	760	A	6	9	8	3
502.1 126	27	760	A	6	7	8	1
502.1 126	28	760	A	6	9	8	3
502.1 127	25	760	A	6	8	8	2
502.1 127	26	760	A	6	10	8	4
502.1 127	27	760	A	6	9	8	3
502.1 127	28	760	A	6	8	8	2
502.1 128	25	760	A	6	9	8	3
502.1 128	26	760	A	6	10	8	4
502.1 128	27	760	A	6	11	8	5
502.1 128	28	760	A	6	11	8	5
502.1 129	25	760	A	6	8	8	2
502.1 129	26	760	A	6	10	8	4
502.1 129	27	760	A	6	10	8	4
502.1 129	28	760	A	6	12	8	6
502.1 130	25	760	A	6	9	8	3
502.1 130	26	760	A	6	9	8	3
502.1 130	27	760	A	6	10	8	4
502.1 130	28	760	A	6	12	8	6

MAG-27-9

## CINTICHEM DECOMMISSIONING PLAN 18-Jun-97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

YARD PIPE SOILS - LOWER TRENCH BY BLDG 3

AREA 502.1

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 08/12/96

TECHNICIANS: TA/LC

AREA: 502.0

UNIT: 502.1

MEDIA TYPE: SOIL

# of POINTS: 307

## SOIL DATA IN

SUM OF FRACTIONS: LIMIT

MAX 0.76 PASS 1

AVG 0.01 PASS 1

STD X 0.06

MU SUB ALPHA 0.02 PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	GRID		SR-90 LIMIT	CO-60 LIMIT	AG-108M LIMIT	CS-134 LIMIT	CS-137 LIMIT	CE-144 LIMIT	EU-152 LIMIT	
	N	W	ELEV	17	0.9	1.1	1.8	3.8	63	2
502.1 02(S)	21	763	<	0.11 <	0.04 <	0.03 <	0.05 <	0.08 <	0.29 <	0.12
502.1 01(S)	20	763	<	0.10 <	0.04 <	0.05 <	0.04 <	0.08 <	0.18 <	0.11
502.1 01(S)	21	763	<	0.09 <	0.04 <	0.03 <	0.04 <	0.08 <	0.12 <	0.12
502.1 01(S)	22	763	<	0.10 <	0.03 <	0.05 <	0.05 <	0.07 <	0.31 <	0.08
502.1 00	20	763	<	0.08 <	0.05 <	0.02 <	0.07 <	0.06 <	0.25 <	0.16
502.1 00	21	763	<	0.11 <	0.06 <	0.05 <	0.06 <	0.07 <	0.31 <	0.17
502.1 00	22	763	<	0.10 <	0.07 <	0.02 <	0.04 <	0.05 <	0.32 <	0.06
502.1 01	20	763	<	0.08 <	0.03 <	0.02 <	0.04 <	0.02 <	0.30 <	0.06
502.1 01	21	763	<	0.11 <	0.03 <	0.03 <	0.04 <	0.06 <	0.19 <	0.11
502.1 01	22	763	<	0.08 <	0.03 <	0.02 <	0.05 <	0.05 <	0.36 <	0.12
502.1 02	20	763	<	0.08 <	0.05 <	0.03 <	0.07 <	0.03 <	0.29 <	0.09
502.1 02	21	763	<	0.11 <	0.05 <	0.02 <	0.05 <	0.07 <	0.15 <	0.07
502.1 02	22	763	<	0.10 <	0.08 <	0.03 <	0.05 <	0.06 <	0.29 <	0.09
502.1 03	20	763	<	0.08 <	0.04 <	0.05 <	0.05 <	0.07 <	0.24 <	0.12
502.1 03	21	763	<	0.11 <	0.03 <	0.05 <	0.04 <	0.03 <	0.21 <	0.07
502.1 03	22	763	<	0.10 <	0.03 <	0.04 <	0.06 <	0.03 <	0.22 <	0.10
502.1 04	20	763	<	0.10 <	0.06 <	0.04 <	0.05 <	0.06 <	0.27 <	0.16
502.1 04	21	763	<	0.10 <	0.04 <	0.05 <	0.05 <	0.07 <	0.14 <	0.14
502.1 04	22	763	<	0.10 <	0.07 <	0.06 <	0.05 <	0.07 <	0.12 <	0.12
502.1 05	20	763	<	0.08 <	0.06 <	0.04 <	0.05 <	0.02 <	0.34 <	0.12
502.1 05	21	763	<	0.08 <	0.05 <	0.02 <	0.05 <	0.03 <	0.22 <	0.15
502.1 05	22	763	<	0.08 <	0.05 <	0.02 <	0.06 <	0.06 <	0.34 <	0.08
5. 1 06	20	763	<	0.10 <	0.06 <	0.04 <	0.05 <	0.05 <	0.16 <	0.16
502.1 06	21	763	<	0.10 <	0.07 <	0.04 <	0.05 <	0.37 <	0.14 <	0.08
502.1 06	22	763	<	0.08 <	0.07 <	0.03 <	0.06 <	0.07 <	0.14 <	0.12
502.1 07	20	763	<	0.12 <	0.04 <	0.02 <	0.05 <	0.07 <	0.27 <	0.14
502.1 07	21	763	<	0.12 <	0.07 <	0.02 <	0.05 <	0.04 <	0.14 <	0.05
502.1 07	22	763	<	0.10 <	0.05 <	0.03 <	0.05 <	0.05 <	0.33 <	0.07
502.1 08	20	763	<	0.07 <	0.03 <	0.02 <	0.05 <	0.07 <	0.13 <	0.17
502.1 08	21	763	<	0.12 <	0.03 <	0.04 <	0.04 <	0.06 <	0.19 <	0.13
502.1 08	22	763	<	0.10 <	0.04 <	0.02 <	0.05 <	0.03 <	0.12 <	0.09
502.1 09	20	763	<	0.07 <	0.05 <	0.04 <	0.06 <	0.06 <	0.30 <	0.10

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**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

**ISOTOPES OF CONCERN IN FRACTION OF LIMIT**

CODE	SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM
------	-------	-------	---------	--------	--------	--------	--------	-----

I <	0.01 <	0.04 <	0.03 <	0.03 <	0.00 <	0.00 <	0.06	0.00
I <	0.01 <	0.04 <	0.05 <	0.02 <	0.00 <	0.00 <	0.06	0.00
I <	0.01 <	0.04 <	0.03 <	0.02 <	0.00 <	0.00 <	0.06	0.00
I <	0.01 <	0.03 <	0.05 <	0.03 <	0.00 <	0.00 <	0.04	0.00
I <	0.00 <	0.06 <	0.02 <	0.04 <	0.00 <	0.00 <	0.08	0.00
I <	0.01 <	0.07 <	0.05 <	0.03 <	0.00 <	0.00 <	0.09	0.00
I <	0.01 <	0.08 <	0.02 <	0.02 <	0.00 <	0.01 <	0.03	0.00
I <	0.00 <	0.03 <	0.02 <	0.02 <	0.00 <	0.00 <	0.03	0.00
I <	0.01 <	0.03 <	0.03 <	0.02 <	0.00 <	0.00 <	0.06	0.00
I <	0.00 <	0.03 <	0.02 <	0.03 <	0.00 <	0.01 <	0.06	0.00
I <	0.00 <	0.06 <	0.03 <	0.04 <	0.00 <	0.00 <	0.05	0.00
I <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.04	0.00
I <	0.01 <	0.09 <	0.03 <	0.03 <	0.00 <	0.00 <	0.05	0.00
I <	0.00 <	0.04 <	0.05 <	0.03 <	0.00 <	0.00 <	0.06	0.00
I <	0.01 <	0.03 <	0.05 <	0.02 <	0.00 <	0.00 <	0.04	0.00
I <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.00 <	0.05	0.00
I <	0.00 <	0.06 <	0.02 <	0.03 <	0.00 <	0.01 <	0.06	0.00
I <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.01 <	0.04	0.00
I <	0.01 <	0.07 <	0.04 <	0.03 <	0.00 <	0.00 <	0.05	0.00
I <	0.01 <	0.07 <	0.04 <	0.03 <	0.00 <	0.00 <	0.08	0.00
I <	0.01 <	0.04 <	0.05 <	0.03 <	0.00 <	0.00 <	0.07	0.00
I <	0.01 <	0.08 <	0.05 <	0.03 <	0.00 <	0.00 <	0.06	0.00
I <	0.00 <	0.07 <	0.04 <	0.03 <	0.00 <	0.01 <	0.06	0.00
I <	0.00 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.08	0.00
I <	0.00 <	0.06 <	0.02 <	0.03 <	0.00 <	0.01 <	0.04	0.00
I <	0.01 <	0.07 <	0.04 <	0.03 <	0.00 <	0.00 <	0.08	0.00
I <	0.01 <	0.08 <	0.04 <	0.03 <	0.00 <	0.00 <	0.08	0.00
I <	0.00 <	0.08 <	0.03 <	0.03 <	0.00 <	0.00 <	0.04	0.00
I <	0.01 <	0.04 <	0.02 <	0.03 <	0.00 <	0.00 <	0.06	0.00
I <	0.01 <	0.04 <	0.02 <	0.03 <	0.00 <	0.00 <	0.07	0.00
I <	0.01 <	0.08 <	0.02 <	0.03 <	0.00 <	0.00 <	0.03	0.00
I <	0.01 <	0.06 <	0.03 <	0.03 <	0.00 <	0.01 <	0.04	0.00
I <	0.00 <	0.03 <	0.02 <	0.03 <	0.00 <	0.00 <	0.09	0.00
I <	0.01 <	0.03 <	0.04 <	0.02 <	0.00 <	0.00 <	0.07	0.00
I <	0.01 <	0.04 <	0.02 <	0.03 <	0.00 <	0.00 <	0.05	0.00
I <	0.00 <	0.06 <	0.04 <	0.03 <	0.00 <	0.00 <	0.05	0.00

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TABLE 502.1-2

502.1 09	21	763 <	0.12 <	0.03 <	0.04 <	0.06 <	0.06 <	0.22 <	0.0
502.1 09	22	763 <	0.10 <	0.07 <	0.03 <	0.06 <	0.07 <	0.30 <	0.1
502.1 10	20	763 <	0.07 <	0.03 <	0.02 <	0.05 <	0.07 <	0.25 <	0.1
502.1 10	21	763 <	0.07 <	0.03 <	0.05 <	0.06 <	0.06 <	0.15 <	0.1
502.1 10	22	763 <	0.12 <	0.03 <	0.02 <	0.05 <	0.06 <	0.19 <	0.1
502.1 11	20	763 <	0.07 <	0.06 <	0.02 <	0.04 <	0.03 <	0.30 <	0.1
502.1 11	21	763 <	0.07 <	0.03 <	0.04 <	0.05 <	0.22 <	0.24 <	0.1
502.1 11	22	763 <	0.07 <	0.03 <	0.02 <	0.04 <	0.07 <	0.28 <	0.0
502.1 12	20	763 <	0.12 <	0.04 <	0.09 <	0.04 <	0.03 <	0.21 <	0.1
502.1 12	21	763 <	0.12 <	0.04 <	0.03 <	0.05 <	0.48 <	0.29 <	0.1
502.1 12	22	763 <	0.12 <	0.04 <	0.02 <	0.05 <	0.06 <	0.23 <	0.1
502.1 13	20	763 <	0.10 <	0.03 <	0.02 <	0.05 <	0.05 <	0.16 <	0.0
502.1 13	21	763 <	0.10 <	0.05 <	0.04 <	0.05 <	0.03 <	0.19 <	0.1
502.1 13	22	763 <	0.10 <	0.06 <	0.04 <	0.04 <	0.06 <	0.22 <	0.1
502.1 14	20	763 <	0.10 <	0.06 <	0.02 <	0.05 <	0.08 <	0.23 <	0.0
502.1 14	21	763 <	0.09 <	0.03 <	0.02 <	0.05 <	0.03 <	0.35 <	0.1
502.1 14	22	763 <	0.10 <	0.08 <	0.05 <	0.05 <	0.03 <	0.26 <	0.1
502.1 15	20	763 <	0.10 <	0.03 <	0.02 <	0.06 <	0.07 <	0.26 <	0.1
502.1 15	21	763 <	0.10 <	0.03 <	0.02 <	0.03 <	0.05 <	0.23 <	0.1
502.1 15	22	763 <	0.10 <	0.06 <	0.04 <	0.05 <	0.05 <	0.28 <	0.0
502.1 16	20	763 <	0.10 <	0.03 <	0.04 <	0.05 <	0.06 <	0.26 <	0.1
502.1 16	21	763 <	0.10 <	0.04 <	0.03 <	0.04 <	0.09 <	0.32 <	0.0
502.1 16	22	763 <	0.10 <	0.07 <	0.05 <	0.06 <	0.07 <	0.14 <	0.0
502.1 17	11	766 <	0.10 <	0.06 <	0.02 <	0.14 <	0.06 <	0.24 <	0.0
502.1 17	20	763 <	0.10 <	0.03 <	0.04 <	0.06 <	0.03 <	0.26 <	0.0
502.1 17	21	763 <	0.11 <	0.03 <	0.04 <	0.06 <	0.03 <	0.28 <	0.0
502.1 17	22	763 <	0.10 <	0.03 <	0.04 <	0.05 <	0.05 <	0.29 <	0.0
502.1 18	10	766 <	0.10 <	0.04 <	0.04 <	0.04 <	0.05 <	0.27 <	0.1
502.1 18	11	766 <	0.10 <	0.03 <	0.02 <	0.05 <	0.06 <	0.33 <	0.1
502.1 18	12	766 <	0.10 <	0.03 <	0.02 <	0.13 <	0.08 <	0.28 <	0.0
502.1 21	11	766 <	0.11 <	0.04 <	0.09 <	0.06 <	0.16 <	0.38 <	0.1
502.1 21	12	766 <	0.11 <	0.05 <	0.02 <	0.06 <	0.06 <	0.38 <	0.1
502.1 21	13	766 <	0.09 <	0.04 <	0.07 <	0.06 <	0.07 <	0.14 <	0.1
502.1 21	14	766 <	0.12 <	0.04 <	0.02 <	0.05 <	0.07 <	0.28 <	0.1
502.1 21	15	766 <	0.12 <	0.05 <	0.06 <	0.08 <	0.10 <	0.35 <	0.1
502.1 21	16	766 <	0.09 <	0.05 <	0.02 <	0.05 <	0.06 <	0.13 <	0.1
502.1 21	17	766 <	0.12 <	0.05 <	0.01 <	0.05 <	0.03 <	0.39 <	0.1
502.1 21	18	766 <	0.11 <	0.07 <	0.05 <	0.06 <	0.07 <	0.34 <	0.1
502.1 21	19	766 <	0.12 <	0.02 <	0.03 <	0.05 <	0.07 <	0.26 <	0.1
502.1 18	20	763 <	0.09 <	0.05 <	0.03 <	0.05 <	0.07 <	0.29 <	0.2
502.1 18	21	763 <	0.11 <	0.07 <	0.05 <	0.06 <	0.16 <	0.19 <	0.0
502.1 18	22	763 <	0.13 <	0.07 <	0.02 <	0.05 <	0.06 <	0.31 <	0.2
502.1 19	09	766	0.14 <	0.03 <	0.05 <	0.05 <	0.08 <	0.13 <	0.1
502.1 19	10	766	0.11 <	0.09 <	0.04 <	0.04 <	0.05 <	0.26 <	0.1
502.1 19	11	766	0.10 <	0.03 <	0.02 <	0.05 <	0.06 <	0.37 <	0.0
502.1 20	09	766	0.10 <	0.03 <	0.02 <	0.15	0.08 <	0.38 <	0.1
502.1 22	11	766 <	0.11 <	0.03 <	0.04 <	0.05 <	0.22 <	0.33 <	0.1
502.1 22	12	766 <	0.11 <	0.02 <	0.03 <	0.05 <	0.06 <	0.33 <	0.0
502.1 22	13	766 <	0.09 <	0.04 <	0.04 <	0.05 <	0.03 <	0.35 <	0.1
502.1 22	14	766 <	0.11 <	0.03 <	0.06 <	0.06 <	0.07 <	0.35 <	0.0
502.1 22	15	766 <	0.10 <	0.04 <	0.04 <	0.06 <	0.08 <	0.28 <	0.0
502.1 22	16	766 <	0.11 <	0.03 <	0.02 <	0.06	0.08 <	0.22 <	0.0
502.1 22	17	766 <	0.11 <	0.04 <	0.02 <	0.05	0.14 <	0.17 <	0.0
502.1 22	18	766 <	0.10 <	0.07 <	0.05 <	0.06 <	0.08 <	0.19 <	0.0
502.1 22	19	766 <	0.10 <	0.05 <	0.04 <	0.06 <	0.08 <	0.27 <	0.1
502.1 19	20	763 <	0.11 <	0.05 <	0.02 <	0.04	0.07 <	0.36 <	0.1
502.1 19	21	766 <	0.09 <	0.04 <	0.09 <	0.06 <	0.07 <	0.24 <	0.1
502.1 19	22	763 <	0.13 <	0.03 <	0.03 <	0.05 <	0.80 <	0.13 <	0.1
502.1 23	11	766 <	0.11 <	0.03 <	0.04 <	0.06 <	0.03 <	0.28 <	0.0
502.1 23	12	766 <	0.11 <	0.03 <	0.03 <	0.05	0.08 <	0.16 <	0.1

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9707240076-36

TABLE 502.1-2

502.1 23	13	766 <	0.10 <	0.03 <	0.04 <	0.06 <	0.07 <	0.33 <	0.12
502.1 23	14	766 <	0.11 <	0.02 <	0.02 <	0.05 <	0.08 <	0.34 <	0.08
502.1 23	15	766 <	0.11 <	0.03 <	0.04 <	0.05 <	0.05 <	0.42 <	0.07
502.1 23	16	766 <	0.11 <	0.04 <	0.05 <	0.06 <	0.05 <	0.40 <	0.09
502.1 23	17	766 <	0.11 <	0.05 <	0.02 <	0.06 <	0.08 <	0.19 <	0.12
502.1 23	18	766 <	0.11 <	0.04 <	0.04 <	0.05 <	0.02 <	0.17 <	0.09
502.1 23	19	766 <	0.10 <	0.04 <	0.06 <	0.06 <	0.06 <	0.14 <	0.15
502.1 20	20	763 <	0.09 <	0.07 <	0.03 <	0.06 <	0.07 <	0.34 <	0.09
502.1 20	21	763 <	0.12 <	0.03 <	0.02 <	0.05 <	0.04 <	0.29 <	0.06
502.1 20	22	763 <	0.09 <	0.03 <	0.06 <	0.06 <	0.59 <	0.28 <	0.12
502.1 21	20	763 <	0.13 <	0.09 <	0.03 <	0.06 <	0.05 <	0.30 <	0.07
502.1 21	21	763 <	0.11 <	0.05 <	0.03 <	0.05 <	0.25 <	0.25 <	0.15
502.1 21	22	763 <	0.09 <	0.12 <	0.07 <	0.05 <	0.87 <	0.26 <	0.08
502.1 22	20	763 <	0.11 <	0.04 <	0.02 <	0.05 <	0.33 <	0.26 <	0.17
502.1 22	21	763 <	0.11 <	0.04 <	0.04 <	0.06 <	0.07 <	0.26 <	0.10
502.1 22	22	763 <	0.11 <	0.02 <	0.03 <	0.05 <	0.06 <	0.34 <	0.13
502.1 23	20	763 <	0.10 <	0.03 <	0.04 <	0.05 <	0.60 <	0.14 <	0.13
502.1 23	21	763 <	0.10 <	0.04 <	0.04 <	0.05 <	0.07 <	0.27 <	0.06
502.1 23	22	763 <	0.10 <	0.04 <	0.04 <	0.05 <	0.10 <	0.33 <	0.07
502.1 24	20	763 <	0.10 <	0.04 <	0.05 <	0.05 <	0.06 <	0.25 <	0.10
502.1 24	21	763 <	0.11 <	0.03 <	0.06 <	0.05 <	0.13 <	0.16 <	0.09
502.1 24	22	763 <	0.11 <	0.03 <	0.05 <	0.05 <	0.03 <	0.42 <	0.10
502.1 24	23	767 <	0.09 <	0.03 <	0.04 <	0.05 <	0.05 <	0.23 <	0.10
502.1 25	20	763 <	0.11 <	0.03 <	0.02 <	0.05 <	0.05 <	0.34 <	0.17
502.1 25	21	763 <	0.11 <	0.08 <	0.06 <	0.06 <	0.14 <	0.57 <	0.08
502.1 25	22	763 <	0.11 <	0.07 <	0.03 <	0.05 <	0.07 <	0.31 <	0.13
502.1 25	23	767 <	0.09 <	0.04 <	0.05 <	0.05 <	0.09 <	0.24 <	0.11
502.1 26	20	763 <	0.11 <	0.05 <	0.04 <	0.06 <	0.14 <	0.25 <	0.09
502.1 26	21	763 <	0.11 <	0.04 <	0.05 <	0.05 <	0.07 <	0.34 <	0.10
502.1 26	22	763 <	0.11 <	0.07 <	0.05 <	0.05 <	0.05 <	0.31 <	0.15
502.1 26	23	767 <	0.10 <	0.07 <	0.04 <	0.04 <	0.04 <	0.27 <	0.15
502.1 27	20	763 <	0.11 <	0.03 <	0.03 <	0.05 <	0.05 <	0.39 <	0.09
502.1 27	21	763 <	0.11 <	0.05 <	0.02 <	0.06 <	0.06 <	0.14 <	0.08
502.1 27	22	763 <	0.11 <	0.06 <	0.02 <	0.05 <	0.05 <	0.31 <	0.11
502.1 27	23	767 <	0.10 <	0.07 <	0.03 <	0.06 <	0.04 <	0.13 <	0.12
502.1 28	20	767 <	0.11 <	0.04 <	0.02 <	0.04 <	0.06 <	0.15 <	0.17
502.1 28	21	763 <	0.11 <	0.04 <	0.03 <	0.05 <	0.05 <	0.26 <	0.06
502.1 28	22	763 <	0.11 <	0.03 <	0.04 <	0.05 <	0.05 <	0.19 <	0.05
502.1 28	23	767 <	0.11 <	0.02 <	0.02 <	0.05 <	0.06 <	0.24 <	0.09
502.1 29	20	763 <	0.10 <	0.08 <	0.04 <	0.05 <	0.46 <	0.32 <	0.11
502.1 29	21	763 <	0.11 <	0.07 <	0.03 <	0.06 <	0.07 <	0.12 <	0.10
502.1 29	22	763 <	0.10 <	0.05 <	0.04 <	0.05 <	0.05 <	0.40 <	0.07
502.1 29	23	767 <	0.09 <	0.03 <	0.02 <	0.05 <	0.07 <	0.36 <	0.11
502.1 30	20	763 <	0.11 <	0.03 <	0.06 <	0.05 <	0.03 <	0.19 <	0.14
502.1 30	21	763 <	0.09 <	0.06 <	0.06 <	0.05 <	0.06 <	0.29 <	0.09
502.1 30	22	763 <	0.09 <	0.03 <	0.02 <	0.05 <	0.06 <	0.41 <	0.07
502.1 31	20	763 <	0.09 <	0.06 <	0.04 <	0.05 <	0.05 <	0.29 <	0.13
502.1 31	21	763 <	0.09 <	0.03 <	0.03 <	0.05 <	0.08 <	0.35 <	0.12
502.1 31	22	763 <	0.10 <	0.03 <	0.03 <	0.06 <	0.08 <	0.27 <	0.06
502.1 32	20	763 <	0.09 <	0.07 <	0.03 <	0.05 <	0.08 <	0.27 <	0.06
502.1 32	21	763 <	0.10 <	0.03 <	0.03 <	0.05 <	0.07 <	0.24 <	0.16
502.1 32	22	763 <	0.10 <	0.03 <	0.07 <	0.06 <	0.30 <	0.13 <	0.17
502.1 33	20	763 <	0.11 <	0.06 <	0.03 <	0.05 <	0.10 <	0.33 <	0.05
502.1 33	21	763 <	0.11 <	0.03 <	0.03 <	0.05 <	0.07 <	0.23 <	0.06
502.1 33	22	763 <	0.09 <	0.03 <	0.04 <	0.04 <	0.07 <	0.27 <	0.08
502.1 34	20	763 <	0.09 <	0.08 <	0.04 <	0.06 <	0.14 <	0.25 <	0.18
502.1 34	21	763 <	0.09 <	0.05 <	0.02 <	0.06 <	0.09 <	0.30 <	0.07
502.1 34	22	763 <	0.09 <	0.06 <	0.04 <	0.05 <	0.02 <	0.41 <	0.07
502.1 35	20	763 <	0.10 <	0.04 <	0.05 <	0.05 <	0.16 <	0.18 <	0.09
502.1 35	21	763 <	0.11 <	0.04 <	0.04 <	0.05 <	0.11 <	0.34 <	0.08

**ANSTEC  
APERTURE  
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Also Available on  
Aperture Card

9707240076-37

TABLE 502.1-2

502.1 35	22	763	<	0.09	<	0.08	<	0.03	<	0.06	<	0.05	<	0.14	<	0.14
502.1 36	20	763	<	0.10	<	0.06	<	0.04	<	0.05	<	0.09	<	0.30	<	0.14
502.1 36	21	763	<	0.10	<	0.05	<	0.05	<	0.05	<	0.17	<	0.30	<	0.14
502.1 36	22	763	<	0.09	<	0.05	<	0.02	<	0.06	<	0.58	<	0.25	<	0.13
502.1 37	20	763	<	0.11	<	0.07	<	0.03	<	0.04	<	0.17	<	0.24	<	0.16
502.1 37	21	763	<	0.11	<	0.04	<	0.02	<	0.05	<	0.32	<	0.23	<	0.08
502.1 37	22	763	<	0.10	<	0.08	<	0.03	<	0.06	<	0.28	<	0.21	<	0.10
502.1 38	20	763	<	0.10	<	0.02	<	0.03	<	0.05	<	0.11	<	0.24	<	0.07
502.1 38	21	763	<	0.11	<	0.05	<	0.02	<	0.06	<	0.15	<	0.22	<	0.11
502.1 38	22	763	<	0.11	<	0.05	<	0.02	<	0.05	<	0.05	<	0.24	<	0.06
502.1 39	20	763	<	0.10	<	0.03	<	0.02	<	0.05	<	0.15	<	0.36	<	0.08
502.1 39	21	763	<	0.10	<	0.07	<	0.02	<	0.05	<	0.06	<	0.33	<	0.08
502.1 39	22	763	<	0.10	<	0.08	<	0.02	<	0.05	<	0.09	<	0.37	<	0.08
502.1 40	20	763	<	0.11	<	0.06	<	0.06	<	0.06	<	0.38	<	0.13	<	0.15
502.1 40	21	763	<	0.10	<	0.03	<	0.03	<	0.05	<	0.59	<	0.41	<	0.08
502.1 40	22	763	<	0.18	<	0.08	<	0.03	<	0.06	<	1.41	<	0.38	<	0.11
502.1 41	20	763	<	0.10	<	0.09	<	0.03	<	0.06	<	0.13	<	0.13	<	0.11
502.1 41	21	763	<	0.10	<	0.03	<	0.04	<	0.06	<	0.08	<	0.33	<	0.08
502.1 41	22	763	<	0.10	<	0.09	<	0.04	<	0.05	<	0.41	<	0.31	<	0.11
502.1 100	24	755	<	0.10	<	0.10	<	0.06	<	0.06	<	0.46	<	0.12	<	0.0
502.1 100	25	755	<	0.10	<	0.03	<	0.06	<	0.05	<	0.66	<	0.28	<	0.0
502.1 101	24	755	<	0.10	<	0.07	<	0.04	<	0.05	<	0.76	<	0.12	<	0.0
502.1 101	25	755	<	0.10	<	0.04	<	0.07	<	0.12	<	0.12	<	0.17	<	0.0
502.1 102	23	755	<	0.10	<	0.03	<	0.03	<	0.05	<	0.11	<	0.28	<	0.0
502.1 102	24	755	<	0.12	<	0.04	<	0.03	<	0.14	<	0.13	<	0.24	<	0.1
502.1 102	25	755	<	0.10	<	0.08	<	0.06	<	0.06	<	0.85	<	0.24	<	0.0
502.1 103	23	755	<	0.12	<	0.05	<	0.02	<	0.05	<	0.09	<	0.30	<	0.0
502.1 103	24	755	<	0.10	<	0.07	<	0.02	<	0.05	<	0.13	<	0.37	<	0.0
502.1 104	23	755	<	0.12	<	0.05	<	0.02	<	0.14	<	0.14	<	0.31	<	0.0
502.1 104	24	755	<	0.12	<	0.15	<	0.05	<	0.06	<	0.45	<	0.39	<	0.0
502.1 105	23	755	<	0.10	<	0.04	<	0.03	<	0.15	<	0.18	<	0.39	<	0.1
502.1 105	24	755	<	0.10	<	0.10	<	0.02	<	0.05	<	0.10	<	0.38	<	0.0
502.1 105	25	755	<	0.08	<	0.04	<	0.02	<	0.04	<	0.12	<	0.22	<	0.1
502.1 105	26	755	<	0.10	<	0.04	<	0.06	<	0.05	<	1.50	<	0.34	<	0.1
502.1 105	27	755	<	0.10	<	0.07	<	0.02	<	0.06	<	0.63	<	0.20	<	0.1
502.1 106	25	755	<	0.20	<	0.10	<	0.05	<	0.05	<	0.69	<	0.35	<	0.1
502.1 106	26	755	<	0.10	<	0.07	<	0.03	<	0.04	<	0.22	<	0.37	<	0.0
502.1 106	27	755	<	0.06	<	0.03	<	0.04	<	0.04	<	0.56	<	0.30	<	0.0
502.1 107	23	760	<	0.11	<	0.04	<	0.03	<	0.35	<	0.07	<	0.16	<	0.1
502.1 107	24	760	<	0.12	<	0.05	<	0.01	<	0.01	<	0.07	<	0.36	<	0.0
502.1 107	25	760	<	0.10	<	0.15	<	0.04	<	0.05	<	1.55	<	0.41	<	0.1
502.1 107	26	760	<	0.13	<	0.05	<	0.05	<	0.07	<	0.36	<	0.15	<	0.1
502.1 107	27	761	<	0.10	<	0.03	<	0.02	<	0.05	<	0.09	<	0.32	<	0.1
502.1 108	23	760	<	0.11	<	0.04	<	0.03	<	0.13	<	0.08	<	0.20	<	0.0
502.1 108	24	760	<	0.12	<	0.05	<	0.01	<	0.01	<	0.07	<	0.36	<	0.0
502.1 108	25	760	<	0.10	<	0.15	<	0.04	<	0.05	<	1.55	<	0.41	<	0.1
502.1 108	26	760	<	0.13	<	0.05	<	0.05	<	0.07	<	0.36	<	0.15	<	0.1
502.1 108	27	761	<	0.10	<	0.03	<	0.02	<	0.05	<	0.09	<	0.32	<	0.1
502.1 109	23	760	<	0.11	<	0.04	<	0.03	<	0.35	<	0.07	<	0.16	<	0.1
502.1 109	24	760	<	0.12	<	0.05	<	0.02	<	0.05	<	0.07	<	0.36	<	0.0
502.1 109	25	760	<	0.10	<	0.04	<	0.03	<	0.05	<	0.39	<	0.35	<	0.1
502.1 109	26	760	<	0.11	<	0.04	<	0.07	<	0.10	<	0.55	<	0.59	<	0.2
502.1 109	27	760	<	0.11	<	0.06	<	0.08	<	0.08	<	0.17	<	0.44	<	0.2
502.1 110	23	760	<	0.11	<	0.03	<	0.02	<	0.05	<	0.06	<	0.12	<	0.0
502.1 110	24	760	<	0.11	<	0.03	<	0.04	<	0.05	<	0.05	<	0.24	<	0.1
502.1 110	25	760	<	0.12	<	0.10	<	0.03	<	0.05	<	0.28	<	0.19	<	0.1
502.1 110	26	760	<	0.11	<	0.07	<	0.07	<	0.13	<	0.68	<	0.87	<	0.2
502.1 110	27	760	<	0.11	<	0.03	<	0.04	<	0.06	<	0.13	<	0.31	<	0.1
502.1 111	23	760	<	0.11	<	0.05	<	0.03	<	0.05	<	0.11	<	0.24	<	0.1
502.1 111	24	760	<	0.11	<	0.06	<	0.02	<	0.13	<	0.08	<	0.28	<	0.1

**ANSATEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

1 <	0.01 <	0.09 <	0.03 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.07 <	0.04 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.06 <	0.05 <	0.03	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.08 <	0.03 <	0.02	0.00 <	0.00 <	0.08	0.00
1 <	0.01 <	0.04 <	0.02 <	0.03	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.09 <	0.03 <	0.03	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.02 <	0.03 <	0.03	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.03 <	0.02 <	0.03	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.08 <	0.02 <	0.03 <	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.09 <	0.02 <	0.03 <	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.07 <	0.05 <	0.03	0.00 <	0.00 <	0.08	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03	0.00 <	0.01 <	0.03	0.00
1 <	0.01 <	0.09 <	0.03 <	0.03	0.37 <	0.01 <	0.08	0.38
1 <	0.01 <	0.10 <	0.03 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.01 <	0.03	0.00
1 <	0.01 <	0.10 <	0.04 <	0.03	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.11 <	0.05 <	0.03	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.03 <	0.05 <	0.03	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.08 <	0.04 <	0.03	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.04 <	0.06 <	0.07 <	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.04 <	0.03 <	0.08	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.09 <	0.05 <	0.03	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.08 <	0.02 <	0.03	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.06 <	0.02 <	0.08	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.17 <	0.05 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.04 <	0.03 <	0.08	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.11 <	0.02 <	0.03 <	0.00 <	0.01 <	0.04	0.00
1 <	0.00 <	0.04 <	0.02 <	0.02	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.04 <	0.05 <	0.03	0.39 <	0.01 <	0.10	0.39
1 <	0.01 <	0.08 <	0.02 <	0.03	0.00 <	0.00 <	0.09	0.00
1 <	0.01 <	0.11 <	0.05 <	0.03	0.00 <	0.01 <	0.06	0.01
1 <	0.01 <	0.08 <	0.03 <	0.02	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.07 <	0.03 <	0.02	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.04 <	0.03 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.06 <	0.01 <	0.03 <	0.00 <	0.01 <	0.03	0.00
1 <	0.01 <	0.17 <	0.04 <	0.03	0.41 <	0.01 <	0.08	0.41
1 <	0.01 <	0.06 <	0.05 <	0.04	0.00 <	0.00 <	0.05	0.01
1 <	0.01 <	0.03 <	0.02 <	0.03 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.04 <	0.03 <	0.07 <	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.10 <	0.02 <	0.07 <	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.06 <	0.03 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.27 <	0.09 <	0.07	0.49 <	0.01 <	0.09	0.50
1 <	0.01 <	0.07 <	0.02 <	0.02	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.07 <	0.04 <	0.02	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.01 <	0.09	0.00
1 <	0.01 <	0.04 <	0.03 <	0.03	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.04 <	0.06 <	0.06	0.00 <	0.01 <	0.12	0.00
1 <	0.01 <	0.07 <	0.07 <	0.04 <	0.00 <	0.01 <	0.11	0.00
1 <	0.01 <	0.03 <	0.02 <	0.03 <	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.11 <	0.03 <	0.03	0.00 <	0.00 <	0.05	0.01
1 <	0.01 <	0.08 <	0.06 <	0.07	0.00 <	0.01 <	0.14	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.06 <	0.03 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.07 <	0.02 <	0.07 <	0.00 <	0.00 <	0.05	0.00

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TABLE 502.1-2

502.1 111	25	760	<	0.10	<	0.09	<	0.03	<	0.05		0.26	<	0.30	<	0.11
502.1 111	26	760		0.29	<	0.04	<	0.09	<	0.10		1.03	<	0.58	<	0.19
502.1 111	27	760	<	0.11	<	0.08	<	0.02	<	0.06		0.07	<	0.3	<	0.13
502.1 112	23	760	<	0.11	<	0.07	<	0.02	<	0.05		0.07	<	0.23	<	0.12
502.1 112	24	760	<	0.11	<	0.03	<	0.04	<	0.05		0.14	<	0.19	<	0.06
502.1 112	25	760	<	0.11	<	0.03	<	0.03	<	0.06		0.09	<	0.24	<	0.14
502.1 112	26	760	<	0.11	<	0.05	<	0.02	<	0.07		0.89	<	0.51	<	0.17
502.1 112	27	760	<	0.11	<	0.04	<	0.05	<	0.05		0.06	<	0.42	<	0.15
502.1 113	23	760	<	0.11	<	0.03	<	0.05	<	0.13		0.07	<	0.35	<	0.12
502.1 113	24	760	<	0.11	<	0.03	<	0.03	<	0.05		0.07	<	0.32	<	0.09
502.1 113	25	760		0.13	<	0.03	<	0.04	<	0.05		0.11	<	0.23	<	0.20
502.1 113	26	760	<	0.11	<	0.17	<	0.04	<	0.08		0.59	<	0.30	<	0.22
502.1 113	27	760	<	0.11	<	0.05	<	0.11	<	0.05		0.95	<	0.17	<	0.12
502.1 114	23	760	<	0.12	<	0.05	<	0.02	<	0.06		0.14	<	0.26	<	0.15
502.1 114	24	760	<	0.10	<	0.02	<	0.03	<	0.05		0.07	<	0.24	<	0.14
502.1 114	25	760	<	0.10	<	0.03	<	0.05	<	0.05		0.09	<	0.36	<	0.05
502.1 114	26	760	<	0.11	<	0.06	<	0.04	<	0.06		0.91	<	0.53	<	0.08
502.1 114	27	760	<	0.11	<	0.04	<	0.03	<	0.05		0.07	<	0.33	<	0.08
502.1 115	23	760		1.13	<	0.05	<	0.04	<	0.05		0.09	<	0.36	<	0.11
502.1 115	24	760	<	0.11	<	0.05	<	0.02	<	0.06		0.07	<	0.32	<	0.14
502.1 115	25	760	<	0.09	<	0.05	<	0.04	<	0.06		0.18	<	0.31	<	0.10
502.1 115	26	760	<	0.10	<	0.07	<	0.05	<	0.04		0.58	<	0.27	<	0.15
502.1 115	27	761			<	0.05	<	0.04	<	0.05		0.07	<	0.36	<	0.11
502.1 116	23	760	<	0.11	<	0.08	<	0.07	<	0.05		0.13	<	0.27	<	0.11
502.1 116	24	760	<	0.11	<	0.03	<	0.04	<	0.05		0.07	<	0.10	<	0.13
502.1 116	25	760	<	0.10	<	0.05	<	0.03	<	0.05		0.23	<	0.36	<	0.09
502.1 116	26	760	<	0.11	<	0.03	<	0.05	<	0.04		0.25	<	0.24	<	0.07
502.1 116	27	761			<	0.05	<	0.04	<	0.05		0.05	<	0.29	<	0.09
502.1 117	23	760	<	0.11	<	0.03	<	0.02	<	0.05		0.14	<	0.22	<	0.08
502.1 117	24	760	<	0.11	<	0.03	<	0.02	<	0.05		0.12	<	0.12	<	0.05
502.1 117	25	760	<	0.10	<	0.05	<	0.02	<	0.04		0.09	<	0.13	<	0.14
502.1 117	26	760	<	0.11	<	0.03	<	0.08	<	0.04		0.06	<	0.17	<	0.09
502.1 117	27	761			<	0.07	<	0.03	<	0.06		0.07	<	0.33	<	0.16
502.1 118	23	760	<	0.12	<	0.02	<	0.02	<	0.05		0.07	<	0.21	<	0.08
502.1 118	24	760	<	0.11	<	0.05	<	0.02	<	0.13		0.06	<	0.16	<	0.14
502.1 118	25	760	<	0.10	<	0.06	<	0.03	<	0.05		0.08	<	0.37	<	0.17
502.1 118	26	760	<	0.10	<	0.06	<	0.02	<	0.05		0.07	<	0.31	<	0.06
502.1 118	27	761			<	0.04	<	0.06	<	0.06		0.62	<	0.34	<	0.09
502.1 119	23	760	<	0.11	<	0.05	<	0.04	<	0.04		0.23	<	0.32	<	0.05
502.1 119	24	760	<	0.11	<	0.08	<	0.03	<	0.06		0.07	<	0.21	<	0.08
502.1 119	25	760	<	0.11	<	0.05	<	0.04	<	0.05		0.06	<	0.31	<	0.14
502.1 119	26	760	<	0.10	<	0.07	<	0.02	<	0.05		0.48	<	0.34	<	0.07
502.1 119	27	761			<	0.04	<	0.05	<	0.05		0.07	<	0.30	<	0.08
502.1 120	23	760	<	0.11	<	0.04	<	0.07	<	0.13		0.07	<	0.38	<	0.06
502.1 120	24	760	<	0.11	<	0.07	<	0.05	<	0.04		0.13	<	0.24	<	0.13
502.1 120	25	760	<	0.10	<	0.03	<	0.03	<	0.04		0.11	<	0.26	<	0.06
502.1 120	26	760			<	0.03	<	0.04	<	0.05		0.05	<	0.18	<	0.07
502.1 120	27	761			<	0.02	<	0.02	<	0.05		0.11	<	0.36	<	0.12
502.1 120	28	761			<	0.05	<	0.05	<	0.05		0.33	<	0.27	<	0.15
502.1 121	23	760	<	0.11	<	0.03	<	0.02	<	0.03		0.09	<	0.35	<	0.16
502.1 121	24	760	<	0.10	<	0.04	<	0.05	<	0.06		0.14	<	0.36	<	0.15
502.1 121	25	760	<	0.11	<	0.03	<	0.02	<	0.06		0.14	<	0.28	<	0.14
502.1 121	26	760			<	0.04	<	0.03	<	0.06		0.08	<	0.30	<	0.14
502.1 121	27	760	<	0.11	<	0.03	<	0.04	<	0.05		0.04	<	0.12	<	0.17
502.1 121	28	761			<	0.06	<	0.02	<	0.06		0.08	<	0.16	<	0.14
502.1 122	23	760	<	0.11	<	0.06	<	0.03	<	0.14		0.09	<	0.47	<	0.08
502.1 122	24	760	<	0.10	<	0.04	<	0.04	<	0.05		0.07	<	0.29	<	0.10
502.1 122	25	760	<	0.10	<	0.03	<	0.06	<	0.05		0.16	<	0.34	<	0.07
502.1 122	26	760			<	0.07	<	0.02	<	0.05		0.82	<	0.37	<	0.08
502.1 122	27	761			<	0.11	<	0.11	<	0.06		2.87	<	0.38	<	0.18

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

1 <	0.01 <	0.10 <	0.03 <	0.03	0.00 <	0.00 <	0.06	0.00
1 <	0.02 <	0.04 <	0.08 <	0.06	0.00 <	0.01 <	0.10	0.02
1 <	0.01 <	0.09 <	0.02 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.08 <	0.02 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.06 <	0.02 <	0.04	0.00 <	0.01 <	0.09	0.00
1 <	0.01 <	0.04 <	0.05 <	0.03 <	0.00 <	0.01 <	0.08	0.00
1 <	0.01 <	0.03 <	0.05 <	0.07 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03 <	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.01 <	0.08	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.19 <	0.04 <	0.04	0.00 <	0.00 <	0.11	0.00
1 <	0.01 <	0.06 <	0.10 <	0.03	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.00 <	0.08	0.00
1 <	0.01 <	0.02 <	0.03 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.03 <	0.05 <	0.03	0.00 <	0.01 <	0.03	0.00
1 <	0.01 <	0.07 <	0.04 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.04 <	0.03 <	0.03 <	0.00 <	0.01 <	0.04	0.00
1 <	0.07 <	0.06 <	0.04 <	0.03 <	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.06 <	0.02 <	0.03 <	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.06 <	0.04 <	0.03	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.08 <	0.05 <	0.02	0.00 <	0.00 <	0.08	0.00
1 <	0.06 <	0.04 <	0.04 <	0.03	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.09 <	0.06 <	0.03 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.03 <	0.04 <	0.03 <	0.00 <	0.00 <	0.06	0.00
1 <	0.01 <	0.06 <	0.03 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03	0.00 <	0.01 <	0.05	0.00
1 <	0.01 <	0.03 <	0.05 <	0.02	0.00 <	0.00 <	0.04	0.00
1 <	0.06 <	0.04 <	0.04 <	0.03 <	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.02 <	0.02 <	0.03 <	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.03 <	0.02 <	0.03 <	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.06 <	0.02 <	0.02 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.03 <	0.07 <	0.02 <	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03 <	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.03 <	0.03 <	0.03 <	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.03 <	0.03 <	0.02	0.00 <	0.00 <	0.03	0.00
1 <	0.01 <	0.08 <	0.04 <	0.03 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.02 <	0.02 <	0.03	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.06 <	0.07 <	0.02 <	0.00 <	0.01 <	0.06	0.00
1 <	0.01 <	0.02 <	0.02 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.09 <	0.03 <	0.03 <	0.00 <	0.00 <	0.04	0.00
1 <	0.01 <	0.06 <	0.04 <	0.03 <	0.00 <	0.00 <	0.07	0.00
1 <	0.01 <	0.08 <	0.02 <	0.03	0.00 <	0.01 <	0.07	0.00
1 <	0.01 <	0.07 <	0.03 <	0.03 <	0.00 <	0.01 <	0.09	0.00
1 <	0.01 <	0.07 <	0.03 <	0.08 <	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.04 <	0.04 <	0.03 <	0.00 <	0.00 <	0.05	0.00
1 <	0.01 <	0.03 <	0.05 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.08 <	0.02 <	0.02 <	0.03	0.00 <	0.01 <	0.04	0.00
1 <	0.01 <	0.12 <	0.05 <	0.03	0.76 <	0.01 <	0.09	0.76

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TABLE 502.1-2

502.1 122	28	760	<	0.11	<	0.06	<	0.04	<	0.05	0.56	<	0.24	<	0.17
502.1 123	23	760	<	0.10	<	0.07	<	0.03	<	0.05	0.16	<	0.25	<	0.07
502.1 123	24	760	<	0.10	<	0.03	<	0.03	<	0.05	0.17	<	0.31	<	0.11
502.1 123	25	760	<	0.12	<	0.05	<	0.02	<	0.13	0.08	<	0.27	<	0.21
502.1 123	26	760	<	0.12	<	0.03	<	0.04	<	0.06	0.10	<	0.23	<	0.10
502.1 123	27	760	<	0.10	<	0.02	<	0.03	<	0.06	0.27	<	0.17	<	0.12
502.1 123	28	760	<	0.11	<	0.07	<	0.05	<	0.05	0.12	<	0.30	<	0.13
502.1 124	25	760	<	0.11	<	^ 05	<	0.04	<	0.06	0.04	<	0.37	<	0.31
502.1 124	26	760	<	0.09	<	0.03	<	0.05	<	0.13	0.08	<	0.36	<	0.13
502.1 124	27	760	<	0.10	<	0.06	<	0.04	<	0.13	0.02	<	0.13	<	0.12
502.1 124	28	760	<	0.09	<	0.04	<	0.05	<	0.06	0.08	<	0.18	<	0.10
502.1 125	25	760	<	0.12	<	0.08	<	0.02	<	0.06	0.07	<	0.25	<	0.10
502.1 125	26	760	<	0.10	<	0.05	<	0.04	<	0.05	0.07	<	0.30	<	0.08
502.1 125	27	760	<	0.09	<	0.03	<	0.02	<	0.05	0.08	<	0.13	<	0.12
502.1 125	28	760	<	0.11	<	0.03	<	0.04	<	0.05	0.06	<	0.42	<	0.06
502.1 126	25	760	<	0.10	<	0.05	<	0.02	<	0.13	0.06	<	0.14	<	0.07
502.1 126	26	760	<	0.11	<	0.03	<	0.02	<	0.05	0.03	<	0.40	<	0.12
502.1 126	27	760	<	0.10	<	0.03	<	0.02	<	0.04	0.06	<	0.26	<	0.08
502.1 126	28	760	<	0.11	<	0.06	<	0.03	<	0.05	0.07	<	0.25	<	0.06
502.1 127	25	760	<	0.11	<	0.05	<	0.04	<	0.05	0.06	<	0.17	<	0.15
502.1 127	26	760	<	0.12	<	0.03	<	0.02	<	0.05	0.07	<	0.17	<	0.05
502.1 127	27	760	<	0.12	<	0.03	<	0.03	<	0.05	0.05	<	0.28	<	0.09
502.1 127	28	760	<	0.10	<	0.03	<	0.04	<	0.05	0.06	<	0.34	<	0.13
502.1 128	25	760	<	0.10	<	0.03	<	0.03	<	0.04	0.06	<	0.25	<	0.08
502.1 128	26	760	<	0.10	<	0.08	<	0.02	<	0.05	0.06	<	0.27	<	0.06
502.1 128	27	760	<	0.11	<	0.03	<	0.02	<	0.13	0.08	<	0.25	<	0.12
502.1 128	28	760	<	0.10	<	0.03	<	0.03	<	0.06	0.20	<	0.25	<	0.19
502.1 129	25	760	<	0.10	<	0.08	<	0.04	<	0.13	0.09	<	0.24	<	0.09
502.1 129	26	760	<	0.06	<	0.06	<	0.03	<	0.13	0.06	<	0.22	<	0.09
502.1 129	27	760	<	0.12	<	0.05	<	0.04	<	0.05	0.07	<	0.22	<	0.10
502.1 129	28	760	<	0.11	<	0.07	<	0.06	<	0.13	0.23	<	0.29	<	0.07
502.1 130	25	760	<	0.11	<	0.03	<	0.03	<	0.05	0.07	<	0.39	<	0.06
502.1 130	26	760	<	0.11	<	0.04	<	0.04	<	0.05	0.08	<	0.14	<	0.15
502.1 130	27	760	<	0.09	<	0.07	<	0.04	<	0.05	0.08	<	0.34	<	0.15
502.1 130	28	760	<	0.11	<	0.04	<	0.02	<	0.15	0.14	<	0.19	<	0.11

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1 < 0.01 < 0.03 < 0.03 < 0.03 < 0.00 < 0.00 < 0.10 0.00  
1 < 0.01 < 0.09 < 0.04 < 0.07 < 0.00 < 0.00 < 0.05 0.00  
1 < 0.01 < 0.07 < 0.03 < 0.07 < 0.00 < 0.00 < 0.05 0.00  
1 < 0.01 < 0.06 < 0.04 < 0.03 < 0.00 < 0.00 < 0.05 0.00  
1 < 0.01 < 0.08 < 0.05 < 0.07 < 0.00 < 0.00 < 0.04 0.00  
1 < 0.01 < 0.03 < 0.03 < 0.03 < 0.00 < 0.01 < 0.03 0.00  
1 < 0.01 < 0.04 < 0.04 < 0.03 < 0.00 < 0.00 < 0.08 0.00  
1 < 0.01 < 0.08 < 0.04 < 0.03 < 0.00 < 0.01 < 0.08 0.00  
1 < 0.01 < 0.04 < 0.02 < 0.08 < 0.00 < 0.00 < 0.06 0.00

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## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.2 survey unit was surveyed on an affected area basis and has a surface area of 300 m<sup>2</sup>. 12 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.2 survey unit are provided in 1 attached table as follows:

Table 502.2-1 Concrete Spoils Pile  
gamma exposure rate data

-M6 4-9-97

## CINTICHEM DECOMMISSIONING PLAN

06/05/97

## FINAL SURVEY DATA SHEET

## DATA FOR Affected AREA DESCRIPTION:

CONCRETE SPOILS PILE

AREA 502.2 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 06/05/97

TECHNICIANS:	LT	MATERIAL CODE	
AREA:	502.0	1:CONCRETE	5:PLASTIC
UNIT:	502.2	2:ROCK	6:SOIL
MEDIA TYPE:	CONCRETE	3:WOOD	7:ASPHALT
# of POINTS:	12	4:METAL	8:OTHER(SPECIFY): NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX:	2.00 PASS	10
Avg:	-0.67 PASS	5
STD X:	1.23	
MU SUB ALPHA:	-0.03 PASS	5

TO #	GRID POINT	INST.	ID #	MATER-			
				AREA	AREA	IAL	NET
UREM/HR	BKG	READING	CODE	UREM/HR	UREM/HR	UREM/HR	

502.2	12.5N	7.5W	A	6	5	8	-1
502.2	12.5N	2.5W	A	6	5	8	-1
502.2	12.5N	2.5E	A	6	7	8	1
502.2	7.5N	2.5E	A	6	5	8	-1
502.2	5N	5E	A	6	4	8	-2
502.2	2.5N	7.5E	A	6	6	8	0
502.2	2.5N	2.5E	A	6	5	8	-1
502.2	2.5S	2.5E	A	6	8	8	2
502.2	2.5N	2.5W	A	6	6	8	0
502.2	5N	5W	A	6	5	8	-1
502.2	7.5S	7.5W	A	6	4	8	-2
502.2	7.5N	2.5W	A	6	4	8	-2

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.3 survey unit was surveyed on an affected area basis and has a surface area of 600 m<sup>2</sup>. 33 gamma exposure rate measurement locations were placed in this area using a 10m by 10m grid. In addition a 100% scan was performed in each 10m by 10m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.3 survey unit are provided in 1 attached table as follows:

Table 502.3-1 East Spoils Pile - Soil  
gamma exposure rate data

M66-9-97

## RETABLE 502.3-1

CINTICHEM DECOMMISSIONING PLAN

06/05/97

FINAL SURVEY DATA SHEET

DATA FOR AffECTED AREA DESCRIPTION:

SOUTH SPOILS PILE

AREA 502.3 FOR uR/HR

RADIACTION TYPE: GAMMA SURVEY IN UREM/HR

COMPLETION

DATE: 06/05/97

TECHNICIANS: LT MATERIAL CODE

AREA: 502.0 1:CONCRETE 5:PLASTIC

UNIT: 502.3 2:ROCK 6:SOIL

MEDIA TYPE: CONCRETE 3:WOOD 7:ASPHALT

# of POINTS: 33 4:METAL 8:OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX: 3.00 PASS 10

AVG: 0.09 PASS 5

STD X: 1.38

MU SUB ALPHA: 0.50 PASS 5

# GRID POINT	INST.	ID #	MATER-			
			AREA UREM/HR	AREA UREM/HR	IAL CODE	NET UREM/HR

502.3	17.5	12.5	A	6	7	8	1
502.3	22.5	12.5	A	6	5	8	-1
502.3	27.5	12.5	A	6	7	8	1
502.3	32.5	12.5	A	6	6	8	0
502.3	37.5	12.5	A	6	6	8	0
502.3	42.5	12.5	A	6	5	8	-1
502.3	17.5	7.5	A	6	4	8	-2
502.3	22.5	7.5	A	6	4	8	-2
502.3	27.5	7.5	A	6	5	8	-1
502.3	32.5	7.5	A	6	6	8	0
502.3	37.5	7.5	A	6	5	8	-1
502.3	42.5	7.5	A	6	8	8	2
502.3	25	5	A	6	7	8	1
502.3	35	5	A	6	6	8	0
502.3	22.5	2.5	A	6	4	8	-2
502.3	27.5	2.5	A	6	5	8	-1
502.3	32.5	2.5	A	6	7	8	1
502.3	37.5	2.5	A	6	9	8	3
502.3	42.5	2.5	A	6	6	8	0
502.3	22.5	2.5E	A	6	8	8	2
502.3	27.5	2.5E	A	6	5	8	-1
502.3	32.5	2.5E	A	6	7	8	1
502.3	37.5	2.5E	A	6	5	8	-1
502.3	42.5	2.5E	A	6	6	8	0
502.3	47.5	2.5E	A	6	8	8	2
502.3	25	5E	A	6	4	8	-2
502.3	35	5E	A	6	6	8	0
502.3	45	5E	A	6	6	8	0
502.3	27.5	7.5E	A	6	5	8	-1
502.3	32.5	7.5E	A	6	6	8	0

TABLE 502.3-1

502.3	37.5	7.5E	A	6	7	8	1
502.3	42.5	7.5E	A	6	7	8	1
502.3	47.5	7.5E	H	6	9	8	3

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.4 survey unit was surveyed on an affected area basis. This unit consisted of an underground ceramic pipe drain line that ran from the former "5K" tanks in the Mall Area to a sump in Building 3 and then to an off-site outfall. This pipe was gamma logged in two stages from Manhole #11 (next to the Boilerhouse, up to which the pipe had been removed) to the Building 3 sump and then from the Building 3 sump to Manhole #8. Manhole #8 was chosen as an end point because its outlet did not indicate the presence of contaminated sediment. The 100.15 meters of pipe was gamma logged at 0.6 meter intervals.

Soil samples were obtained next to the pipes at 20 locations evenly spaced along the length of pipes with a set of three samples taken at each location. The set of three soil samples were taken one foot above, next to, and one foot below the pipe.

Measurement and sampling results for the 502.4 survey unit are provided in 3 attached table as follows:

Table 502.4A-1 Process Drain Line Bldg. 3 Sump to Manhole #8  
gamma pipe logging data

Table 502.4A-2 Process Drain Line Bldg. 3 Sump to Manhole #8  
soil sampling data

Table 502.4B-1 Process Drain Line Manhole #11 to Bldg. 3 Sump  
gamma pipe logging data

Table 502.4B-2 Process Drain Line Manhole #11 to Bldg. 3 Sump  
soil sampling data

TABLE 502.4A-1  
 PROCESS DRAIN LINE  
 BUILDING 3 TO MANHOLE #8  
 GAMMA PIPE LOGGING DATA

Survey Unit 502.4A

Location in Pipe (a) ft (meters)	Mean dpm/ 100 cm <sup>2</sup>	2 sigma +/- % error (b)	Fraction of Criteria (c)
0 (0)	Sump at Bldg. 3		NA
0.5' (.15)	5304.48 +/-	4.6	1.41
6' (1.83)	489.91 +/-	1.5	0.13
8' (2.43)	399.80 +/-	1.0	0.11
10' (3.05)	387.85 +/-	1.0	0.10
12' (3.66)	3245.74 +/-	11.7	0.86
14' (4.27)	571.40 +/-	1.8	0.15
16' (4.88)	491.44 +/-	1.7	0.13
18' (5.49)	583.73 +/-	2.0	0.16
20' (6.10)	929.98 +/-	3.4	0.25
22' (6.71)	333.25 +/-	1.2	0.09
24' (7.32)	-1452.76 +/-	5.6	0.00
26' (7.93)	2394.42 +/-	9.0	0.64
28' (8.54)	925.12 +/-	3.4	0.25
30' (9.15)	-795.55 +/-	3.0	0.00
32' (9.76)	32723.81 +/-	111.6	8.70
34' (10.37)	657.44 +/-	2.4	0.17
36' (10.98)	5220.00 +/-	16.6	1.39
38' (11.59)	4232.82 +/-	16.0	1.13
40' (12.20)	1170.82 +/-	4.3	0.31
42' (12.80)	1599.22 +/-	5.7	0.43
44' (13.42)	889.59 +/-	3.4	0.24
46' (14.02)	-17114.71 +/-	63.6	0.00
48' (14.63)	7000.00 +/-	26.5	1.86
50' (15.24)	1122.91 +/-	4.1	0.30
52' (15.85)	954.24 +/-	3.5	0.25
54' (16.46)	-955.89 +/-	3.7	0.00
56' (17.07)	-1780.31 +/-	6.7	0.00
58' (17.69)	(e)		NA
60' (18.30)	(e)		NA
62' (18.91)	(e)		NA
64' (19.51)	-32450.00 +/-	120.2	0.00
66' (20.12)	1685.30 +/-	6.1	0.45
68' (20.74)	(e)		NA
70' (21.35)	(e)		NA
72' (21.95)	-900.15 +/-	3.4	0.00
74' (22.56)	3221.94 +/-	11.4	0.86
76' (23.17)	505.99 +/-	1.6	0.13
78' (23.78)	493.26 +/-	1.7	0.13
80' (24.40)	(e)		NA
82' (25.01)	(e)		NA
84' (25.62)	(e)		NA
86' (26.23)	(e)		NA
88' (26.84)	(e)		NA
90' (27.45)	(e)		NA

92' (28.06)	(e)		NA
94' (28.67)	(e)		NA
96' (29.27)	1788.81 +/-	7.1	0.48
98' (29.88)	-3917.19 +/-	15.7	0.00
100' (30.49)	-507.17 +/-	2.2	0.00
102' (31.10)	-5936.86 +/-	8.0	0.00
104' (31.71)	-1148.81 +/-	4.8	0.00
106' (32.32)	-1281.44 +/-	5.4	0.00
108' (32.93)	9120.41 +/-	38.5	2.42
110' (33.54)	1326.18 +/-	5.5	0.35
112' (34.15)	-10788.10 +/-	45.4	0.00
114' (34.76)	-342.30 +/-	1.5	0.00
116' (35.37)	-665.86 +/-	2.7	0.00
118' (35.98)	476.68 +/-	1.9	0.13
120' (36.59)	-3118.35 +/-	12.7	0.00
122' (37.20)	-11860.47 +/-	47.1	0.00
124' (37.81)	785.63 +/-	2.9	0.21
126' (38.42)	-1336.52 +/-	5.2	0.00
128' (39.02)	579.97 +/-	1.9	0.15
130' (39.63)	574.93 +/-	2.0	0.15
<hr/>			
pop. mean <=	-81.67386 (d)	<=	0.4805 (d)

- (a) Distance of detector from West end of pipe.
- (b) As averaged over the bottom half of a 0.6m length of pipe  
(a surface area of 2280cm<sup>2</sup>)
- (c) Specific pipe mixture criteria (3762 dpm/100cm<sup>2</sup>)
- (d) Calculated mean values were determined using zero in lieu  
of negative results.

## A-1 TABLE 502.4A-2

CINTICHEM DECOMMISSIONING PLAN 06/27/97

FINAL SURVEY DATA SHEET

DATA FOR AFFECTED AREA DESCRIPTION:

PROCESS DRAIN LINE BUILDING 3 TO MANHOLE #8

AREA 502.4A

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 9/96  
 TECHNICIANS: JMC  
 AREA: 502.0  
 UNIT: 502.4A  
 MEDIA TYPE: SOIL  
 # of POINTS: 27

## SOIL DATA IN

SUM OF FRACTIONS:		LIMIT
MAX	0.48	PASS 1
AVG.	0.06	PASS 1
STD X	0.11	
MU SUB ALPHA	0.09	PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID # OR OTHER ID	GRID COORDINATES	No	DEPTH IN FT.	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)						
				SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	
502.4A		2	10.5 < 0.12 <	0.05 < 0.02 < 0.05 < 0.14 < 0.27 < 0.18						1
502.4A		2	11.5 < 0.11 <	0.18 < 0.05 < 0.17 < 0.10 < 0.55 < 0.36						1
502.4A		2	12.5 < 0.12 <	0.07 < 0.03 < 0.07 < 0.12 < 0.54 < 0.12						1
502.4A		3	11.75 < 0.11 <	0.13 < 0.05 < 0.10 < 0.12 < 0.52 < 0.30						1
502.4A		3	12.75 < 0.11 <	0.09 < 0.05 < 0.05 < 0.06 < 0.22 < 0.11						1
502.4A		3	13.75 < 0.11	0.12 < 0.05 < 0.16 < 0.07 < 0.54 < 0.21						1
502.4A		4	10.5 < 0.12 <	0.07 < 0.05 < 0.07 < 0.14 < 0.46 < 0.23						1
502.4A		4	11.5 < 0.12 <	0.06 < 0.08 < 0.07 < 0.35 < 0.38 < 0.26						1
502.4A		4	12.5 < 0.12 <	0.10 < 0.04 < 0.12 < 0.19 < 0.37 < 0.15						1
502.4A		5	5.5 < 0.10 <	0.12 < 0.05 < 0.16 < 0.40 < 0.60 < 0.21						1
502.4A		5	6.5 < 0.10 <	0.24 < 0.17 < 0.17 < 0.14 < 0.58 < 0.42						1
502.4A		5	7.5 < 0.10 <	0.10 < 0.04 < 0.12 < 0.23 < 0.59 < 0.15						1
502.4A		6	5 < 0.11 <	0.06 < 0.05 < 0.06 < 0.15 < 0.23 < 0.16						1
502.4A		6	6 < 0.11 <	0.16 < 0.09 < 0.10 < 0.24 < 0.48 < 0.15						1
502.4A		6	7 < 0.11 <	0.06 < 0.04 < 0.06 < 0.13 < 0.42 < 0.17						1
502.4A		7	5 < 0.10 <	0.04 < 0.05 < 0.05 < 0.08 < 0.15 < 0.07						1
502.4A		7	6 < 0.10 <	0.07 < 0.06 < 0.10 < 0.13 < 0.57 < 0.37						1
502.4A		7	7 < 0.10 <	0.07 < 0.08 < 0.08 < 0.07 < 0.21 < 0.24						1
502.4A		8	5 < 0.16 <	0.04 < 0.05 < 0.05 < 0.06 < 0.38 < 0.07						1
502.4A		8	6 < 0.10 <	0.04 < 0.04 < 0.07 < 0.08 < 0.22 < 0.16						1
502.4A		8	7 < 0.10 <	0.04 < 0.03 < 0.06 < 0.07 < 0.30 < 0.17						1
502.4A		9	5 < 0.11 <	0.08 < 0.05 < 0.06 < 0.15 < 0.12 < 0.09						1
502.4A		9	6 < 0.11 <	0.06 < 0.03 < 0.05 < 0.06 < 0.25 < 0.06						1
502.4A		9	7 < 0.12 <	0.06 < 0.03 < 0.04 < 0.06 < 0.23 < 0.15						1
502.4A		10	5 < 0.15 <	0.08 < 0.03 < 0.05 < 0.84 < 0.23 < 0.18						1
502.4A		10	6 < 0.11 <	0.15 < 0.05 < 0.08 < 1.83 < 0.21 < 0.18						1
502.4A		10	7 < 0.50 <	0.10 < 0.05 < 0.04 < 0.91 < 0.17 < 0.10						1

JAG 6-27-91

ISOTOPES OF CONCERN INDIVIDUAL SAMPLE FRACTION OF LIMIT  
(WITHOUT Cs-137 BACKGROUND OF 1.25 pCi/gm SUBTRACTED)

SR-90 CO-50 AG-108M CS-134 CS-137 CE-144 EU-152 SUM

ANSTEC  
APERTURE  
CARD

0.007 <	0.056 <	0.018 <	0.028 <	0.037 <	0.004 <	0.090	0.000
0.006 <	0.200	0.045 <	0.094	0.026 <	0.009 <	0.180	0.072
0.007 <	0.078 <	0.027 <	0.039 <	0.032 <	0.009 <	0.060	0.000
0.006 <	0.144 <	0.045 <	0.056 <	0.032 <	0.008 <	0.150	0.000
0.006 <	0.100 <	0.045 <	0.028 <	0.016 <	0.003 <	0.055	0.000
0.006	0.133 <	0.045 <	0.089 <	0.018 <	0.009 <	0.105	0.133
0.007 <	0.078 <	0.045 <	0.039 <	0.037 <	0.007 <	0.115	0.000
0.007 <	0.067 <	0.073 <	0.039	0.092 <	0.006 <	0.130	0.092
0.007 <	0.111 <	0.036 <	0.067 <	0.050 <	0.006 <	0.075	0.000
0.006 <	0.133 <	0.045 <	0.089	0.105 <	0.010 <	0.105	0.105
0.006 <	0.267 <	0.155 <	0.094 <	0.037 <	0.009 <	0.210	0.000
0.006 <	0.111 <	0.036 <	0.067	0.061 <	0.009 <	0.075	0.061
0.006 <	0.067 <	0.045 <	0.033	0.039 <	0.004 <	0.080	0.039
0.006 <	0.178 <	0.082 <	0.056 <	0.063 <	0.008 <	0.075	0.000
0.006 <	0.067 <	0.036 <	0.033 <	0.034 <	0.007 <	0.085	0.000
0.006 <	0.044 <	0.045 <	0.028 <	0.021 <	0.002 <	0.035	0.000
0.006 <	0.078 <	0.055 <	0.056 <	0.034 <	0.009 <	0.185	0.000
0.006 <	0.078 <	0.073 <	0.044 <	0.018 <	0.003 <	0.120	0.000
0.009 <	0.044 <	0.045 <	0.028 <	0.016 <	0.006 <	0.035	0.009
0.006 <	0.044 <	0.036 <	0.039 <	0.021 <	0.003 <	0.080	0.000
0.006 <	0.044 <	0.027 <	0.033 <	0.018 <	0.005 <	0.085	0.000
0.006 <	0.089 <	0.045 <	0.033	0.039 <	0.002 <	0.045	0.039
0.006 <	0.067 <	0.027 <	0.028 <	0.016 <	0.004 <	0.030	0.000
0.007 <	0.057 <	0.027 <	0.022 <	0.016 <	0.004 <	0.075	0.007
0.009 <	0.089 <	0.027 <	0.028	0.221 <	0.004 <	0.090	0.230
0.006 <	0.167 <	0.045 <	0.044	0.482 <	0.003 <	0.090	0.482
0.029 <	0.111 <	0.045 <	0.022	0.239 <	0.003 <	0.050	0.269

Also Available on  
Aperture Card

9707240076-41

TABLE 502.4B-1  
 PROCESS DRAIN LINE  
 MANHOLE 11 TO BUILDING 3 SUMP  
 GAMMA PIPE LOGGING DATA

Survey Unit 502.4B

Location in Pipe (a)	Mean dpm/ 100 cm <sup>2</sup>	2 sigma % error (b)	Fraction of Criteria (c)
ft	meters		
0	0	Building 3 sump	NA
2	0.61	Pipe section removed	NA
4	1.22	3540.432 +/- 1.1	0.94
6	1.83	262.14 +/- 14.4	0.07
8	2.44	596.754 +/- 6.4	0.16
10	3.05	1131.828 +/- 3.2	0.30
12	3.66	798.756 +/- 4.7	0.21
14	4.27	595.212 +/- 6.1	0.16
16	4.88	-87.894 +/- 44.5	0.00
18	5.49	2020.02 +/- 1.8	0.54
20	6.10	385.5 +/- 9.7	0.10
22	6.71	481.104 +/- 7.8	0.13
24	7.32	Pipe section removed	NA
26	7.93	Pipe section removed	NA
28	8.54	Pipe section removed	NA
30	9.15	Pipe section removed	NA
32	9.76	Pipe section removed	NA
34	10.37	923.658 +/- 4.0	0.25
36	10.98	1790.262 +/- 2.0	0.48
38	11.59	269.85 +/- 13.8	0.07
40	12.20	-217.422 +/- 17.4	0.00
42	12.81	1753.254 +/- 2.0	0.47
43	13.12	226.674 +/- 16.5	0.06
44	13.42	4220.454 +/- 0.9	1.12
45	13.73	354.66 +/- 10.6	0.09
46	14.03	-69.39 +/- 53.9	0.00
48	14.64	322.278 +/- 11.7	0.09
50	15.25	629.136 +/- 6.0	0.17
52	15.86	55.512 +/- 68.6	0.01
54	16.47	1518.87 +/- 2.4	0.40
56	17.08	-948.33 +/- 4.1	0.00
58	17.69	-1047.02 +/- 3.8	0.00
60	18.30	2151.09 +/- 1.8	0.57
62	18.91	829.596 +/- 4.8	0.22
63	19.22	450.264 +/- 8.9	0.12
64	19.52	5281.35 +/- 0.8	1.40
66	20.13	912.864 +/- 4.3	0.24
68	20.74	-320.736 +/- 7.5	0.00
70	21.35	1964.508 +/- 1.9	0.52
72	21.96	1141.08 +/- 3.3	0.30
74	22.57	-1006.93 +/- 3.9	0.00
76	23.18	555.12 +/- 6.8	0.15
78	23.79	934.452 +/- 4.0	0.25
80	24.40	417.882 +/- 9.4	0.11

82	25.01	-646.098 +/-	6.1	0.00
84	25.62	6.168 +/-	629.8	0.00
86	26.23	-1116.41 +/-	3.6	0.00
88	26.84	598.296 +/-	6.7	0.16
90	27.45	845.016 +/-	4.6	0.22
92	28.06	212.796 +/-	19.9	0.06
94	28.67	168.078 +/-	24.2	0.04
96	29.28	451.806 +/-	8.9	0.12
98	29.89	1659.192 +/-	2.3	0.44
100	30.50	7174.926 +/-	0.7	1.91
102	31.11	(e)		NA
104	31.72	(e)		NA
106	32.33	(e)		NA
106.5	32.48	-1546.63 +/-	2.7	0.00
107.5	32.79	858.894 +/-	4.7	0.23
108.5	33.09	10525.69 +/-	0.5	2.80
109.5	33.40	3585.15 +/-	1.2	0.95
110.5	33.70	1087.11 +/-	3.7	0.29
112.5	34.31	3540.432 +/-	1.3	0.94
114.5	34.92	-948.33 +/-	4.2	0.00
116.5	35.53	2420.94 +/-	1.8	0.64
118.5	36.14	-471.852 +/-	8.2	0.00
120.5	36.75	-1097.9 +/-	3.5	0.00
122.5	37.36	704.694 +/-	5.4	0.19
124.5	37.97	1503.45 +/-	2.5	0.40
126.5	38.58	-192.75 +/-	20.4	0.00
128.5	39.19	771 +/-	4.9	0.20
130.5	39.80	2303.748 +/-	1.6	0.61
132.5	40.41	-345.408 +/-	11.9	0.00
134.5	41.02	294.522 +/-	13.4	0.08
136.5	41.63	831.138 +/-	4.5	0.22
138.5	42.24	809.55 +/-	4.9	0.22
140.5	42.85	1449.48 +/-	2.8	0.39
142.5	43.46	3469.5 +/-	1.3	0.92
144.5	44.07	1646.856 +/-	2.6	0.44
146.5	44.68	1679.238 +/-	2.4	0.45
148.5	45.29	15.42 +/-	259.6	0.00
150.5	45.90	-374.706 +/-	10.8	0.00
152.5	46.51	-897.444 +/-	4.6	0.00
154.5	47.12	-232.842 +/-	18.2	0.00
156.5	47.73	377.79 +/-	11.1	0.10
158.5	48.34	164.994 +/-	24.8	0.04
160.5	48.95	-223.59 +/-	18.5	0.00
162.5	49.56	3488.004 +/-	1.3	0.93
164.5	50.17	7905.834 +/-	0.6	2.10
166.5	50.78	1500.366 +/-	2.7	0.40
167.5	51.09	2399.352 +/-	1.7	0.64
168.5	51.39	7995.27 +/-	0.6	2.13
169.5	51.70	5269.014 +/-	1.0	1.40
170.5	52.00	4698.474 +/-	1.0	1.25
172.5	52.61	2838.822 +/-	1.4	0.75
174.5	53.22	-106.398 +/-	38.4	0.00
176.5	53.83	1608.306 +/-	2.5	0.43
178.5	54.44	-266.766 +/-	13.0	0.00
180.5	55.05	283.728 +/-	12.8	0.08
182.5	55.66	2370.054 +/-	1.6	0.63

184.5	56.27	-272.934 +/-	12.2	0.00
186.5	56.88	-2932.88 +/-	1.4	0.00
187.5	57.19	1744.002 +/-	2.0	0.46
188.5	57.49	-1909 +/-	1.9	0.00
190.5	58.10	2422.482 +/-	1.7	0.64
192.5	58.71	-709.32 +/-	5.2	0.00
194.5	59.32	2275.992 +/-	1.8	0.60
196.5	59.93	4646.046 +/-	0.9	1.23
198.5	60.54	Manhole #11		NA

-----  
pop. mean <= 1215.584 (d) <= 0.3719 (d)

- (a) Distance of detector starting at north (Bldg. 3) end of pipe.
- (b) As averaged over a 0.6m length of pipe  
(a surface area of 3830cm<sup>2</sup>)
- (c) Specific pipe mixture criteria (3762 dpm/100cm<sup>2</sup>)
- (d) Calculated mean values were determined using zero in lieu  
of negative results.
- (e) This section of pipe is in-accessible with the detector,  
i.e. maximum cable length is 120', however access to manhole or  
sump area precluded use of entire cable. Therefore gamma logging  
from each end was unable to reach the middle 1.98 meters  
portion of the pipe.

CINTICHEM DECOMMISSIONING PLAN 07/01/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

PROCESS DRAIN LINE MANHOLE #1 TO BLDG. #3 SUMP

AREA 502.4B

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 9/96

TECHNICIANS: JMC

AREA: 502.0

UNIT: 502.4B

MEDIA TYPE: SOIL

# OF POINTS: 25

SOIL DATA IN

SUM OF FRACTIONS:	LIMIT
MAX	0.00 PASS 1*
AVG.	0.00 PASS 1*
STD Y	0.00
HU SUB ALPHA	0.00 PASS 1*

ID #	GRID COORDINATES OR OTHER ID	SAMPLE ELEVATION (FEET)	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)						ISOTOPES OF CONCERN IN (WITHOUT Cs-137 BACKGR)		
			SR-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SOIL CODE	SR-90

502.4B	21W,45H	759.0-760.0	UNABLE TO OBTAIN SAMPLE FOR THIS INTERVAL									
502.4B	21W,45H	760.0-761.0	< * < 0.15 < 0.21 < 0.22 < 0.17 < 0.95 < 0.42	1	< 0.000	< 0.167	< 0.1					
502.4B	21W,45N	761.0-762.0	< * < 0.22 < 0.25 < 0.25 < 0.25 < 0.97 < 0.59	1	< 0.000	< 0.244	< 0.2					
502.4B	21W,51H	759.0-760.0	< * < 0.12 < 0.03 < 0.21 < 0.08 < 0.46 < 0.10	1	< 0.000	< 0.133	< 0.0					
502.4B	21W,51H	760.0-761.0	< * < 0.03 < 0.02 < 0.06 < 0.05 < 0.30 < 0.15	1	< 0.000	< 0.033	< 0.0					
502.4B	21W,51H	761.0-762.0	< * < 0.05 < 0.04 < 0.10 < 0.07 < 0.27 < 0.16	1	< 0.000	< 0.056	< 0.0					
502.4B	21W,57H	758.0-759.0	< * < 0.06 < 0.11 < 0.08 < 0.10 < 0.32 < 0.15	1	< 0.000	< 0.067	< 0.1					
502.4B	21W,57H	759.0-760.0	< * < 0.04 < 0.03 < 0.20 < 0.10 < 0.49 < 0.12	1	< 0.000	< 0.044	< 0.0					
502.4B	21W,57H	760.0-761.0	< * < 0.04 < 0.02 < 0.05 < 0.02 < 0.21 < 0.12	1	< 0.000	< 0.044	< 0.0					
502.4B	21W,63H	757.5-758.5	< * < 0.06 < 0.03 < 0.07 < 0.11 < 0.57 < 0.22	1	< 0.000	< 0.067	< 0.0					
502.4B	21W,63H	758.5-759.5	< * < 0.07 < 0.11 < 0.21 < 0.09 < 0.20 < 0.15	1	< 0.000	< 0.078	< 0.1					
502.4B	21W,63H	759.5-760.5	UNABLE TO OBTAIN SAMPLE FOR THIS INTERVAL									
502.4B	21W,71H	757.0-758.0	< * < 0.06 < 0.02 < 0.08 < 0.08 < 0.26 < 0.14	1	< 0.000	< 0.067	< 0.0					
502.4B	21W,71H	758.0-759.0	< * < 0.09 < 0.04 < 0.07 < 0.08 < 0.44 < 0.09	1	< 0.000	< 0.100	< 0.0					
502.4B	21W,71H	759.0-760.0	< * < 0.12 < 0.09 < 0.10 < 0.14 < 0.56 < 0.22	1	< 0.000	< 0.133	< 0.0					
502.4B	21W,75H	755.0-756.0	< * < 0.07 < 0.05 < 0.06 < 0.03 < 0.17 < 0.15	1	< 0.000	< 0.078	< 0.0					
502.4B	21W,75H	756.0-757.5	< * < 0.04 < 0.02 < 0.07 < 0.09 < 0.29 < 0.20	1	< 0.000	< 0.044	< 0.0					
502.4B	21W,75H	757.5-758.0	< * < 0.39 < 0.10 < 0.29 < 0.25 < 1.29 < 0.48	1	< 0.000	< 0.433	< 0.0					
502.4B	21W,81H	754.0-755.0	< * < 0.04 < 0.03 < 0.07 < 0.07 < 0.38 < 0.09	1	< 0.000	< 0.044	< 0.0					
502.4B	21W,81H	755.0-756.0	< * < 0.18 < 0.12 < 0.13 < 0.17 < 0.55 < 0.22	1	< 0.000	< 0.200	< 0.1					
502.4B	21W,81H	756.0-757.0	< * < 0.11 < 0.09 < 0.09 < 0.35 < 0.26 < 0.14	1	< 0.000	< 0.122	< 0.0					
502.4B	22.5W,87H	754.5-755.5	< * < 0.03 < 0.04 < 0.07 < 0.04 < 0.36 < 0.09	1	< 0.000	< 0.033	< 0.0					
502.4B	22.5W,87H	755.5-756.5	< * < 0.04 < 0.02 < 0.05 < 0.05 < 0.17 < 0.12	1	< 0.000	< 0.044	< 0.0					
502.4B	22.5W,87H	756.5-757.5	UNABLE TO OBTAIN SAMPLE FOR THIS INTERVAL									
502.4B	23W,93H	753.0-754.0	< * < 0.08 < 0.02 < 0.06 < 0.06 < 0.36 < 0.17	1	< 0.000	< 0.089	< 0.0					
502.4B	23W,93H	754.0-755.0	< * < 0.19 < 0.08 < 0.11 < 0.07 < 0.44 < 0.30	1	< 0.000	< 0.211	< 0.0					
502.4B	23W,93H	755.0-756.0	UNABLE TO OBTAIN SAMPLE FOR THIS INTERVAL									
502.4B	23W,99H	752.0-753.0	< * < 0.12 < 0.04 < 0.09 < 0.09 < 0.74 < 0.17	1	< 0.000	< 0.133	< 0.0					
502.4B	23W,99H	753.0-754.0	< * < 0.05 < 0.10 < 0.25 < 0.12 < 0.29 < 0.24	1	< 0.000	< 0.056	< 0.0					
502.4B	23W,99H	755.0-756.0	UNABLE TO OBTAIN SAMPLE FOR THIS INTERVAL									

\*SR-90 RESULTS NOT AVAILABLE AT THIS TIME

**ANSTEC  
APERTURE  
CARD**

DUAL SAMPLE FRACTION OF LIMIT  
OF 1.25 pCi/gm SUBTRACTED)  
CS-134 CS-137 CE-144 EU-152 SUM

Also Available on  
Aperture Card

0.122 < 0.045 < 0.015 < 0.210 0.000  
0.139 < 0.066 < 0.015 < 0.295 0.000  
0.117 < 0.021 < 0.007 < 0.050 0.000  
0.033 < 0.013 < 0.005 < 0.075 0.000  
0.056 < 0.018 < 0.004 < 0.080 0.000  
0.044 < 0.026 < 0.005 < 0.075 0.000  
0.111 < 0.026 < 0.008 < 0.060 0.000  
0.028 < 0.005 < 0.003 < 0.060 0.000  
0.039 < 0.029 < 0.009 < 0.110 0.000  
0.117 < 0.024 < 0.003 < 0.075 0.000

0.044 < 0.021 < 0.004 < 0.070 0.000  
0.039 < 0.021 < 0.007 < 0.045 0.000  
0.056 < 0.037 < 0.009 < 0.110 0.000  
0.033 < 0.008 < 0.003 < 0.075 0.000  
0.039 < 0.024 < 0.005 < 0.100 0.000  
0.161 < 0.066 < 0.020 < 0.240 0.000  
0.039 < 0.016 < 0.006 < 0.045 0.000  
0.072 < 0.045 < 0.009 < 0.110 0.000  
0.050 < 0.092 < 0.004 < 0.070 0.000  
0.039 < 0.011 < 0.006 < 0.045 0.000  
0.028 < 0.015 < 0.003 < 0.060 0.000

0.033 < 0.016 < 0.006 < 0.085 0.000  
0.061 < 0.018 < 0.007 < 0.150 0.000  
0.050 < 0.024 < 0.012 < 0.085 0.000  
0.139 < 0.032 < 0.005 < 0.120 0.000

9707240076-42

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.5 survey unit was surveyed on an affected area basis. 156 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 1m by 1m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 156 removable surface contamination measurement locations were placed in this area using a 1m by 1m grid. In addition a 100% scan was performed in each 1m by 1m grid location. The location of these measurements is shown in the accompanying diagrams.

Measurement and sampling results for the 502.5 survey unit are provided in 4 attached tables as follows:

- Table 502.5-1 Manhole 11 - Outside Boilerhouse  
direct beta/gamma surface contamination data
- Table 502.5-2 Manhole 11 - Outside Boilerhouse  
direct alpha surface contamination data
- Table 502.5-3 Manhole 11 - Outside Boilerhouse  
removable beta/gamma surface contamination data
- Table 502.5-4 Manhole 11 - Outside Boilerhouse  
removable alpha surface contamination data

Final Survey Area.  
Interior  
Manhole # 11  
502.5

p.1 of 7

2	6		17	18	22
3		7		19	
4	5	8	20	21	28
9	12		24	25	29
11		15		26	
12	13	16	27	28	30

NORTH  
WALL

EAST WALL

31	32	36		47	48	52
33		37		49		
34	35	38		50	51	53
39	40	44		54	55	59
41		45		56		
42	43	46		57	58	60

SOUTH WALL

WEST WALL

61	62	66		72	73	77
63		67		74		78
64	65	68		75	76	79
66		71		80	81	
70						

CEILING

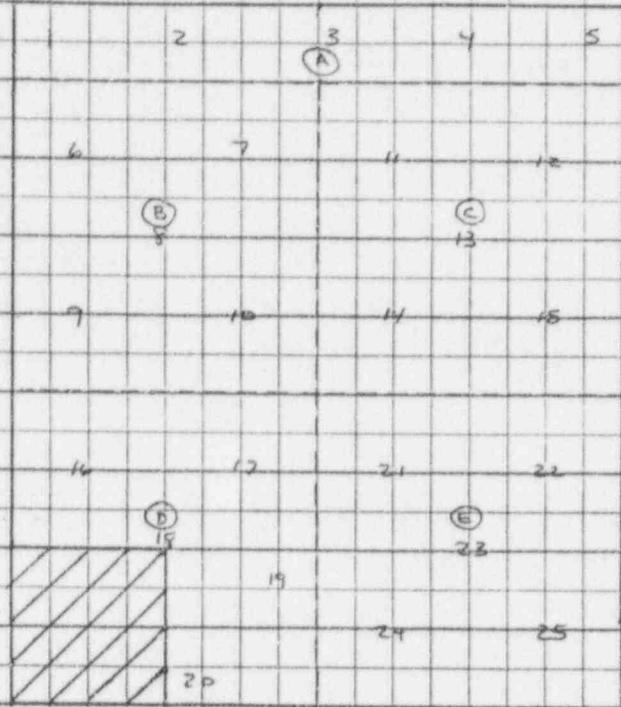
FLOOR

NOTES: MANHOLE 100% FILLED WITH RUBBISH  
LARGEST 17" DIA.

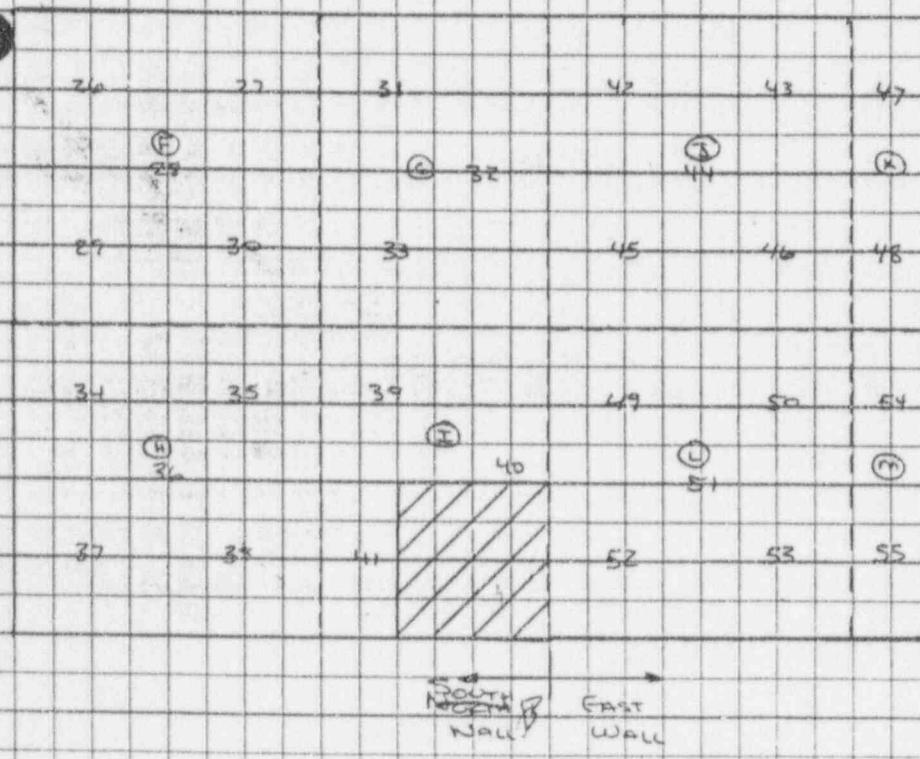
TECHNICIANS:

J. BARON  
F. MORSEY

DATE: 4-2-96

EXTERIOR MANHOLE SURVEY #11

North Wall



SOUTH  
WESTERN WALL  
EAST  
WALL

TECHS: J. BABONI  
F. MOREY

DATE: 4-4-96

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 502.5

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)	Removable Alpha	Removable Beta
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	464	16	14	40
Number of Meas.:	NA	156	156	156	156
Survey Unit Mean:	NA	297	17	0.5	7
True Mean; U alpha 95% C.L.:	NA	333	20	0.7	8
Criteria	5	1273	5000	1000	255
Acceptable Y/N	Y	Y	Y	Y	Y
Max Grid Block Wt. Mean	NA	846	182	5	33
Criteria	10	1273	5000	1000	255
Acceptable Y/N	Y	Y	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE	NONE	NONE
Criteria	NA	NA	NA	NA	NA
Acceptable Y/N	NA	NA	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural radioactive material content

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

MANHOLE 11 - OUTSIDE BOILERHOUSE

AREA 502.5 FOR BETA

RADIATION TYPE: I BETA SCALING FACTOR = 0.975  
COMPLETION

DATE: 04/04/96

TECHNICIANS: JB/FM MATERIAL CODE

AREA: 502.0 1=CONCRETE 5=PLASTIC

UNIT: 502.5 2=ROCK 6=SOIL

MEDIA TYPE: BRICK/CONCRETE 3=WOOD 7=ASPHALT

# OF POINTS: 156 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR INDO GRID 846 PASS 1273

AVG - SURVEY UNIT 297 PASS 1273

STD X 269

MU SUB ALPHA 333 PASS 1273

MAX HOT SPOT NONE PASS 3818

## WEIGHTED

ID #	GRID COORDINATES	GRID ID	LOCATION	INST.	BETA	BETA	SCAN	TOTAL	CONT. MATER-	MDA	DPM/	100 CM^2	100 CM^2 TEST	WEIGHTED AVG.	AVG.	MAX	INST. EFF.
					INST. AREA COUNTS/ CPM	FIXED 1 COUNTS CPM	MAX BETA MINUTES	AREA CM^2									
502.5	INTERIOR	1	3	579	546	0	0	8	438	-126 +/- 251	NA				0.2685		
502.5		2	3	579	563	0	0	8	438	-61 +/- 253	NA				0.2685		
502.5		3	3	579	585	0	0	8	438	23 +/- 255	NA				0.2685		
502.5		4	3	579	608	0	0	8	438	111 +/- 258	NA				0.2685		
502.5		5	3	579	518	0	0	8	438	-233 +/- 248	NA				0.2685		
502.5		6	3	579	579	0	0	8	438	0 +/- 255	NA				0.2685		
502.5		7	3	579	576	0	0	8	438	-11 +/- 254	NA				0.2685		
502.5		8	3	579	598	0	0	8	438	73 +/- 257	NA				0.2685		
502.5		9	3	579	637	0	0	8	438	222 +/- 261	NA				0.2685		
502.5		10	3	579	605	0	0	8	438	99 +/- 258	NA				0.2685		
502.5		11	3	579	620	0	0	8	438	157 +/- 259	NA				0.2685		
502.5		12	3	579	658	0	0	8	438	302 +/- 263	NA				0.2685		
502.5		13	3	579	625	0	0	8	438	176 +/- 260	NA				0.2685		
502.5		14	3	579	681	0	0	8	438	390 +/- 266	NA				0.2685		
502.5		15	3	579	650	0	0	8	438	271 +/- 262	NA				0.2685		
502.5		16	3	579	534	0	0	8	438	-172 +/- 250	NA				0.2685		
502.5		17	3	579	584	0	0	8	438	19 +/- 255	NA				0.2685		
502.5		18	3	579	734	0	0	8	438	592 +/- 271	NA				0.2685		
502.5		19	3	579	791	0	0	8	438	810 +/- 277	NA				0.2685		
502.5		20	3	579	550	0	0	8	438	-111 +/- 252	NA				0.2685		
502.5		21	5	594	625	0	0	8	448	120 +/- 264	NA				0.2656		
502.5		22	5	594	673	0	0	8	448	305 +/- 269	NA				0.2656		
502.5		23	5	594	684	0	0	8	448	348 +/- 271	NA				0.2656		
502.5		24	5	594	678	0	0	8	448	324 +/- 270	NA				0.2656		
502.5		25	5	594	656	0	0	8	448	239 +/- 268	NA				0.2656		
502.5		26	5	594	659	0	0	8	448	251 +/- 268	NA				0.2656		
502.5		27	5	594	771	0	0	8	448	684 +/- 280	NA				0.2656		
502.5		28	5	594	662	0	0	8	448	263 +/- 268	NA				0.2656		
502.5		29	5	594	722	0	0	8	448	494 +/- 275	NA				0.2656		
502.5		30	5	594	731	0	0	8	448	529 +/- 276	NA				0.2656		

TABLE 502.5-1

502.5	31	5	594	601	0	0	8	448	27 +/- 262	NA	0.2656
502.5	32	5	594	701	0	0	8	448	413 +/- 272	NA	0.2656
502.5	33	5	594	686	0	0	8	448	355 +/- 271	NA	0.2656
502.5	34	5	594	677	0	0	8	448	321 +/- 270	NA	0.2656
502.5	35	5	594	646	0	0	8	448	201 +/- 267	NA	0.2656
502.5	36	5	594	683	0	0	8	448	344 +/- 270	NA	0.2656
502.5	37	5	594	744	0	0	8	448	579 +/- 277	NA	0.2656
502.5	38	5	594	740	0	0	8	448	564 +/- 276	NA	0.2656
502.5	39	5	594	710	0	0	8	448	448 +/- 273	NA	0.2656
502.5	40	5	594	687	0	0	8	448	359 +/- 271	NA	0.2656
502.5	41	5	594	647	0	0	8	448	205 +/- 267	NA	0.2656
502.5	42	5	594	737	0	0	8	448	552 +/- 276	NA	0.2656
502.5	43	5	594	775	0	0	8	448	699 +/- 280	NA	0.2656
502.5	44	5	594	751	0	0	8	448	606 +/- 278	NA	0.2656
502.5	45	5	594	727	0	0	8	448	514 +/- 275	NA	0.2656
502.5	46	5	594	787	0	0	8	448	745 +/- 281	NA	0.2656
502.5	47	5	594	795	0	0	8	448	776 +/- 282	NA	0.2656
502.5	48	5	594	656	0	0	8	448	239 +/- 268	NA	0.2656
502.5	49	5	594	665	0	0	8	448	274 +/- 269	NA	0.2656
502.5	50	5	594	701	0	0	8	448	413 +/- 272	NA	0.2656
502.5	51	5	594	689	0	0	8	448	367 +/- 271	NA	0.2656
502.5	52	5	594	649	0	0	8	448	212 +/- 267	NA	0.2656
502.5	53	5	594	684	0	0	8	448	348 +/- 271	NA	0.2656
502.5	54	5	594	651	0	0	8	448	220 +/- 267	NA	0.2656
502.5	55	5	594	714	0	0	8	448	463 +/- 274	NA	0.2656
502.5	56	5	594	693	0	0	8	448	382 +/- 272	NA	0.2656
502.5	57	5	594	764	0	0	8	448	656 +/- 279	NA	0.2656
502.5	58	5	594	708	0	0	8	448	440 +/- 273	NA	0.2656
502.5	59	5	594	723	0	0	8	448	498 +/- 275	NA	0.2656
502.5	60	5	594	703	0	0	8	448	421 +/- 273	NA	0.2656
502.5	61	5	594	624	0	0	8	448	116 +/- 264	NA	0.2656
502.5	62	5	594	527	0	0	8	448	-259 +/- 253	NA	0.2656
502.5	63	5	594	707	0	0	8	448	436 +/- 273	NA	0.2656
502.5	64	5	594	639	0	0	8	448	174 +/- 266	NA	0.2656
502.5	65	5	594	727	0	0	8	448	514 +/- 275	NA	0.2656
502.5	66	5	594	660	0	0	8	448	255 +/- 268	NA	0.2656
502.5	67	5	594	759	0	0	8	448	637 +/- 278	NA	0.2656
502.5	68	5	594	709	0	0	8	448	444 +/- 273	NA	0.2656
502.5	69	5	594	708	0	0	8	448	440 +/- 273	NA	0.2656
502.5	70	5	594	741	0	0	8	448	568 +/- 277	NA	0.2656
502.5	71	5	594	749	0	0	8	448	599 +/- 277	NA	0.2656
502.5	72	5	594	712	0	0	8	448	456 +/- 274	NA	0.2656
502.5	73	5	594	691	0	0	8	448	375 +/- 271	NA	0.2656
502.5	74	5	594	771	0	0	8	448	684 +/- 280	NA	0.2656
502.5	75	5	594	687	0	0	8	448	359 +/- 271	NA	0.2656
502.5	76	5	594	747	0	0	8	448	591 +/- 277	NA	0.2656
502.5	77	5	594	734	0	0	8	448	541 +/- 276	NA	0.2656
502.5	78	5	594	733	0	0	8	448	537 +/- 276	NA	0.2656
502.5	79	5	594	813	0	0	8	448	846 +/- 284	NA	0.2656
502.5	80	5	594	732	0	0	8	448	533 +/- 276	NA	0.2656
502.5	81	5	594	735	0	0	8	448	544 +/- 276	NA	0.2656
502.5 EXTERIOR	1	11	490	429	0	0	8	422	-243 +/- 237	NA	0.257
502.5	2	11	490	519	0	0	8	422	116 +/- 248	NA	0.257
502.5	3	11	490	548	0	0	8	422	231 +/- 252	NA	0.257
502.5	4	11	490	509	0	0	8	422	76 +/- 247	NA	0.257
502.5	5	11	490	581	0	0	8	422	363 +/- 256	NA	0.257
502.5	6	11	490	553	0	0	8	422	251 +/- 253	NA	0.257
502.5	7	11	490	615	0	0	8	422	499 +/- 260	NA	0.257
502.5	8	11	490	601	0	0	8	422	443 +/- 258	NA	0.257
502.5	9	11	490	598	0	0	8	422	431 +/- 258	NA	0.257

TABLE 502.5-1

502.5	10	11	490	574	0	0	8	422	335 +/- 255	NA	0.257
502.5	11	11	490	579	0	0	8	422	355 +/- 256	NA	0.257
502.5	12	11	490	633	0	0	8	422	571 +/- 262	NA	0.257
502.5	13	11	490	646	0	0	8	422	623 +/- 264	NA	0.257
502.5	14	11	490	637	0	0	8	422	587 +/- 263	NA	0.257
502.5	15	11	490	692	0	0	8	422	806 +/- 269	NA	0.257
502.5	16	11	490	491	0	0	8	422	4 +/- 245	NA	0.257
502.5	17	11	490	486	0	0	8	422	-16 +/- 244	NA	0.257
502.5	18	11	490	483	0	0	8	422	-28 +/- 244	NA	0.257
502.5	19	11	490	666	0	0	8	422	702 +/- 266	NA	0.257
502.5	20	11	490	666	0	0	8	422	702 +/- 266	NA	0.257
502.5	21	11	490	621	0	0	8	422	523 +/- 261	NA	0.257
502.5	22	11	490	563	0	0	8	422	291 +/- 254	NA	0.257
502.5	23	11	490	612	0	0	8	422	487 +/- 260	NA	0.257
502.5	24	11	490	674	0	0	8	422	734 +/- 267	NA	0.257
502.5	25	11	490	646	0	0	8	422	623 +/- 264	NA	0.257
502.5	26	10	595	653	0	0	8	464	232 +/- 277	NA	0.2567
502.5	27	10	595	612	0	0	8	464	68 +/- 272	NA	0.2567
502.5	28	10	595	625	0	0	8	464	120 +/- 274	NA	0.2567
502.5	29	10	595	657	0	0	8	464	248 +/- 277	NA	0.2567
502.5	30	10	595	659	0	0	8	464	256 +/- 277	NA	0.2567
502.5	31	10	595	703	0	0	8	464	432 +/- 282	NA	0.2567
502.5	32	10	595	713	0	0	8	464	471 +/- 283	NA	0.2567
502.5	33	10	595	654	0	0	8	464	236 +/- 277	NA	0.2567
502.5	34	10	595	665	0	0	8	464	280 +/- 278	NA	0.2567
502.5	35	10	595	672	0	0	8	464	308 +/- 279	NA	0.2567
502.5	36	10	595	621	0	0	8	464	104 +/- 273	NA	0.2567
502.5	37	10	595	674	0	0	8	464	316 +/- 279	NA	0.2567
502.5	38	10	595	745	0	0	8	464	599 +/- 287	NA	0.2567
502.5	39	10	595	645	0	0	8	464	200 +/- 276	NA	0.2567
502.5	40	10	595	614	0	0	8	464	76 +/- 272	NA	0.2567
502.5	41	10	595	742	0	0	8	464	587 +/- 286	NA	0.2567
502.5	42	10	595	617	0	0	8	464	88 +/- 273	NA	0.2567
502.5	43	10	595	649	0	0	8	464	216 +/- 276	NA	0.2567
502.5	44	10	595	646	0	0	8	464	204 +/- 276	NA	0.2567
502.5	45	10	595	633	0	0	8	464	152 +/- 274	NA	0.2567
502.5	46	10	595	688	0	0	8	464	372 +/- 281	NA	0.2567
502.5	47	10	595	686	0	0	8	464	364 +/- 280	NA	0.2567
502.5	48	10	595	648	0	0	8	464	212 +/- 276	NA	0.2567
502.5	49	10	595	653	0	0	8	464	232 +/- 277	NA	0.2567
502.5	50	10	595	596	0	0	8	464	4 +/- 270	NA	0.2567
502.5	51	10	595	703	0	0	8	464	432 +/- 282	NA	0.2567
502.5	52	10	595	694	0	0	8	464	396 +/- 281	NA	0.2567
502.5	53	10	595	701	0	0	8	464	424 +/- 282	NA	0.2567
502.5	54	10	595	713	0	0	8	464	471 +/- 283	NA	0.2567
502.5	55	10	595	694	0	0	8	464	396 +/- 281	NA	0.2567
502.5	56	10	595	646	0	0	8	464	204 +/- 276	NA	0.2567
502.5	57	10	595	500	0	0	8	464	-380 +/- 259	NA	0.2567
502.5	58	10	595	611	0	0	8	464	64 +/- 272	NA	0.2567
502.5	59	10	595	492	0	0	8	464	-412 +/- 258	NA	0.2567
502.5	60	10	595	558	0	0	8	464	-148 +/- 266	NA	0.2567
502.5	61	10	595	651	0	0	8	464	224 +/- 276	NA	0.2567
502.5	62	10	595	660	0	0	8	464	260 +/- 277	NA	0.2567
502.5	63	10	595	667	0	0	8	464	288 +/- 278	NA	0.2567
502.5	64	10	595	522	0	0	8	464	-292 +/- 262	NA	0.2567
502.5	65	10	595	662	0	0	8	464	268 +/- 278	NA	0.2567
502.5	66	10	595	478	0	0	8	464	-467 +/- 257	NA	0.2567
502.5	67	10	595	676	0	0	8	464	324 +/- 279	NA	0.2567
502.5	68	10	595	686	0	0	8	464	364 +/- 280	NA	0.2567
502.5	69	10	595	637	0	0	8	464	168 +/- 275	NA	0.2567

TABLE 502.5-1

502.5	70	10	595	414	0	0	8	464	-723 +/- 249	NA	0.2567
502.5	71	10	595	676	0	0	8	464	324 +/- 279	NA	0.2567
502.5	72	10	595	656	0	0	8	464	244 +/- 277	NA	0.2567
502.5	73	10	595	603	0	0	8	464	32 +/- 271	NA	0.2567
502.5	74	10	595	634	0	0	8	464	156 +/- 275	NA	0.2567
502.5	75	10	595	555	0	0	8	464	-160 +/- 266	NA	0.2567

8A 7100 U-17-75

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AffECTED AREA DESCRIPTION:

MANHOLE 11 - OUTSIDE BOILERHOUSE

AREA 502.5 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 04/04/96

TECHNICIANS: JB/FM MATERIAL CODE

AREA: 502.0 1:CONCRETE 5:PLASTIC

UNIT: 502.5 2:ROCK 6:SOIL

MEDIA TYPE: BRICK/CONCRETE 3:WOOD 7:ASPHALT

# OF POINTS: 156 4:METAL 8:OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM<sup>2</sup>

REM.+ FIXED: LIMIT

MAX FOR IND GRID 182 PASS 5000

AVG - SURVEY UNIT 17 PASS 5000

STD X 22

MU SUB ALPHA 20 PASS 5000

MAX HOT SPOT NONE PASS 15000

ID #	GRID ID	LOCATION	ID #	GRID	INST.	ALPHA	ALPHA	SCAN	TOTAL	WEIGHTED				
				COORDINATES	INST.	INST. AREA COUNTS/	INST. AREA COUNTS/	CONT. MATER-	MDA	AVG.	MAX	INST. EFF.		
				BKG	CPM	1	MINUTES	CM <sup>2</sup>	CODE	DPM/	DPM/	Avg 100 CM <sup>2</sup> TEST	100 CM <sup>2</sup> TEST	100 CM <sup>2</sup> TEST
		502.5 INTERIOR	1	3	0	2	0	0	8	15	11 +/-	16	NA	0.1785
		502.5	2	3	0	2	0	0	8	15	11 +/-	16	NA	0.1785
		502.5	3	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	4	3	0	1	0	0	8	15	6 +/-	11	NA	0.1785
		502.5	5	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	6	3	0	1	0	0	8	15	6 +/-	11	NA	0.1785
		502.5	7	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	8	3	0	4	0	0	8	15	22 +/-	22	NA	0.1785
		502.5	9	3	0	2	0	0	8	15	11 +/-	16	NA	0.1785
		502.5	10	3	0	5	0	0	8	15	28 +/-	25	NA	0.1785
		502.5	11	3	0	1	0	0	8	15	6 +/-	11	NA	0.1785
		502.5	12	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	13	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	14	3	0	6	0	0	8	15	34 +/-	27	NA	0.1785
		502.5	15	3	0	2	0	0	8	15	11 +/-	16	NA	0.1785
		502.5	16	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	17	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	18	3	0	2	0	0	8	15	11 +/-	16	NA	0.1785
		502.5	19	3	0	0	0	0	8	15	0 +/-	0	NA	0.1785
		502.5	20	3	0	1	0	0	8	15	6 +/-	11	NA	0.1785
		502.5	21	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
		502.5	22	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
		502.5	23	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
		502.5	24	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
		502.5	25	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
		502.5	26	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
		502.5	27	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
		502.5	28	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
		502.5	29	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
		502.5	30	5	0	7	0	0	8	14	37 +/-	28	NA	0.1872

TABLE 502.5-2

502.5	31	5	0	5	0	0	8	14	27 +/-	23	NA	0.1872
502.5	32	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	33	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	34	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	35	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	36	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	37	5	0	5	0	0	8	14	27 +/-	23	NA	0.1872
502.5	38	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	39	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	40	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	41	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	42	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	43	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	44	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	45	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	46	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	47	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	48	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	49	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	50	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	51	5	0	6	0	0	8	14	32 +/-	26	NA	0.1872
502.5	52	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	53	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	54	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	55	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	56	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	57	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	58	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	59	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	60	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	61	5	0	8	0	0	8	14	43 +/-	30	NA	0.1872
502.5	62	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	63	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	64	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	65	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	66	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	67	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	68	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	69	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	70	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	71	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	72	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	73	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	74	5	0	1	0	0	8	14	5 +/-	10	NA	0.1872
502.5	75	5	0	5	0	0	8	14	27 +/-	23	NA	0.1872
502.5	76	5	0	4	0	0	8	14	21 +/-	21	NA	0.1872
502.5	77	5	0	3	0	0	8	14	16 +/-	18	NA	0.1872
502.5	78	5	0	5	0	0	8	14	27 +/-	23	NA	0.1872
502.5	79	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5	80	5	0	2	0	0	8	14	11 +/-	15	NA	0.1872
502.5	81	5	0	0	0	0	8	14	0 +/-	0	NA	0.1872
502.5 EXTERIOR	1	11	0	4	0	0	8	16	23 +/-	23	NA	0.1707
502.5	2	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	3	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	4	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	5	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	6	11	0	3	0	0	8	16	18 +/-	20	NA	0.1707
502.5	7	11	0	4	0	0	8	16	23 +/-	23	NA	0.1707
502.5	8	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	9	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707

TABLE 502.5-2

502.5	10	11	0	6	0	0	8	16	35 +/-	28	NA	0.1707
502.5	11	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	12	11	0	3	0	0	8	16	18 +/-	20	NA	0.1707
502.5	13	11	0	1	0	0	8	16	6 +/-	11	NA	0.1707
502.5	14	11	0	1	0	0	8	16	6 +/-	11	NA	0.1707
502.5	15	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	16	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	17	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	18	11	0	4	0	0	8	16	23 +/-	23	NA	0.1707
502.5	19	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	20	11	0	2	0	0	8	16	12 +/-	16	NA	0.1707
502.5	21	11	0	5	0	0	8	16	29 +/-	26	NA	0.1707
502.5	22	11	0	4	0	0	8	16	23 +/-	23	NA	0.1707
502.5	23	11	0	1	0	0	8	16	6 +/-	11	NA	0.1707
502.5	24	11	0	1	0	0	8	16	6 +/-	11	NA	0.1707
502.5	25	11	0	0	0	0	8	16	0 +/-	0	NA	0.1707
502.5	26	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	27	10	0	6	0	0	8	14	32 +/-	26	NA	0.1873
502.5	28	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	29	10	0	7	0	0	8	14	37 +/-	28	NA	0.1873
502.5	30	10	0	5	0	0	8	14	27 +/-	23	NA	0.1873
502.5	31	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	32	10	0	7	0	0	8	14	37 +/-	28	NA	0.1873
502.5	33	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	34	10	0	7	0	0	8	14	37 +/-	28	NA	0.1873
502.5	35	10	0	5	0	0	8	14	27 +/-	23	NA	0.1873
502.5	36	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	37	10	0	5	0	0	8	14	27 +/-	23	NA	0.1873
502.5	38	10	0	1	0	0	8	14	5 +/-	10	NA	0.1873
502.5	39	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	40	10	0	1	0	0	8	14	5 +/-	10	NA	0.1873
502.5	41	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	42	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	43	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	44	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	45	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	46	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	47	10	0	7	0	0	8	14	37 +/-	28	NA	0.1873
502.5	48	10	0	6	0	0	8	14	32 +/-	26	NA	0.1873
502.5	49	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	50	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	51	10	0	3	0	0	8	14	16 +/-	18	NA	0.1873
502.5	52	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	53	10	0	8	0	0	8	14	43 +/-	30	NA	0.1873
502.5	54	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	55	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	56	10	0	1	0	0	8	14	5 +/-	10	NA	0.1873
502.5	57	10	0	20	0	0	8	14	107 +/-	47	NA	0.1873
502.5	58	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	59	10	0	13	0	0	8	14	69 +/-	38	NA	0.1873
502.5	60	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	61	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	62	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	63	10	0	3	0	0	8	14	16 +/-	18	NA	0.1873
502.5	64	10	0	18	0	0	8	14	96 +/-	44	NA	0.1873
502.5	65	10	0	4	0	0	8	14	21 +/-	21	NA	0.1873
502.5	66	10	0	34	0	0	8	14	182 +/-	61	NA	0.1873
502.5	67	10	0	2	0	0	8	14	11 +/-	15	NA	0.1873
502.5	68	10	0	3	0	0	8	14	16 +/-	18	NA	0.1873
502.5	69	10	0	0	0	0	8	14	0 +/-	0	NA	0.1873

TABLE 502.5-2

502.5	70	10	0	0	0	8	14	0 +/-	0	NA	0.1873
502.5	71	10	0	23	0	8	14	123 +/-	50	NA	0.1873
502.5	72	10	0	3	0	8	14	16 +/-	18	NA	0.1873
502.5	73	10	0	1	0	8	14	5 +/-	10	NA	0.1873
502.5	74	10	0	1	0	8	14	5 +/-	10	NA	0.1873
502.5	75	10	0	2	0	8	14	11 +/-	15	NA	0.1873

CINTICHEM DECOMMISSIONING PLAN  
 FINAL SURVEY DATA SHEET  
 DATA FOR Affected AREA DESCRIPTION:  
 MANHOLE #11 - OUTSIDE BOILERHOUSE  
 AREA 502.5

06/18/97

QA OK  
*R. Smith*  
 6/18/92

RADIATION TYPE: SMEAR SURVEY  
 COMPLETION  
 DATE: 4-04-96  
 TECHNICIANS: E5  
 AREA: 502.0  
 UNIT: 502.5  
 MEDIA TYPE: CONCRETE  
 # of POINTS: 156  
 CT IN MINUTES: 0.5

ALPHA MAX: 5.28 PASS  
 ALPHA AVG: 0.47 PASS      ALPHA LIMIT: 1000 DPM/100 CM<sup>2</sup>  
 ALPHA STD X: 1.52      ALPHA HL EFF: 0.3785  
 MU SUB ALPHA: 0.67 PASS

BETA MAX: 32.79 PASS  
 BETA AVG: 6.59 PASS      BETA LIMIT: 255 DPM/100 CM<sup>2</sup>  
 BETA STD X: 9.39      BETA HL EFF: 0.3660 SF = 0.975  
 MU SUB ALPHA: 7.83 PASS      BETA EFF: 0.3754

#	GRID POINT LETTER	INST. #	ALPHA COUNTS	BETA COUNTS	ALPHA BKG	BETA BKG	ALPHA MDA	BETA MDA	ALPHA CPM	BETA CPM	ALPHA DPM	BETA DPM
502.5	INTERIOR	1	1	0	2	0	1	14	33	0	2	0
502.5		2	1	0	1	0	1	14	33	0	0	0
502.5		3	1	0	1	0	1	14	33	0	0	0
502.5		4	1	0	3	0	1	14	33	0	4	0
502.5		5	1	0	3	0	1	14	33	0	4	0
502.5		6	1	0	1	0	1	14	33	0	0	0
502.5		7	1	1	5	0	1	14	33	2	8	5
502.5		8	1	0	1	0	1	14	33	0	0	0
502.5		9	1	0	2	0	1	14	33	0	2	0
502.5		10	1	0	0	0	1	14	33	0	-2	0
502.5		11	1	0	1	0	1	14	33	0	0	0
502.5		12	1	1	3	0	1	14	33	2	4	5
502.5		13	1	0	0	0	1	14	33	0	-2	0
502.5		14	1	1	4	0	1	14	33	2	6	5
502.5		15	1	0	3	0	1	14	33	0	4	0
502.5		16	1	0	1	0	1	14	33	0	0	0
502.5		17	1	0	0	0	1	14	33	0	-2	0
502.5		18	1	0	1	0	1	14	33	0	0	0
502.5		19	1	0	4	0	1	14	33	0	6	0
502.5		20	1	0	4	0	1	14	33	0	6	0
502.5		21	1	0	2	0	1	14	33	0	2	0
502.5		22	1	0	2	0	1	14	33	0	2	0
502.5		23	1	0	1	0	1	14	33	0	0	0
502.5		24	1	0	0	0	1	14	33	0	-2	0
502.5		25	1	0	0	0	1	14	33	0	-2	0
502.5		26	1	1	1	0	1	14	33	2	0	5
502.5		27	1	1	2	0	1	14	33	2	2	5
502.5		28	1	1	7	0	1	14	33	2	12	5
502.5		29	1	1	1	0	1	14	33	2	0	33

TABLE 502.5-3/502.5-4

502.5	30	1	0	1	0	1	14	33	0	0	0	0
502.5	31	1	0	0	0	1	14	33	0	-2	0	-5
502.5	32	1	0	1	0	1	14	33	0	0	0	0
502.5	33	1	0	2	0	1	14	33	0	2	0	5
502.5	34	1	0	0	0	1	14	33	0	-2	0	-5
502.5	35	1	0	1	0	1	14	33	0	0	0	0
502.5	36	1	0	5	0	1	14	33	0	8	0	22
502.5	37	1	0	2	0	1	14	33	0	2	0	5
502.5	38	1	0	0	0	1	14	33	0	-2	0	-5
502.5	39	1	0	2	0	1	14	33	0	2	0	5
502.5	40	1	0	2	0	1	14	33	0	2	0	5
502.5	41	1	0	3	0	1	14	33	0	4	0	11
502.5	42	1	0	4	0	1	14	33	0	6	0	16
502.5	43	1	0	2	0	1	14	33	0	2	0	5
502.5	44	1	0	3	0	1	14	33	0	4	0	11
502.5	45	1	0	1	0	1	14	33	0	0	0	0
502.5	46	1	0	1	0	1	14	33	0	0	0	0
502.5	47	1	0	2	0	1	14	33	0	2	0	5
502.5	48	1	0	1	0	1	14	33	0	0	0	0
502.5	49	1	0	5	0	1	14	33	0	8	0	22
502.5	50	1	0	3	0	1	14	33	0	4	0	11
502.5	51	1	0	0	0	2	14	40	0	-4	0	-11
502.5	52	1	0	2	0	2	14	40	0	0	0	0
502.5	53	1	0	1	0	2	14	40	0	-2	0	-5
502.5	54	1	0	4	0	2	14	40	0	4	0	11
502.5	55	1	0	1	0	2	14	40	0	-2	0	-5
502.5	56	1	0	3	0	2	14	40	0	2	0	5
502.5	57	1	0	0	0	2	14	40	0	-4	0	-11
502.5	58	1	0	1	0	2	14	40	0	-2	0	-5
502.5	59	1	0	2	0	2	14	40	0	0	0	0
502.5	60	1	0	2	0	2	14	40	0	0	0	0
502.5	61	1	0	0	0	2	14	40	0	-4	0	-11
502.5	62	1	0	3	0	2	14	40	0	2	0	5
502.5	63	1	0	1	0	2	14	40	0	-2	0	-5
502.5	64	1	0	1	0	2	14	40	0	-2	0	-5
502.5	65	1	0	1	0	2	14	40	0	-2	0	-5
502.5	66	1	0	2	0	2	14	40	0	0	0	0
502.5	67	1	0	2	0	2	14	40	0	0	0	0
502.5	68	1	0	0	0	2	14	40	0	-4	0	-11
502.5	69	1	0	2	0	2	14	40	0	0	0	0
502.5	70	1	0	1	0	2	14	40	0	-2	0	-5
502.5	71	1	0	1	0	2	14	40	0	-2	0	-5
502.5	72	1	0	1	0	2	14	40	0	-2	0	-5
502.5	73	1	0	3	0	2	14	40	0	2	0	5
502.5	74	1	0	5	0	2	14	40	0	6	0	16
502.5	75	1	0	2	0	2	14	40	0	0	0	0
502.5	76	1	0	4	0	2	14	40	0	4	0	11
502.5	77	1	0	1	0	2	14	40	0	-2	0	-5
502.5	78	1	0	4	0	2	14	40	0	4	0	11
502.5	79	1	0	3	0	2	14	40	0	2	0	5
502.5	80	1	0	2	0	2	14	40	0	0	0	0
502.5	81	1	0	2	0	2	14	40	0	0	0	0
502.5 EXTERIOR	1	1	0	0	0	0	14	15	0	0	0	0
502.5	2	1	0	2	0	0	14	15	0	4	0	11
502.5	3	1	0	1	0	0	14	15	0	2	0	5
502.5	4	1	0	3	0	0	14	15	0	6	0	16
502.5	5	1	0	0	0	0	14	15	0	0	0	0
502.5	6	1	0	1	0	0	14	15	0	2	0	5
502.5	7	1	0	0	0	0	14	15	0	0	0	0

502.5	8	1	0	3	0	0	14	15	0	6	0	16
502.5	9	1	0	3	0	0	14	15	0	6	0	16
502.5	10	1	0	3	0	0	14	15	0	6	0	16
502.5	11	1	0	2	0	0	14	15	0	4	0	11
502.5	12	1	0	1	0	0	14	15	0	2	0	5
502.5	13	1	0	2	0	0	14	15	0	4	0	11
502.5	14	1	1	3	0	0	14	15	2	6	5	16
502.5	15	1	0	1	0	0	14	15	0	2	0	5
502.5	16	1	0	4	0	0	14	15	0	8	0	22
502.5	17	1	0	3	0	0	14	15	0	6	0	16
502.5	18	1	0	3	0	0	14	15	0	6	0	16
502.5	19	1	0	0	0	0	14	15	0	0	0	0
502.5	20	1	0	4	0	0	14	15	0	8	0	22
502.5	21	1	0	0	0	0	14	15	0	0	0	0
502.5	22	1	0	4	0	0	14	15	0	8	0	22
502.5	23	1	0	3	0	0	14	15	0	6	0	16
502.5	24	1	0	5	0	0	14	15	0	10	0	27
502.5	25	1	0	1	0	0	14	15	0	2	0	5
502.5	26	1	0	2	0	0	14	15	0	4	0	11
502.5	27	1	0	2	0	0	14	15	0	4	0	11
502.5	28	1	0	3	0	0	14	15	0	6	0	16
502.5	29	1	0	4	0	0	14	15	0	8	0	22
502.5	30	1	0	1	0	0	14	15	0	2	0	5
502.5	31	1	0	3	0	0	14	15	0	6	0	16
502.5	32	1	0	0	0	0	14	15	0	0	0	0
502.5	33	1	0	0	0	0	14	15	0	0	0	0
502.5	34	1	0	1	0	0	14	15	0	2	0	5
502.5	35	1	0	3	0	0	14	15	0	6	0	16
502.5	36	1	0	2	0	0	14	15	0	4	0	11
502.5	37	1	0	1	0	0	14	15	0	2	0	5
502.5	38	1	0	2	0	0	14	15	0	4	0	11
502.5	39	1	0	2	0	0	14	15	0	4	0	11
502.5	40	1	0	6	0	0	14	15	0	12	0	33
502.5	41	1	0	0	0	0	14	15	0	0	0	0
502.5	42	1	0	0	0	0	14	15	0	0	0	0
502.5	43	1	0	2	0	0	14	15	0	4	0	11
502.5	44	1	0	3	0	0	14	15	0	6	0	16
502.5	45	1	0	3	0	0	14	15	0	6	0	16
502.5	46	1	0	1	0	0	14	15	0	2	0	5
502.5	47	1	1	4	0	0	14	15	2	8	5	22
502.5	48	1	0	4	0	0	14	15	0	8	0	22
502.5	49	1	1	4	0	0	14	15	2	8	5	22
502.5	50	1	0	4	0	0	14	15	0	8	0	22
502.5	51	1	0	1	0	1	14	33	0	0	0	0
502.5	52	1	0	2	0	1	14	33	0	2	0	5
502.5	53	1	0	1	0	1	14	33	0	0	0	0
502.5	54	1	0	2	0	1	14	33	0	2	0	5
502.5	55	1	0	1	0	1	14	33	0	0	0	0
502.5	56	1	0	5	0	1	14	33	0	8	0	22
502.5	57	1	0	1	0	1	14	33	0	0	0	0
502.5	58	1	0	2	0	1	14	33	0	2	0	5
502.5	59	1	1	3	0	1	14	33	2	4	5	11
502.5	60	1	1	3	0	1	14	33	2	4	5	11
502.5	61	1	0	3	0	1	14	33	0	4	0	11
502.5	62	1	0	1	0	1	14	33	0	0	0	0
502.5	63	1	0	2	0	1	14	33	0	2	0	5
502.5	64	1	0	2	0	1	14	33	0	2	0	5
502.5	65	1	0	6	0	1	14	33	0	10	0	27
502.5	66	1	0	3	0	1	14	33	0	4	0	11

502.5	67	1	0	2	0	1	14	33	0	2	0	5
502.5	68	1	0	3	0	1	14	33	0	4	0	11
502.5	69	1	0	5	0	1	14	33	0	3	0	22
502.5	70	1	1	2	0	1	14	33	2	2	5	5
502.5	71	1	0	2	0	1	14	33	0	2	0	5
502.5	72	1	0	3	0	1	14	33	0	4	0	11
502.5	73	1	0	1	0	1	14	33	0	0	0	0
502.5	74	1	0	0	0	1	14	33	0	-2	0	-5
502.5	75	1	1	6	0	1	14	33	2	10	5	27

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.6 survey unit was surveyed on an affected area basis and has a surface area of 10 m<sup>2</sup>. 27 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 1m by 1m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. In addition a 100% scan was performed in each 1m by 1m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.6 survey unit are provided in 2 attached tables as follows:

Table 502.6-1 Stack Section #16 and Stack Base  
direct beta/gamma surface contamination data

Table 502.6-2 Stack Section #16 and Stack Base  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 502.6

Mees. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	411	16
Number of Meas:	NA	27	27
Survey Unit Mean:	NA	604	6
True Mean:U alpha 95% C.L.:	NA	690	11
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	NA	968	56
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural  
radioactive material content

1066-2-97

## CINTICHEM DECOMMISSIONING PLAN

11/19/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

STACK SECTION #16, AND STACK BASE

AREA 502.6 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR : 0.975  
 COMPLETION

DATE: 11/15/96  
 TECHNICIANS: DT/PS MATERIAL CODE  
 AREA: 502.0 1=CONCRETE 5=PLASTIC  
 UNIT: 502.6 2=ROCK 6=SOIL  
 MEDIA TYPE: CONCRETE 3=WOOD 7=ASPHALT  
 # OF POINTS: 27 4=METAL 8=OTHER(SPECIFY):  
 CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT  
 MAX FOR IND GRID 968 PASS 1273  
 AVG - SURVEY UNIT 604 PASS 1273  
 STD X 260  
 MU SUB ALPHA 690 PASS 1273  
 MAX HOT SPOT NONE PASS 3818

#	GRID COORDINATES	GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	WEIGHTED			INST. EFF.	
				INST.	FIXED	MAX	CONT. MATER-	BETA	AVG.	MAX		
				AREA	COUNTS/	BETA	AREA	IAL	MDA	FIXED	PER	
				8KG	1	COUNTS	CM^2	CODE	DPM/	100 CM^2 TEST	CPM/DPM	
				CPM	MINUTES		100 CM^2			100 CM^2 TEST		
502.6		6	1	400	610	0	0	8	376	826 +/- 245	NA	0.2608
502.6		8	1	400	610	0	0	8	376	826 +/- 245	NA	0.2608
502.6		12	1	400	435	0	0	8	376	138 +/- 223	NA	0.2608
502.6		13	1	400	480	0	0	8	376	315 +/- 229	NA	0.2608
502.6		14	1	400	500	0	0	8	376	393 +/- 231	NA	0.2608
502.6		15	1	400	585	0	0	8	376	728 +/- 242	NA	0.2608
502.6		16	1	400	570	0	0	8	376	669 +/- 240	NA	0.2608
502.6		17	1	400	590	0	0	8	376	747 +/- 243	NA	0.2608
502.6		19	1	400	610	0	0	8	376	826 +/- 245	NA	0.2608
502.6		20	1	400	440	0	0	8	376	157 +/- 223	NA	0.2608
502.6		22	1	400	475	0	0	8	376	295 +/- 228	NA	0.2608
502.6		23	1	400	580	0	0	8	376	708 +/- 241	NA	0.2608
502.6		24	1	400	540	0	0	8	376	551 +/- 236	NA	0.2608
502.6		25	1	400	545	0	0	8	376	570 +/- 237	NA	0.2608
502.6		26	1	400	410	0	0	8	376	39 +/- 219	NA	0.2608
502.6		27	1	400	580	0	0	8	376	708 +/- 241	NA	0.2608
502.6		28	1	400	475	0	0	8	376	295 +/- 228	NA	0.2608
502.6		1	2	422	596	0	0	8	386	684 +/- 246	NA	0.2608
502.6		2	2	422	602	0	0	8	393	720 +/- 251	NA	0.2563
502.6		3	2	422	546	0	0	8	393	496 +/- 244	NA	0.2563
502.6		4	2	422	568	0	0	8	393	584 +/- 247	NA	0.2563
502.6		5	2	422	634	0	0	8	393	848 +/- 255	NA	0.2563
502.6		6	2	422	622	0	0	8	393	800 +/- 253	NA	0.2563
502.6		7	2	422	657	0	0	8	393	940 +/- 258	NA	0.2563
502.6		8	2	422	558	0	0	8	393	544 +/- 246	NA	0.2563
502.6		1	2	463	698	0	0	8	411	940 +/- 267	NA	0.2563
502.6		2	2	463	705	0	0	8	411	968 +/- 268	NA	0.2563

M66-27-9+

## CINTICHEM DECOMMISSIONING PLAN

11/19/96

## FINAL SURVEY DATA SHEET

## DATA FOR AffECTED AREA DESCRIPTION:

STACK SECTION #16, AND STACK BASE

AREA 502.6 FOR ALPHA

RADIATION TYPE: 2

## COMPLETION

DATE: 11/15/96

TECHNICIANS: DT/PS MATERIAL CODE

AREA: 502.0 1=CONCRETE 5=PLASTIC

UNIT: 502.6 2=ROCK 6=SOIL

MEDIA TYPE: CONCRETE 3=WOOD 7=ASPHALT

# of POINTS: 27 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR INDO GRID 56 PASS 5000

AVG - SURVEY UNIT 6 PASS 5000

STD X 13

MU SUB ALPHA 11 PASS 5000

MAX HOT SPOT NONE PASS 15000

GRID COORDINATES GRID ID LOCATION	INST. ID #	INST.	ALPHA	ALPHA	SCAN	TOTAL	WEIGHTED				
			BKG	AREA COUNTS/ 1 CPM	ALPHA MINUTES	CONT. AREA CM^2	MATER- IAL CODE	MDA DPM/ 100 CM^2	Avg. DPM/ 100 CM^2 TEST	Max PER CM^2 TEST	Inst Eff. CPM/DPM
502.6	6	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	8	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	12	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	13	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	14	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	15	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	16	1	0	5	0	0	8	15	28 +/- 24	NA	0.1789
502.6	17	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	19	1	0	10	0	0	8	15	56 +/- 35	NA	0.1789
502.6	20	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	22	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	23	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	24	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	25	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	26	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	27	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	28	1	0	0	0	0	8	15	0 +/- 0	NA	0.1789
502.6	1	2	0	1	0	0	8	16	5 +/- 12	NA	0.1677
502.6	2	2	0	0	0	0	8	16	0 +/- 0	NA	0.1677
502.6	3	2	0	4	0	0	8	16	24 +/- 23	NA	0.1677
502.6	4	2	0	0	0	0	8	16	0 +/- 0	NA	0.1677
502.6	5	2	0	2	0	0	8	16	12 +/- 17	NA	0.1677
502.6	6	2	0	2	0	0	8	16	12 +/- 17	NA	0.1677
502.6	7	2	0	5	0	0	8	16	30 +/- 26	NA	0.1677
502.6	8	2	0	0	0	0	8	16	0 +/- 0	NA	0.1677
502.6	1	2	0	1	0	0	8	16	6 +/- 12	NA	0.1677
502.6	2	2	0	0	0	0	8	16	0 +/- 0	NA	0.1677

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.7 survey unit was surveyed on an affected area basis and has a surface area of 10 m<sup>2</sup>. 536 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 1m by 1m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. In addition a 100% scan was performed in each 1m by 1m grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.7 survey unit are provided in 2 attached tables as follows:

Table 502.7-1 Stack Base Data Sheet  
direct beta/gamma surface contamination data

Table 502.7-2 Stack Base Data Sheet  
direct alpha surface contamination data

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 502.7

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	1025	128
Number of Meas:	NA	536	536
Survey Unit Mean:	NA	411	16
True Mean:U alpha 95% C.L.:	NA	430	17
Criteria	5	1273	5000
Acceptable Y/N	Y	Y	Y
Max Grid Block Wt. Mean	NA	1221	116
Criteria	10	1273	5000
Acceptable Y/N	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE
Criteria	NA	NA	NA
Acceptable Y/N	NA	NA	NA

(a) With a mean site background of 6 uRem/hr subtracted

(b) Without subtraction of radioactivity due to natural  
radioactive material content

Table 502.7-1

IN 6-27-97

## CINTICHEM DECOMMISSIONING PLAN

11/19/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

## STACK BASE DATA SHEET

## AREA 502.7 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975

## COMPLETION

DATE: 9/94

TECHNICIANS: MANY MATERIAL CODE

AREA: 502.0 1=CONCRETE 5=PLASTIC

UNIT: 502.7 2=ROCK 6=SOIL

MEDIA TYPE: CONCRETE 3=WOOD 7=ASPHALT

# of POINTS: 536 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 1221 PASS 1273

AVG - SURVEY UNIT 411 PASS 1273

STD X 276

MU SUB ALPHA 430 PASS

MAX HOT SPOT 0 PASS 3818

ID #	GRID COORDINATES	GRID ID LOCATION	INST. ID #	BETA	BETA	SCAN	TOTAL	CONT. AREA	MATER-	MDA	BETA	MAX	INST. PER	EFF.
				INST.	CORR.	MAX	CONT. CM^2				DPM/100 CM^2	DPM/100 CM^2 TEST	Avg 100 CM^2 TEST	MAX 100 CM^2 TEST
502.7	BASE 1	1	1	NA	65	0	0	8	652	289	NA	NA	0.231	
502.7		2	1	NA	-15	0	0	8	652	-67	NA	NA	0.231	
502.7		3	1	NA	105	0	0	8	652	466	NA	NA	0.231	
502.7		4	1	NA	130	0	0	8	652	577	NA	NA	0.231	
502.7		5	1	NA	145	0	0	8	652	644	NA	NA	0.231	
502.7		6	1	NA	10	0	0	8	652	44	NA	NA	0.231	
502.7		7	1	NA	75	0	0	8	652	333	NA	NA	0.231	
502.7		8	1	NA	160	0	0	8	652	710	NA	NA	0.231	
502.7		9	1	NA	155	0	0	8	652	688	NA	NA	0.231	
502.7		10	1	NA	25	0	0	8	652	111	NA	NA	0.231	
502.7		11	1	NA	130	0	0	8	652	577	NA	NA	0.231	
502.7		12	1	NA	75	0	0	8	652	333	NA	NA	0.231	
502.7		13	1	NA	100	0	0	8	652	444	NA	NA	0.231	
502.7		14	1	NA	50	0	0	8	652	222	NA	NA	0.231	
502.7		15	1	NA	175	0	0	8	652	777	NA	NA	0.231	
502.7		16	1	NA	10	0	0	8	652	44	NA	NA	0.231	
502.7		17	1	NA	-15	0	0	8	652	-67	NA	NA	0.231	
502.7		18	1	NA	70	0	0	8	652	311	NA	NA	0.231	
502.7		19	1	NA	80	0	0	8	652	355	NA	NA	0.231	
502.7	BASE 2	1	1	NA	5	0	0	8	652	22	NA	NA	0.231	
502.7		2	1	NA	70	0	0	8	652	311	NA	NA	0.231	
502.7		3	1	NA	75	0	0	8	652	333	NA	NA	0.231	
502.7		4	1	NA	100	0	0	8	652	444	NA	NA	0.231	
502.7		5	1	NA	110	0	0	8	652	488	NA	NA	0.231	
502.7		6	1	NA	85	0	0	8	652	377	NA	NA	0.231	
502.7		7	1	NA	50	0	0	8	652	222	NA	NA	0.231	
502.7		8	1	NA	90	0	0	8	652	400	NA	NA	0.231	
502.7		9	1	NA	100	0	0	8	652	444	NA	NA	0.231	
502.7		10	1	NA	30	0	0	8	652	133	NA	NA	0.231	

Table 502.7-1

502.7	11	1	NA	105	0	0	8	652	466	NA	0.231
502.7	12	1	NA	120	0	0	8	652	533	NA	0.231
502.7	13	1	NA	140	0	0	8	652	622	NA	0.231
502.7	14	1	NA	175	0	0	8	652	777	NA	0.231
502.7	15	1	NA	210	0	0	8	652	932	NA	0.231
502.7	16	1	NA	150	0	0	8	652	666	NA	0.231
502.7	17	1	NA	115	0	0	8	652	511	NA	0.231
502.7	18	1	NA	155	0	0	8	652	688	NA	0.231
502.7	19	1	NA	155	0	0	8	652	688	NA	0.231
502.7	20	1	NA	130	0	0	8	652	577	NA	0.231
502.7	21	1	NA	260	0	0	8	652	1154	NA	0.231
502.7	22	1	NA	155	0	0	8	652	688	NA	0.231
502.7	23	1	NA	110	0	0	8	652	488	NA	0.231
502.7	24	1	NA	260	0	0	8	652	1154	NA	0.231
502.7	25	1	NA	95	0	0	8	652	422	NA	0.231
502.7	26	1	NA	40	0	0	8	652	178	NA	0.231
502.7	27	1	NA	95	0	0	8	652	422	NA	0.231
502.7 BASE 3	1	1	NA	135	0	0	8	652	599	NA	0.231
502.7	2	1	NA	120	0	0	8	652	533	NA	0.231
502.7	3	1	NA	145	0	0	8	652	644	NA	0.231
502.7	4	1	NA	110	0	0	8	652	480	NA	0.231
502.7	5	1	NA	60	0	0	8	652	266	NA	0.231
502.7	6	1	NA	35	0	0	8	652	155	NA	0.231
502.7	7	1	NA	140	0	0	8	652	622	NA	0.231
502.7	8	1	NA	130	0	0	8	652	577	NA	0.231
502.7	9	1	NA	65	0	0	8	652	289	NA	0.231
502.7	10	1	NA	160	0	0	8	652	710	NA	0.231
502.7	11	1	NA	160	0	0	8	652	710	NA	0.231
502.7	12	1	NA	55	0	0	8	652	244	NA	0.231
502.7	13	1	NA	80	0	0	8	652	355	NA	0.231
502.7	14	1	NA	60	0	0	8	652	266	NA	0.231
502.7	15	1	NA	115	0	0	8	652	511	NA	0.231
502.7	16	1	NA	130	0	0	8	652	577	NA	0.231
502.7	17	1	NA	110	0	0	8	652	488	NA	0.231
502.7	18	1	NA	35	0	0	8	652	155	NA	0.231
502.7	19	1	NA	85	0	0	8	652	377	NA	0.231
502.7	20	1	NA	60	0	0	8	652	266	NA	0.231
502.7	21	1	NA	50	0	0	8	652	222	NA	0.231
502.7	22	1	NA	160	0	0	8	652	710	NA	0.231
502.7	23	1	NA	55	0	0	8	652	244	NA	0.231
502.7	24	1	NA	135	0	0	8	652	599	NA	0.231
502.7	25	1	NA	100	0	0	8	652	444	NA	0.231
502.7	26	1	NA	80	0	0	8	652	355	NA	0.231
502.7	27	1	NA	105	0	0	8	652	466	NA	0.231
502.7	28	1	NA	65	0	0	8	652	289	NA	0.231
502.7 BASE 4	1	1	NA	180	0	0	8	652	799	NA	0.231
502.7	2	1	NA	120	0	0	8	652	533	NA	0.231
502.7	3	1	NA	155	0	0	8	652	688	NA	0.231
502.7	4	1	NA	55	0	0	8	652	244	NA	0.231
502.7	5	1	NA	200	0	0	8	652	888	NA	0.231
502.7	6	1	NA	120	0	0	8	652	533	NA	0.231
502.7	7	1	NA	175	0	0	8	652	777	NA	0.231
502.7	8	1	NA	205	0	0	8	652	910	NA	0.231
502.7	9	1	NA	80	0	0	8	652	355	NA	0.231
502.7	10	1	NA	135	0	0	8	652	599	NA	0.231
502.7	11	1	NA	155	0	0	8	652	688	NA	0.231
502.7	12	1	NA	145	0	0	8	652	644	NA	0.231
502.7	13	1	NA	170	0	0	8	652	755	NA	0.231
502.7	14	1	NA	80	0	0	8	652	355	NA	0.231
502.7	15	1	NA	105	0	0	8	652	466	NA	0.231

Table 502.7-1

502.7	16	1	NA	140	0	0	8	652	622	NA	0.231
502.7	17	1	NA	115	0	0	8	652	511	NA	0.231
502.7	18	1	NA	130	0	0	8	652	577	NA	0.231
502.7	19	1	NA	120	0	0	8	652	533	NA	0.231
502.7	20	1	NA	60	0	0	8	652	266	NA	0.231
502.7	21	1	NA	40	0	0	8	652	178	NA	0.231
502.7	22	1	NA	15	0	0	8	652	67	NA	0.231
502.7	23	1	NA	150	0	0	8	652	666	NA	0.231
502.7	24	1	NA	100	0	0	8	652	444	NA	0.231
502.7	25	1	NA	110	0	0	8	652	488	NA	0.231
502.7	26	1	NA	85	0	0	8	652	377	NA	0.231
502.7	27	1	NA	115	0	0	8	652	511	NA	0.231
502.7	28	1	NA	150	0	0	8	652	666	NA	0.231
502.7	29	1	NA	150	0	0	8	652	666	NA	0.231
502.7	30	1	NA	95	0	0	8	652	422	NA	0.231
502.7	31	1	NA	100	0	0	8	652	444	NA	0.231
502.7	32	1	NA	90	0	0	8	652	400	NA	0.231
502.7	33	1	NA	110	0	0	8	652	488	NA	0.231
502.7	34	1	NA	85	0	0	8	652	377	NA	0.231
502.7	35	1	NA	50	0	0	8	652	222	NA	0.231
502.7	36	1	NA	95	0	0	8	652	422	NA	0.231
502.7	37	1	NA	65	0	0	8	652	289	NA	0.231
502.7	38	1	NA	60	0	0	8	652	266	NA	0.231
502.7	39	1	NA	125	0	0	8	652	555	NA	0.231
502.7	40	1	NA	40	0	0	8	652	178	NA	0.231
502.7	41	1	NA	105	0	0	8	652	466	NA	0.231
502.7	42	1	NA	145	0	0	8	652	644	NA	0.231
502.7	43	1	NA	180	0	0	8	652	799	NA	0.231
502.7	44	1	NA	65	0	0	8	652	289	NA	0.231
502.7	45	1	NA	120	0	0	8	652	533	NA	0.231
502.7	46	1	NA	175	0	0	8	652	777	NA	0.231
502.7	47	1	NA	115	0	0	8	652	511	NA	0.231
502.7 BASE 5	1	1	NA	145	0	0	8	652	644	NA	0.231
502.7	2	1	NA	155	0	0	8	652	688	NA	0.231
502.7	3	1	NA	120	0	0	8	652	533	NA	0.231
502.7	4	1	NA	85	0	0	8	652	377	NA	0.231
502.7	5	1	NA	205	0	0	8	652	910	NA	0.231
502.7	6	1	NA	275	0	0	8	652	1221	NA	0.231
502.7	7	1	NA	130	0	0	8	652	577	NA	0.231
502.7	8	1	NA	110	0	0	8	652	488	NA	0.231
502.7	9	1	NA	120	0	0	8	652	533	NA	0.231
502.7	10	1	NA	90	0	0	8	652	400	NA	0.231
502.7	11	1	NA	195	0	0	8	652	866	NA	0.231
502.7	12	1	NA	175	0	0	8	652	777	NA	0.231
502.7	13	1	NA	165	0	0	8	652	733	NA	0.231
502.7	14	1	NA	150	0	0	8	652	666	NA	0.231
502.7	15	1	NA	135	0	0	8	652	599	NA	0.231
502.7	16	1	NA	105	0	0	8	652	466	NA	0.231
502.7	17	1	NA	95	0	0	8	652	422	NA	0.231
502.7	18	1	NA	110	0	0	8	652	488	NA	0.231
502.7	19	1	NA	80	0	0	8	652	355	NA	0.231
502.7	20	1	NA	65	0	0	8	652	289	NA	0.231
502.7	21	1	NA	130	0	0	8	652	577	NA	0.231
502.7 BASE 6	1	2	NA	65	0	0	8	672	314	NA	0.2121
502.7	2	2	NA	105	0	0	8	672	508	NA	0.2121
502.7	3	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	4	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	5	2	NA	5	0	0	8	672	24	NA	0.2121
502.7	6	2	NA	5	0	0	8	672	24	NA	0.2121
502.7	7	2	NA	170	0	0	8	672	822	NA	0.2121

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502.7	8	6	NA	173	0	0	8	286	694	NA	0.2557
502.7	9	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	10	2	NA	135	0	0	8	672	653	NA	0.2121
502.7	11	2	NA	55	0	0	8	672	266	NA	0.2121
502.7	12	2	NA	140	0	0	8	672	677	NA	0.2121
502.7	13	2	NA	160	0	0	8	672	774	NA	0.2121
502.7	14	2	NA	55	0	0	8	672	266	NA	0.2121
502.7	15	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	16	2	NA	40	0	0	8	672	193	NA	0.2121
502.7 BASE 7	1	2	NA	105	0	0	8	672	508	NA	0.2121
502.7	2	2	NA	45	0	0	8	672	218	NA	0.2121
502.7	3	2	NA	5	0	0	8	672	24	NA	0.2121
502.7	4	2	NA	50	0	0	8	672	242	NA	0.2121
502.7	5	2	NA	5	0	0	8	672	24	NA	0.2121
502.7	6	2	NA	100	0	0	8	672	484	NA	0.2121
502.7	7	2	NA	80	0	0	8	672	387	NA	0.2121
502.7	8	2	NA	155	0	0	8	672	750	NA	0.2121
502.7	9	2	NA	130	0	0	8	672	629	NA	0.2121
502.7	10	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	11	2	NA	25	0	0	8	672	121	NA	0.2121
502.7	12	2	NA	65	0	0	8	672	314	NA	0.2121
502.7	13	2	NA	15	0	0	8	672	73	NA	0.2121
502.7	14	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	15	2	NA	85	0	0	8	672	411	NA	0.2121
502.7	16	2	NA	120	0	0	8	672	580	NA	0.2121
502.7 BASE 8	1	2	NA	35	0	0	8	672	169	NA	0.2121
502.7	2	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	3	2	NA	40	0	0	8	672	193	NA	0.2121
502.7	4	2	NA	55	0	0	8	672	266	NA	0.2121
502.7	5	2	NA	40	0	0	8	672	193	NA	0.2121
502.7	6	2	NA	-5	0	0	8	672	-24	NA	0.2121
502.7	7	2	NA	90	0	0	8	672	435	NA	0.2121
502.7	8	2	NA	130	0	0	8	672	629	NA	0.2121
502.7	9	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	10	2	NA	130	0	0	8	672	629	NA	0.2121
502.7	11	2	NA	150	0	0	8	672	725	NA	0.2121
502.7	12	2	NA	50	0	0	8	672	242	NA	0.2121
502.7	13	2	NA	35	0	0	8	672	169	NA	0.2121
502.7	14	2	NA	10	0	0	8	672	48	NA	0.2121
502.7	15	2	NA	10	0	0	8	672	48	NA	0.2121
502.7	16	2	NA	45	0	0	8	672	218	NA	0.2121
502.7	17	2	NA	30	0	0	8	672	145	NA	0.2121
502.7	18	2	NA	130	0	0	8	672	629	NA	0.2121
502.7	19	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	20	2	NA	10	0	0	8	672	48	NA	0.2121
502.7	21	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	22	2	NA	-15	0	0	8	672	-73	NA	0.2121
502.7	23	2	NA	40	0	0	8	672	193	NA	0.2121
502.7	24	2	NA	85	0	0	8	672	411	NA	0.2121
502.7	25	2	NA	30	0	0	8	672	145	NA	0.2121
502.7	26	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	27	2	NA	55	0	0	8	672	266	NA	0.2121
502.7	28	2	NA	45	0	0	8	672	218	NA	0.2121
502.7	29	2	NA	35	0	0	8	672	169	NA	0.2121
502.7	30	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	31	2	NA	100	0	0	8	672	484	NA	0.2121
502.7	32	2	NA	65	0	0	8	672	314	NA	0.2121
502.7	33	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	34	2	NA	85	0	0	8	672	411	NA	0.2121
502.7	35	2	NA	20	0	0	8	672	97	NA	0.2121

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502.7	36	2	NA	-20	0	0	8	672	-97	NA	0.2121
502.7	37	2	NA	60	0	0	8	672	290	NA	0.2121
502.7	38	2	NA	40	0	0	8	672	193	NA	0.2121
502.7	39	2	NA	85	0	0	8	672	411	NA	0.2121
502.7 BASE 9	1	3	NA	95	0	0	8	685	374	NA	0.2608
502.7	2	3	NA	110	0	0	8	685	433	NA	0.2608
502.7	3	3	NA	80	0	0	8	685	315	NA	0.2608
502.7	4	3	NA	80	0	0	8	685	315	NA	0.2608
502.7	5	3	NA	120	0	0	8	685	472	NA	0.2608
502.7	6	3	NA	125	0	0	8	685	492	NA	0.2608
502.7	7	3	NA	220	0	0	8	685	865	NA	0.2608
502.7	8	3	NA	50	0	0	8	685	197	NA	0.2608
502.7	9	3	NA	270	0	0	8	685	1062	NA	0.2608
502.7	10	4	NA	140	0	0	8	663	508	NA	0.2829
502.7	11	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	12	3	NA	205	0	0	8	685	806	NA	0.2608
502.7	13	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	14	3	NA	70	0	0	8	685	275	NA	0.2608
502.7	15	3	NA	90	0	0	8	685	354	NA	0.2608
502.7	16	3	NA	50	0	0	8	685	197	NA	0.2608
502.7	17	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	18	3	NA	85	0	0	8	685	334	NA	0.2608
502.7	19	3	NA	35	0	0	8	685	138	NA	0.2608
502.7	20	3	NA	120	0	0	8	685	472	NA	0.2608
502.7	21	3	NA	150	0	0	8	685	590	NA	0.2608
502.7	22	3	NA	135	0	0	8	685	531	NA	0.2608
502.7	23	3	NA	45	0	0	8	685	177	NA	0.2608
502.7	24	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	25	3	NA	35	0	0	8	685	138	NA	0.2608
502.7	26	3	NA	55	0	0	8	685	216	NA	0.2608
502.7	27	3	NA	75	0	0	8	685	295	NA	0.2608
502.7	28	3	NA	25	0	0	8	685	98	NA	0.2608
502.7 BASE 10	1	2	NA	165	0	0	8	672	798	NA	0.2121
502.7	2	2	NA	160	0	0	8	672	774	NA	0.2121
502.7	3	2	NA	95	0	0	8	672	459	NA	0.2121
502.7	4	2	NA	125	0	0	8	672	604	NA	0.2121
502.7	5	2	NA	195	0	0	8	672	943	NA	0.2121
502.7	6	2	NA	100	0	0	8	672	484	NA	0.2121
502.7	7	2	NA	165	0	0	8	672	798	NA	0.2121
502.7	8	2	NA	245	0	0	8	672	1185	NA	0.2121
502.7	9	2	NA	210	0	0	8	672	1015	NA	0.2121
502.7	10	2	NA	160	0	0	8	672	774	NA	0.2121
502.7	11	2	NA	105	0	0	8	672	508	NA	0.2121
502.7	12	2	NA	160	0	0	8	672	774	NA	0.2121
502.7	13	2	NA	135	0	0	8	672	653	NA	0.2121
502.7	14	2	NA	155	0	0	8	672	750	NA	0.2121
502.7	15	2	NA	160	0	0	8	672	774	NA	0.2121
502.7	16	2	NA	140	0	0	8	672	677	NA	0.2121
502.7	17	2	NA	215	0	0	8	672	1040	NA	0.2121
502.7	18	2	NA	165	0	0	8	672	798	NA	0.2121
502.7	19	2	NA	175	0	0	8	672	846	NA	0.2121
502.7	20	2	NA	220	0	0	8	672	1064	NA	0.2121
502.7	21	2	NA	180	0	0	8	672	870	NA	0.2121
502.7	22	2	NA	105	0	0	8	672	508	NA	0.2121
502.7	23	2	NA	100	0	0	8	672	484	NA	0.2121
502.7	24	2	NA	220	0	0	8	672	1064	NA	0.2121
502.7	25	2	NA	145	0	0	8	672	701	NA	0.2121
502.7	26	2	NA	125	0	0	8	672	604	NA	0.2121
502.7	27	2	NA	205	0	0	8	672	991	NA	0.2121
502.7	28	2	NA	200	0	0	8	672	967	NA	0.2121

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502.7 BASE 11	1	5	NA	205	0	0	8	1025	880	NA	0.239
502.7	2	5	NA	235	0	0	8	1025	1008	NA	0.239
502.7	3	5	NA	160	0	0	8	1025	687	NA	0.239
502.7	4	5	NA	175	0	0	8	1025	751	NA	0.239
502.7	5	5	NA	235	0	0	8	1025	1008	NA	0.239
502.7	6	5	NA	175	0	0	8	1025	751	NA	0.239
502.7	7	5	NA	165	0	0	8	1025	708	NA	0.239
502.7	8	5	NA	160	0	0	8	1025	687	NA	0.239
502.7	9	5	NA	190	0	0	8	1025	815	NA	0.239
502.7	10	5	NA	215	0	0	8	1025	923	NA	0.239
502.7	11	5	NA	180	0	0	8	1025	772	NA	0.239
502.7	12	5	NA	185	0	0	8	1025	794	NA	0.239
502.7	13	5	NA	245	0	0	8	1025	1051	NA	0.239
502.7	14	5	NA	175	0	0	8	1025	751	NA	0.239
502.7 BASE 12	1	3	NA	130	0	0	8	685	511	NA	0.2608
502.7	2	3	NA	125	0	0	8	685	492	NA	0.2608
502.7	3	3	NA	115	0	0	8	685	452	NA	0.2608
502.7	4	3	NA	85	0	0	8	685	334	NA	0.2608
502.7	5	3	NA	150	0	0	8	685	590	NA	0.2608
502.7	6	3	NA	110	0	0	8	685	433	NA	0.2608
502.7	7	3	NA	240	0	0	8	685	944	NA	0.2608
502.7	8	3	NA	120	0	0	8	685	472	NA	0.2608
502.7	9	3	NA	35	0	0	8	685	138	NA	0.2608
502.7	10	3	NA	75	0	0	8	685	295	NA	0.2608
502.7	11	4	NA	169	0	0	8	663	613	NA	0.2829
502.7	12	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	13	3	NA	55	0	0	8	685	216	NA	0.2608
502.7	14	4	NA	319	0	0	8	663	1157	NA	0.2829
502.7	15	3	NA	0	0	0	8	685	0	NA	0.2608
502.7	16	3	NA	70	0	0	8	685	275	NA	0.2608
502.7	17	4	NA	269	0	0	8	663	975	NA	0.2829
502.7	18	3	NA	75	0	0	8	685	295	NA	0.2608
502.7	19	3	NA	150	0	0	8	685	590	NA	0.2608
502.7	20	3	NA	190	0	0	8	685	747	NA	0.2608
502.7	21	3	NA	105	0	0	8	685	413	NA	0.2608
502.7	22	3	NA	80	0	0	8	685	315	NA	0.2608
502.7	23	3	NA	40	0	0	8	685	157	NA	0.2608
502.7	24	3	NA	120	0	0	8	685	472	NA	0.2608
502.7	25	3	NA	130	0	0	8	685	511	NA	0.2608
502.7	26	3	NA	145	0	0	8	685	570	NA	0.2608
502.7	27	3	NA	40	0	0	8	685	157	NA	0.2608
502.7	28	3	NA	175	0	0	8	685	688	NA	0.2608
502.7	29	3	NA	135	0	0	8	685	531	NA	0.2608
502.7	30	3	NA	65	0	0	8	685	256	NA	0.2608
502.7	31	3	NA	160	0	0	8	685	629	NA	0.2608
502.7	32	3	NA	90	0	0	8	685	354	NA	0.2608
502.7	33	3	NA	130	0	0	8	685	511	NA	0.2608
502.7	34	3	NA	190	0	0	8	685	747	NA	0.2608
502.7	35	3	NA	35	0	0	8	685	138	NA	0.2608
502.7	36	3	NA	65	0	0	8	685	256	NA	0.2608
502.7	37	3	NA	-45	0	0	8	685	-177	NA	0.2608
502.7	38	3	NA	135	0	0	8	685	531	NA	0.2608
502.7	39	3	NA	60	0	0	8	685	236	NA	0.2608
502.7	40	3	NA	180	0	0	8	685	708	NA	0.2608
502.7	41	3	NA	100	0	0	8	685	393	NA	0.2608
502.7	42	3	NA	115	0	0	8	685	452	NA	0.2608
502.7 BASE 13	1	2	NA	60	0	0	8	672	290	NA	0.2121
502.7	2	2	NA	-10	0	0	8	672	-48	NA	0.2121
502.7	3	2	NA	-15	0	0	8	672	-73	NA	0.2121
502.7	4	2	NA	100	0	0	8	672	484	NA	0.2121

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502.7	5	2	NA	35	0	0	8	672	169	NA	0.2121
502.7	6	2	NA	50	0	0	8	672	242	NA	0.2121
502.7	7	2	NA	15	0	0	8	672	73	NA	0.2121
502.7	8	2	NA	70	0	0	8	672	338	NA	0.2121
502.7	9	2	NA	-10	0	0	8	672	-48	NA	0.2121
502.7	10	2	NA	-10	0	0	8	672	-48	NA	0.2121
502.7	11	2	NA	30	0	0	8	672	145	NA	0.2121
502.7	12	2	NA	55	0	0	8	672	266	NA	0.2121
502.7	13	2	NA	60	0	0	8	672	290	NA	0.2121
502.7	14	2	NA	65	0	0	8	672	314	NA	0.2121
502.7	15	2	NA	-15	0	0	8	672	-73	NA	0.2121
502.7	16	2	NA	85	0	0	8	672	411	NA	0.2121
502.7	17	2	NA	60	0	0	8	672	290	NA	0.2121
502.7	18	2	NA	-40	0	0	8	672	-193	NA	0.2121
502.7	19	2	NA	20	0	0	8	672	97	NA	0.2121
502.7	20	2	NA	-40	0	0	8	672	-193	NA	0.2121
502.7	21	2	NA	-15	0	0	8	672	-73	NA	0.2121
502.7	22	2	NA	30	0	0	8	672	145	NA	0.2121
502.7	23	2	NA	-25	0	0	8	672	-121	NA	0.2121
502.7	24	2	NA	0	0	0	8	672	0	NA	0.2121
502.7	25	2	NA	0	0	0	8	672	0	NA	0.2121
502.7	26	2	NA	15	0	0	8	672	73	NA	0.2121
502.7	27	2	NA	65	0	0	8	672	314	NA	0.2121
502.7	28	2	NA	0	0	0	8	672	0	NA	0.2121
502.7	29	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	30	2	NA	100	0	0	8	672	484	NA	0.2121
502.7	31	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	32	2	NA	70	0	0	8	672	338	NA	0.2121
502.7	33	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	34	2	NA	85	0	0	8	672	411	NA	0.2121
502.7	35	2	NA	105	0	0	8	672	508	NA	0.2121
502.7	36	2	NA	200	0	0	8	672	967	NA	0.2121
502.7	37	2	NA	75	0	0	8	672	363	NA	0.2121
502.7	38	2	NA	35	0	0	8	672	169	NA	0.2121
502.7	39	2	NA	110	0	0	8	672	532	NA	0.2121
502.7	40	2	NA	15	0	0	8	672	314	NA	0.2121
502.7	41	2	NA	0	0	0	8	672	0	NA	0.2121
502.7 BASE 14	1	6	NA	210	0	0	8	671	947	NA	0.2275
502.7	2	6	NA	200	0	0	8	671	902	NA	0.2275
502.7	3	6	NA	165	0	0	8	671	744	NA	0.2275
502.7	4	6	NA	150	0	0	8	671	676	NA	0.2275
502.7	5	6	NA	125	0	0	8	671	564	NA	0.2275
502.7	6	6	NA	115	0	0	8	671	518	NA	0.2275
502.7	7	6	NA	115	0	0	8	671	518	NA	0.2275
502.7	8	6	NA	140	0	0	8	671	631	NA	0.2275
502.7	9	6	NA	110	0	0	8	671	496	NA	0.2275
502.7	10	6	NA	130	0	0	8	671	586	NA	0.2275
502.7	11	6	NA	155	0	0	8	671	699	NA	0.2275
502.7	12	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	13	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	14	6	NA	25	0	0	8	671	113	NA	0.2275
502.7	15	6	NA	90	0	0	8	671	406	NA	0.2275
502.7	16	6	NA	160	0	0	8	671	721	NA	0.2275
502.7	17	6	NA	125	0	0	8	671	564	NA	0.2275
502.7	18	6	NA	45	0	0	8	671	203	NA	0.2275
502.7	19	6	NA	40	0	0	8	671	180	NA	0.2275
502.7	20	6	NA	140	0	0	8	671	631	NA	0.2275
502.7	21	6	NA	5	0	0	8	671	23	NA	0.2275
502.7	22	6	NA	55	0	0	8	671	248	NA	0.2275
502.7	23	6	NA	90	0	0	8	671	406	NA	0.2275

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502.7	24	6	NA	55	0	0	8	671	148	NA	0.2275
502.7	25	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	26	6	NA	55	0	0	8	671	248	NA	0.2275
502.7	27	6	NA	65	0	0	8	671	293	NA	0.2275
502.7	28	6	NA	40	0	0	8	671	180	NA	0.2275
502.7	29	6	NA	55	0	0	8	671	248	NA	0.2275
502.7	30	6	NA	20	0	0	8	671	10	NA	0.2275
502.7	31	6	NA	110	0	0	8	671	476	NA	0.2275
502.7	32	6	NA	5	0	0	8	671	23	NA	0.2275
502.7	33	6	NA	105	0	0	8	671	473	NA	0.2275
502.7	34	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	35	6	NA	35	0	0	8	671	158	NA	0.2275
502.7	36	6	NA	50	0	0	8	671	225	NA	0.2275
502.7	37	6	NA	40	0	0	8	671	180	NA	0.2275
502.7	38	6	NA	25	0	0	8	671	113	NA	0.2275
502.7	39	6	NA	145	0	0	8	671	654	NA	0.2275
502.7	40	6	NA	35	0	0	8	671	158	NA	0.2275
502.7	41	6	NA	20	0	0	8	671	90	NA	0.2275
502.7	42	6	NA	120	0	0	8	671	541	NA	0.2275
502.7	43	6	NA	45	0	0	8	671	203	NA	0.2275
502.7	44	6	NA	145	0	0	8	671	654	NA	0.2275
502.7	45	6	NA	90	0	0	8	671	406	NA	0.2275
502.7	46	6	NA	-30	0	0	8	671	-135	NA	0.2275
502.7	47	6	NA	15	0	0	8	671	68	NA	0.2275
502.7	48	6	NA	35	0	0	8	671	158	NA	0.2275
502.7	49	6	NA	40	0	0	8	671	180	NA	0.2275
502.7	50	6	NA	110	0	0	8	671	496	NA	0.2275
502.7	51	6	NA	125	0	0	8	671	564	NA	0.2275
502.7	52	6	NA	65	0	0	8	671	293	NA	0.2275
502.7	53	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	54	6	NA	5	0	0	8	671	23	NA	0.2275
502.7	55	6	NA	60	0	0	8	671	270	NA	0.2275
502.7	56	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	57	6	NA	165	0	0	8	671	744	NA	0.2275
502.7	58	6	NA	80	0	0	8	671	361	NA	0.2275
502.7	59	6	NA	120	0	0	8	671	541	NA	0.2275
502.7	60	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	61	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	62	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	63	6	NA	15	0	0	8	671	68	NA	0.2275
502.7	64	6	NA	65	0	0	8	671	293	NA	0.2275
502.7	65	6	NA	105	0	0	8	671	473	NA	0.2275
502.7	66	6	NA	40	0	0	8	671	180	NA	0.2275
502.7	67	6	NA	190	0	0	8	671	857	NA	0.2275
502.7	68	6	NA	85	0	0	8	671	383	NA	0.2275
502.7	69	6	NA	155	0	0	8	671	699	NA	0.2275
502.7	70	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	71	6	NA	100	0	0	8	671	451	NA	0.2275
502.7	72	6	NA	5	0	0	8	671	23	NA	0.2275
502.7	73	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	74	6	NA	120	0	0	8	671	541	NA	0.2275
502.7	75	6	NA	85	0	0	8	671	383	NA	0.2275
502.7	76	6	NA	-5	0	0	8	671	-23	NA	0.2275
502.7	77	6	NA	10	0	0	8	671	45	NA	0.2275
502.7	78	6	NA	60	0	0	8	671	270	NA	0.2275
502.7	79	6	NA	55	0	0	8	671	248	NA	0.2275
502.7	80	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	81	6	NA	80	0	0	8	671	361	NA	0.2275
502.7	82	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	83	6	NA	150	0	0	8	671	676	NA	0.2275

Table 502.7-1

502.7	84	6	NA	90	0	0	8	671	406	NA	0.2275
502.7	85	6	NA	135	0	0	8	671	609	NA	0.2275
502.7	86	6	NA	35	0	0	8	671	158	NA	0.2275
502.7	87	6	NA	60	0	0	8	671	270	NA	0.2275
502.7	88	6	NA	165	0	0	8	671	744	NA	0.2275
502.7	89	6	NA	50	0	0	8	671	225	NA	0.2275
502.7	90	6	NA	45	0	0	8	671	203	NA	0.2275
502.7	91	6	NA	155	0	0	8	671	699	NA	0.2275
502.7	92	6	NA	225	0	0	8	671	1014	NA	0.2275
502.7	93	6	NA	140	0	0	8	671	631	NA	0.2275
502.7	94	6	NA	95	0	0	8	671	428	NA	0.2275
502.7	95	6	NA	260	0	0	8	671	1172	NA	0.2275
502.7	96	6	NA	95	0	0	8	671	428	NA	0.2275
502.7	97	6	NA	160	0	0	8	671	721	NA	0.2275
502.7	98	6	NA	35	0	0	8	671	158	NA	0.2275
502.7	99	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	100	6	NA	85	0	0	8	671	383	NA	0.2275
502.7	101	6	NA	70	0	0	8	671	316	NA	0.2275
502.7	102	6	NA	100	0	0	8	671	451	NA	0.2275
502.7	103	6	NA	170	0	0	8	671	766	NA	0.2275
502.7	104	6	NA	145	0	0	8	671	654	NA	0.2275
502.7	105	6	NA	75	0	0	8	671	338	NA	0.2275
502.7	106	6	NA	50	0	0	8	671	225	NA	0.2275
502.7	107	6	NA	55	0	0	8	671	248	NA	0.2275
502.7	108	6	NA	5	0	0	8	671	23	NA	0.2275
502.7	109	6	NA	-25	0	0	8	671	-113	NA	0.2275
502.7	110	6	NA	30	0	0	8	671	175	NA	0.2275
502.7	111	6	NA	-10	0	0	8	671	-45	NA	0.2275
502.7	112	6	NA	-25	0	0	8	671	-113	NA	0.2275
502.7	113	6	NA	-65	0	0	8	671	-293	NA	0.2275
502.7	114	6	NA	-90	0	0	8	671	-406	NA	0.2275
502.7	115	6	NA	-50	0	0	8	671	-225	NA	0.2275
502.7	116	6	NA	-40	0	0	8	671	-180	NA	0.2275
502.7	117	6	NA	-80	0	0	8	671	-361	NA	0.2275
502.7	118	6	NA	-30	0	0	8	671	-135	NA	0.2275
502.7	119	6	NA	-35	0	0	8	671	-158	NA	0.2275
502.7	120	6	NA	-10	0	0	8	671	-45	NA	0.2275
502.7 BASE 15	1	1	NA	50	0	0	8	652	222	NA	0.231
502.7	2	1	NA	95	0	0	8	652	422	NA	0.231
502.7	3	1	NA	135	0	0	8	652	599	NA	0.231
502.7	4	1	NA	95	0	0	8	652	422	NA	0.231
502.7	5	1	NA	165	0	0	8	652	733	NA	0.231
502.7	6	1	NA	35	0	0	8	652	155	NA	0.231
502.7	7	1	NA	80	0	0	8	652	355	NA	0.231
502.7	8	1	NA	25	0	0	8	652	111	NA	0.231
502.7	9	1	NA	35	0	0	8	652	155	NA	0.231
502.7	10	1	NA	20	0	0	8	652	89	NA	0.231
502.7	11	1	NA	45	0	0	8	652	200	NA	0.231
502.7	12	1	NA	65	0	0	8	652	289	NA	0.231
502.7	13	1	NA	0	0	0	8	652	0	NA	0.231
502.7	14	1	NA	50	0	0	8	652	222	NA	0.231
502.7	15	1	NA	25	0	0	8	652	111	NA	0.231
502.7	16	1	NA	120	0	0	8	652	533	NA	0.231
502.7	17	1	NA	65	0	0	8	652	289	NA	0.231
502.7	18	1	NA	40	0	0	8	652	178	NA	0.231
502.7	19	1	NA	95	0	0	8	652	422	NA	0.231
502.7	20	1	NA	10	0	0	8	652	44	NA	0.231
502.7	21	1	NA	80	0	0	8	652	355	NA	0.231
502.7	22	1	NA	75	0	0	8	652	333	NA	0.231
502.7	23	1	NA	45	0	0	8	652	200	NA	0.231

Table 502.7-1

502.7	24	1	NA	0	0	0	8	652	0	NA	0.231
502.7	25	1	NA	80	0	0	8	652	355	NA	0.231
502.7	26	1	NA	115	0	0	8	652	511	NA	0.231
502.7	27	1	NA	75	0	0	8	652	333	NA	0.231
502.7	28	1	NA	95	0	0	8	652	422	NA	0.231
502.7	29	1	NA	65	0	0	8	652	289	NA	0.231
502.7	30	1	NA	35	0	0	8	652	155	NA	0.231
502.7	31	1	NA	10	0	0	8	652	44	NA	0.231
502.7	32	1	NA	75	0	0	8	652	333	NA	0.231
502.7	33	1	NA	75	0	0	8	652	333	NA	0.231
502.7	34	1	NA	35	0	0	8	652	155	NA	0.231
502.7	35	1	NA	70	0	0	8	652	311	NA	0.231
502.7	36	1	NA	75	0	0	8	652	333	NA	0.231
502.7	37	1	NA	80	0	0	8	652	355	NA	0.231
502.7	38	1	NA	110	0	0	8	652	488	NA	0.231
502.7	39	1	NA	60	0	0	8	652	266	NA	0.231
502.7	40	1	NA	120	0	0	8	652	533	NA	0.231
502.7	41	1	NA	80	0	0	8	652	355	NA	0.231
502.7	42	1	NA	105	0	0	8	652	466	NA	0.231
502.7	43	1	NA	25	0	0	8	652	111	NA	0.231
502.7	44	1	NA	95	0	0	8	652	422	NA	0.231
502.7	45	1	NA	105	0	0	8	652	466	NA	0.231
502.7	46	1	NA	70	0	0	8	652	311	NA	0.231
502.7	47	1	NA	75	0	0	8	652	333	NA	0.231
502.7	48	1	NA	30	0	0	8	652	155	NA	0.231
502.7	49	1	NA	75	0	0	8	652	333	NA	0.231
502.7	50	1	NA	15	0	0	8	652	67	NA	0.231

TAD 6-27-97

## CINTICHEM DECOMMISSIONING PLAN

11/19/96

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

## STACK BASE DATA SHEET

## AREA 502.7 FOR ALPHA

RADIATION TYPE: 2

COMPLETION

DATE: 9/94

TECHNICIANS: MANY MATERIAL CODE

AREA: 502.0 1=CONCRETE 5=PLASTIC

UNIT: 502.7 2=ROCK 6=SOIL

MEDIA TYPE: CONCRETE 3=WOOD 7=ASPHALT

# of POINTS: 536 4=METAL 8=OTHER(SPECIFY):

CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

## DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 116 PASS 5000

AVG - SURVEY UNIT 16 PASS 5000

STD X 23

MU SUB ALPHA 17 PASS 5000

MAX HOT SPOT 0 PASS 15000

ID #	GRID ID	LOCATION	INST.	ALPHA		SCAN	TOTAL		ALPHA	MAX	PER	INST	EFF.
				BKG	INST. CPM		CORR. MINUTES	MAX COUNTS	CONT. AREA CM^2	MATER-IAL CODE	DPM/100 CM^2	DPM/100 CM^2	TEST CM^2 TEST
502.7	BASE 1	1	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		2	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		3	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		4	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		5	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		6	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		7	1	NA	10	0	0	0	8	112	57	NA	0.1756
502.7		8	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		9	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		10	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		11	1	NA	10	0	0	0	8	112	57	NA	0.1756
502.7		12	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		13	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		14	1	NA	10	0	0	0	8	112	57	NA	0.1756
502.7		15	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		16	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		17	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		18	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		19	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7	BASE 2	1	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		2	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		3	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		4	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		5	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		6	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		7	1	NA	5	0	0	0	8	112	28	NA	0.1756
502.7		8	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		9	1	NA	0	0	0	0	8	112	0	NA	0.1756
502.7		10	1	NA	0	0	0	0	8	112	0	NA	0.1756

Table 502.7-2

502.7	11	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	12	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	13	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	14	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	15	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	16	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	17	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	18	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	19	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	20	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	21	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	22	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	23	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	24	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	25	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	26	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	27	1	NA	0	0	0	8	112	0	NA	0.1756
502.7 BASE 3	1	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	2	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	3	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	4	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	5	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	6	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	7	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	8	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	9	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	10	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	11	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	12	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	13	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	14	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	15	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	16	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	17	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	18	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	19	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	20	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	21	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	22	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	23	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	24	1	NA	15	0	0	8	112	85	NA	0.1756
502.7	25	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	26	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	27	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	28	1	NA	5	0	0	8	112	28	NA	0.1756
502.7 BASE 4	1	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	2	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	3	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	4	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	5	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	6	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	7	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	8	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	9	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	10	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	11	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	12	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	13	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	14	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	15	1	NA	5	0	0	8	112	28	NA	0.1756

Table 502.7-2

502.7	16	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	17	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	18	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	19	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	20	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	21	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	22	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	23	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	24	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	25	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	26	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	27	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	28	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	29	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	30	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	31	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	32	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	33	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	34	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	35	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	36	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	37	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	38	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	39	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	40	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	41	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	42	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	43	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	44	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	45	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	46	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	47	1	NA	5	0	0	8	112	28	NA	0.1756
502.7 BASE 5	1	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	2	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	3	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	4	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	5	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	6	1	NA	15	0	0	8	112	85	NA	0.1756
502.7	7	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	8	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	9	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	10	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	11	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	12	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	13	1	NA	15	0	0	8	112	85	NA	0.1756
502.7	14	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	15	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	16	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	17	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	18	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	19	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	20	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	21	1	NA	0	0	0	8	112	0	NA	0.1756
502.7 BASE 6	1	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	2	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	3	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	4	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	5	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	6	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	7	2	NA	0	0	0	8	128	0	NA	0.1721

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502.7	8	6	NA	1	0	0	8	84	6	NA	0.1596
502.7	9	2	NA	20	0	0	8	128	116	NA	0.1721
502.7	10	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	11	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	12	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	13	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	14	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	15	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	16	2	NA	0	0	0	8	128	0	NA	0.1721
502.7 BASE 7	1	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	2	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	3	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	4	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	5	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	6	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	7	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	8	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	9	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	10	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	11	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	12	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	13	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	14	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	15	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	16	2	NA	0	0	0	8	128	0	NA	0.1721
502.7 BASE 8	1	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	2	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	3	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	4	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	5	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	6	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	7	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	8	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	9	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	10	2	NA	20	0	0	8	128	116	NA	0.1721
502.7	11	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	12	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	13	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	14	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	15	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	16	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	17	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	18	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	19	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	20	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	21	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	22	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	23	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	24	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	25	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	26	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	27	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	28	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	29	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	30	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	31	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	32	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	33	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	34	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	35	2	NA	0	0	0	8	128	0	NA	0.1721

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502.7	36	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	37	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	38	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	39	2	NA	5	0	0	8	128	29	NA	0.1721
502.7 BASE 9	1	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	2	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	3	3	NA	5	0	0	8	110	29	NA	0.1789
502.7	4	3	NA	10	0	0	8	110	56	NA	0.1789
502.7	5	3	NA	5	0	0	8	110	29	NA	0.1789
502.7	6	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	7	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	8	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	9	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	10	4	NA	10	0	0	8	109	50	NA	0.2015
502.7	11	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	12	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	13	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	14	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	15	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	16	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	17	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	18	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	19	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	20	3	NA	10	0	0	8	110	56	NA	0.1789
502.7	21	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	22	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	23	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	24	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	25	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	26	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	27	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	28	3	NA	0	0	0	8	110	0	NA	0.1789
502.7 BASE 10	1	2	NA	15	0	0	8	128	87	NA	0.1721
502.7	2	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	3	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	4	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	5	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	6	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	7	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	8	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	9	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	10	3	NA	5	0	0	8	128	28	NA	0.1789
502.7	11	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	12	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	13	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	14	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	15	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	16	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	17	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	18	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	19	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	20	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	21	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	22	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	23	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	24	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	25	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	26	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	27	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	28	2	NA	5	0	0	8	128	29	NA	0.1721

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502.7 BASE 11	1	5	NA	5	0	0	8	116	27	NA	0.1875
502.7	2	5	NA	10	0	0	8	116	53	NA	0.1875
502.7	3	5	NA	10	0	0	8	116	53	NA	0.1875
502.7	4	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	5	5	NA	5	0	0	8	116	27	NA	0.1875
502.7	6	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	7	5	NA	5	0	0	8	116	27	NA	0.1875
502.7	8	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	9	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	10	5	NA	5	0	0	8	116	27	NA	0.1875
502.7	11	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	12	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	13	5	NA	0	0	0	8	116	0	NA	0.1875
502.7	14	5	NA	0	0	0	8	116	0	NA	0.1875
502.7 BASE 12	1	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	2	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	3	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	4	3	NA	10	0	0	8	110	56	NA	0.1789
502.7	5	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	6	3	NA	10	0	0	8	110	56	NA	0.1789
502.7	7	3	NA	15	0	0	8	110	84	NA	0.1789
502.7	8	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	9	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	10	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	11	4	NA	5	0	0	8	109	25	NA	0.2015
502.7	12	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	13	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	14	4	NA	10	0	0	8	109	50	NA	0.2015
502.7	15	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	16	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	17	4	NA	5	0	0	8	109	25	NA	0.2015
502.7	18	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	19	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	20	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	21	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	22	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	23	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	24	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	25	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	26	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	27	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	28	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	29	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	30	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	31	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	32	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	33	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	34	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	35	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	36	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	37	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	38	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	39	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	40	3	NA	0	0	0	8	110	0	NA	0.1789
502.7	41	3	NA	5	0	0	8	110	28	NA	0.1789
502.7	42	3	NA	0	0	0	8	110	0	NA	0.1789
502.7 BASE 13	1	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	2	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	3	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	4	2	NA	0	0	0	8	128	0	NA	0.1721

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502.7	5	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	6	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	7	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	8	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	9	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	10	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	11	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	12	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	13	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	14	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	15	2	NA	10	0	0	8	128	58	NA	0.1721
502.7	16	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	17	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	18	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	19	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	20	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	21	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	22	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	23	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	24	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	25	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	26	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	27	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	28	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	29	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	30	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	31	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	32	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	33	2	NA	5	0	0	8	128	29	NA	0.1721
502.7	34	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	35	2	NA	15	0	0	8	128	87	NA	0.1721
502.7	36	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	37	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	38	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	39	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	40	2	NA	0	0	0	8	128	0	NA	0.1721
502.7	41	2	NA	0	0	0	8	128	0	NA	0.1721
502.7 BASE 14	1	6	NA	0	0	0	8	116	0	NA	0.175
502.7	2	6	NA	5	0	0	8	116	29	NA	0.175
502.7	3	6	NA	0	0	0	8	116	0	NA	0.175
502.7	4	6	NA	0	0	0	8	116	0	NA	0.175
502.7	5	6	NA	0	0	0	8	116	0	NA	0.175
502.7	6	6	NA	15	0	0	8	116	86	NA	0.175
502.7	7	6	NA	5	0	0	8	116	29	NA	0.175
502.7	8	6	NA	5	0	0	8	116	29	NA	0.175
502.7	9	6	NA	0	0	0	8	116	0	NA	0.175
502.7	10	6	NA	0	0	0	8	116	0	NA	0.175
502.7	11	6	NA	0	0	0	8	116	0	NA	0.175
502.7	12	6	NA	0	0	0	8	116	0	NA	0.175
502.7	13	6	NA	5	0	0	8	116	29	NA	0.175
502.7	14	6	NA	0	0	0	8	116	0	NA	0.175
502.7	15	6	NA	10	0	0	8	116	57	NA	0.175
502.7	16	6	NA	5	0	0	8	116	29	NA	0.175
502.7	17	6	NA	0	0	0	8	116	0	NA	0.175
502.7	18	6	NA	0	0	0	8	116	0	NA	0.175
502.7	19	6	NA	0	0	0	8	116	0	NA	0.175
502.7	20	6	NA	10	0	0	8	116	57	NA	0.175
502.7	21	6	NA	5	0	0	8	116	29	NA	0.175
502.7	22	6	NA	5	0	0	8	116	29	NA	0.175
502.7	23	6	NA	15	0	0	8	116	86	NA	0.175

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502.7	24	6	NA	15	0	0	8	116	86	NA	0.175
502.7	25	6	NA	0	0	0	8	116	0	NA	0.175
502.7	26	6	NA	0	0	0	8	116	0	NA	0.175
502.7	27	6	NA	0	0	0	8	116	0	NA	0.175
502.7	28	6	NA	0	0	0	8	116	0	NA	0.175
502.7	29	6	NA	0	0	0	8	116	0	NA	0.175
502.7	30	6	NA	0	0	0	8	116	0	NA	0.175
502.7	31	6	NA	0	0	0	8	116	0	NA	0.175
502.7	32	6	NA	0	0	0	8	116	0	NA	0.175
502.7	33	6	NA	0	0	0	8	116	0	NA	0.175
502.7	34	6	NA	5	0	0	8	116	29	NA	0.175
502.7	35	6	NA	0	0	0	8	116	0	NA	0.175
502.7	36	6	NA	0	0	0	8	116	0	NA	0.175
502.7	37	6	NA	0	0	0	8	116	0	NA	0.175
502.7	38	6	NA	0	0	0	8	116	0	NA	0.175
502.7	39	6	NA	5	0	0	8	116	29	NA	0.175
502.7	40	6	NA	5	0	0	8	116	29	NA	0.175
502.7	41	6	NA	10	0	0	8	116	57	NA	0.175
502.7	42	6	NA	0	0	0	8	116	0	NA	0.175
502.7	43	6	NA	10	0	0	8	116	57	NA	0.175
502.7	44	6	NA	5	0	0	8	116	29	NA	0.175
502.7	45	6	NA	5	0	0	8	116	29	NA	0.175
502.7	46	6	NA	15	0	0	8	116	86	NA	0.175
502.7	47	6	NA	5	0	0	8	116	29	NA	0.175
502.7	48	6	NA	0	0	0	8	116	0	NA	0.175
502.7	49	6	NA	5	0	0	8	116	29	NA	0.175
502.7	50	6	NA	5	0	0	8	116	29	NA	0.175
502.7	51	6	NA	10	0	0	8	116	57	NA	0.175
502.7	52	6	NA	0	0	0	8	116	0	NA	0.175
502.7	53	6	NA	0	0	0	8	116	0	NA	0.175
502.7	54	6	NA	0	0	0	8	116	0	NA	0.175
502.7	55	6	NA	5	0	0	8	116	29	NA	0.175
502.7	56	6	NA	0	0	0	8	116	0	NA	0.175
502.7	57	6	NA	0	0	0	8	116	0	NA	0.175
502.7	58	6	NA	0	0	0	8	116	0	NA	0.175
502.7	59	6	NA	0	0	0	8	116	0	NA	0.175
502.7	60	6	NA	0	0	0	8	116	0	NA	0.175
502.7	61	6	NA	5	0	0	8	116	29	NA	0.175
502.7	62	6	NA	0	0	0	8	116	0	NA	0.175
502.7	63	6	NA	0	0	0	8	116	0	NA	0.175
502.7	64	6	NA	0	0	0	8	116	0	NA	0.175
502.7	65	6	NA	0	0	0	8	116	0	NA	0.175
502.7	66	6	NA	0	0	0	8	116	0	NA	0.175
502.7	67	6	NA	0	0	0	8	116	0	NA	0.175
502.7	68	6	NA	15	0	0	8	116	86	NA	0.175
502.7	69	6	NA	0	0	0	8	116	0	NA	0.175
502.7	70	6	NA	0	0	0	8	116	0	NA	0.175
502.7	71	6	NA	0	0	0	8	116	0	NA	0.175
502.7	72	6	NA	5	0	0	8	116	29	NA	0.175
502.7	73	6	NA	0	0	0	8	116	0	NA	0.175
502.7	74	6	NA	5	0	0	8	116	29	NA	0.175
502.7	75	6	NA	5	0	0	8	116	29	NA	0.175
502.7	76	6	NA	0	0	0	8	116	0	NA	0.175
502.7	77	6	NA	0	0	0	8	116	0	NA	0.175
502.7	78	6	NA	5	0	0	8	116	29	NA	0.175
502.7	79	6	NA	0	0	0	8	116	0	NA	0.175
502.7	80	6	NA	0	0	0	8	116	0	NA	0.175
502.7	81	6	NA	5	0	0	8	116	29	NA	0.175
502.7	82	6	NA	0	0	0	8	116	0	NA	0.175
502.7	83	6	NA	5	0	0	8	116	29	NA	0.175

Table 502.7-2

502.7	84	6	NA	0	0	0	8	116	0	NA	0.175
502.7	85	6	NA	0	0	0	8	116	0	NA	0.175
502.7	86	6	NA	5	0	0	8	116	29	NA	0.175
502.7	87	6	NA	0	0	0	8	116	0	NA	0.175
502.7	88	6	NA	5	0	0	8	116	29	NA	0.175
502.7	89	6	NA	5	0	0	8	116	29	NA	0.175
502.7	90	6	NA	0	0	0	8	116	0	NA	0.175
502.7	91	6	NA	0	0	0	8	116	0	NA	0.175
502.7	92	6	NA	0	0	0	8	116	0	NA	0.175
502.7	93	6	NA	0	0	0	8	116	0	NA	0.175
502.7	94	6	NA	5	0	0	8	116	29	NA	0.175
502.7	95	6	NA	0	0	0	8	116	0	NA	0.175
502.7	96	6	NA	5	0	0	8	116	29	NA	0.175
502.7	97	6	NA	10	0	0	8	116	57	NA	0.175
502.7	98	6	NA	5	0	0	8	116	29	NA	0.175
502.7	99	6	NA	0	0	0	8	116	0	NA	0.175
502.7	100	6	NA	5	0	0	8	116	29	NA	0.175
502.7	101	6	NA	5	0	0	8	116	29	NA	0.175
502.7	102	6	NA	5	0	0	8	116	29	NA	0.175
502.7	103	6	NA	10	0	0	8	116	57	NA	0.175
502.7	104	6	NA	5	0	0	8	116	29	NA	0.175
502.7	105	6	NA	0	0	0	8	116	0	NA	0.175
502.7	106	6	NA	5	0	0	8	116	29	NA	0.175
502.7	107	6	NA	0	0	0	8	116	0	NA	0.175
502.7	108	6	NA	0	0	0	8	116	0	NA	0.175
502.7	109	6	NA	0	0	0	8	116	0	NA	0.175
502.7	110	6	NA	0	0	0	8	116	0	NA	0.175
502.7	111	6	NA	0	0	0	8	116	0	NA	0.175
502.7	112	6	NA	0	0	0	8	116	0	NA	0.175
502.7	113	6	NA	0	0	0	8	116	0	NA	0.175
502.7	114	6	NA	0	0	0	8	116	0	NA	0.175
502.7	115	6	NA	0	0	0	8	116	0	NA	0.175
502.7	116	6	NA	0	0	0	8	116	0	NA	0.175
502.7	117	6	NA	0	0	0	8	116	0	NA	0.175
502.7	118	6	NA	0	0	0	8	116	0	NA	0.175
502.7	119	6	NA	5	0	0	8	116	29	NA	0.175
502.7	120	6	NA	0	0	0	8	116	0	NA	0.175
502.7 BASE 15	1	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	2	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	3	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	4	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	5	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	6	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	7	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	8	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	9	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	10	1	NA	0	2	0	8	112	0	NA	0.1756
502.7	11	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	12	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	13	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	14	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	15	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	16	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	17	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	18	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	19	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	20	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	21	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	22	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	23	1	NA	0	0	0	8	112	0	NA	0.1756

Table 502.7-2

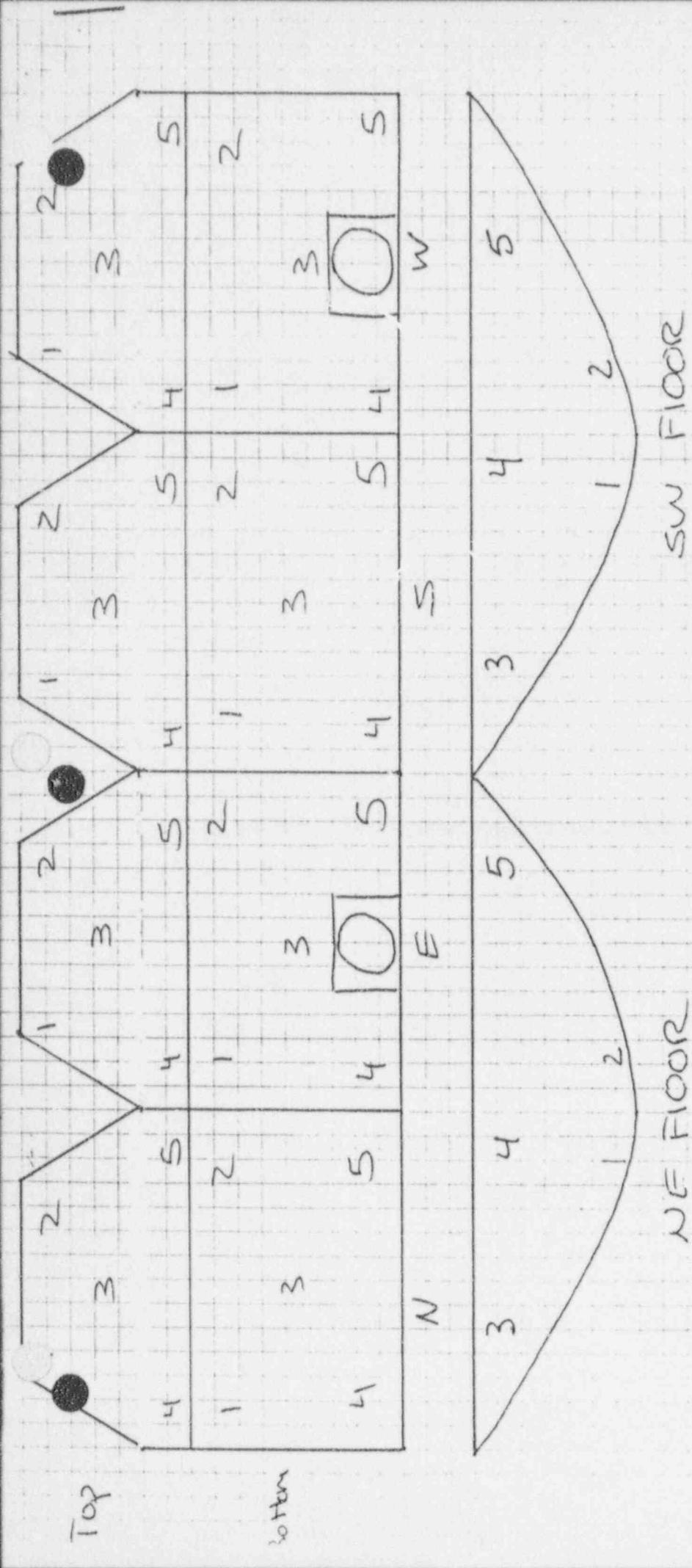
502.7	24	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	25	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	26	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	27	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	28	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	29	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	30	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	31	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	32	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	33	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	34	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	35	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	36	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	37	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	38	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	39	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	40	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	41	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	42	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	43	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	44	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	45	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	46	1	NA	5	0	0	8	112	28	NA	0.1756
502.7	47	1	NA	10	0	0	8	112	57	NA	0.1756
502.7	48	1	NA	20	0	0	8	112	114	NA	0.1756
502.7	49	1	NA	0	0	0	8	112	0	NA	0.1756
502.7	50	1	NA	0	0	0	8	112	0	NA	0.1756

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.8 survey unit was surveyed on an affected area basis. 130 direct beta/alpha surface contamination measurement locations were placed in this area using 5 readings per 1m by 1m grid. One reading was taken at the center of the grid and four each at the midpoint between the center and the corners of the grid. 140 removable surface contamination measurement locations were placed in this area using a 1m by 1m grid. In addition a 100% scan was performed in each 1m by 1m grid location. The location of these measurements is shown in the accompanying diagrams.

Measurement and sampling results for the 502.8 survey unit are provided in 4 attached tables as follows:

- Table 502.8-1 Manhole 10 - Mall Area  
direct beta/gamma surface contamination data
- Table 502.8-2 Manhole 10 - Mall Area  
direct alpha surface contamination data
- Table 502.8-3 Manhole 10 - Mall Area  
removable beta/gamma surface contamination data
- Table 502.8-4 Manhole 10 - Mall Area  
removable alpha surface contamination data



SW FLOOR

NE FLOOR

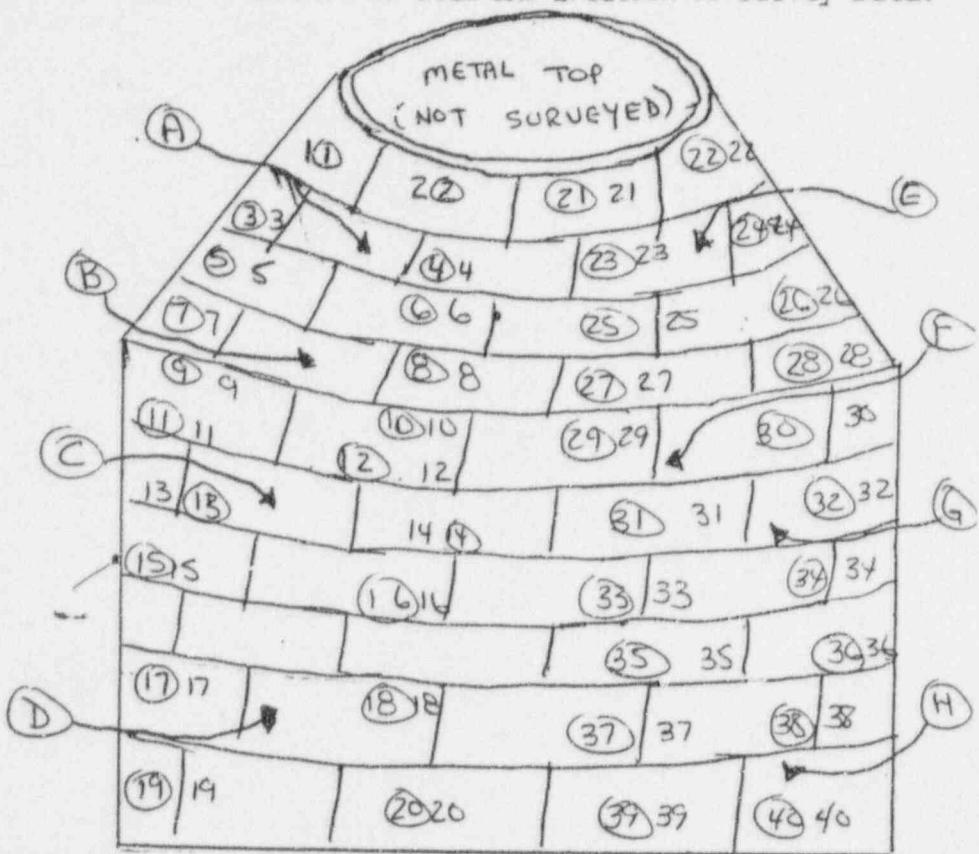
10K System manhole interior  
Area 502.8

Date: 5-30-95  
By: T. Arnold  
P. Skoels

Sheet 1 of 8

## EQUIPMENT/MATERIAL FREE RELEASE PROCEDURE: DATA SHEET I

## Sketch of Item and Location of Survey Data:



SMEAR LOCATIONS #41-80 as well as direct readings #41-80 are located on rear of wall. GAMMA reading locations I-P are also located on rear of wall.

Date of Survey: 6/6/95 Technician: STONICK / Taylor

Item Description: Exterior Manhole - 10k TANK - Mall Area

Item Origin: Assumed Bldg 2

Pre-screen ID: N/A FOL-015 No. N/A

- o circled alpha character (e.g. @) = gamma exposure rate location
- o numeric character = direct contamination measurement location
- o circled numeric character = smear sample location

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

AREA 502.8

Meas. Type:	Gamma Exposure Rate (a)	Direct Beta (b)	Direct Alpha (b)	Removable Alpha	Removable Beta
Units	uRem/hr	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>	dpm/ 100 cm <sup>2</sup>
MDA	2	448	15	14	57
Number of Meas:	NA	130	130	140	140
Survey Unit Mean:	NA	267	13	1.0	-10
True Mean; U alpha 95% C.L.:	NA	310	16	1.3	-8
Criteria	5	1273	5000	1000	255
Acceptable Y/N	Y	Y	Y	Y	Y
Max Grid Block Wt. Mean	NA	1000	79	11	16
Criteria	10	1273	5000	1000	255
Acceptable Y/N	Y	Y	Y	Y	Y
Max. Hot Spot Scans (affected areas only)	NONE	NONE	NONE	NONE	NONE
Criteria	NA	NA	NA	NA	NA
Acceptable Y/N	NA	NA	NA	NA	NA

- (a) With a mean site background of 6 uRem/hr subtracted  
 (b) Without subtraction of radioactivity due to natural radioactive material content

QA OK  
PShen  
6/17/97

CINTICHEM DECOMMISSIONING PLAN  
FINAL SURVEY DATA SHEET  
DATA FOR Affected AREA DESCRIPTION:  
MANHOLE 10 - MALL AREA  
AREA 502.8 FOR BETA

RADIATION TYPE: 1 BETA SCALING FACTOR = 0.975  
COMPLETION  
DATE: 06/06/95  
TECHNICIANS: ES/PS/PK/LT MATERIAL CODE  
AREA: 502.0 1=CONCRETE 5=PLASTIC  
UNIT: 502.8 2=ROCK 6=SOIL  
MEDIA TYPE: BRICK/CONCRETE 3=WOOD 7=ASPHALT  
# of POINTS: 130 4=METAL 8=OTHER(SPECIFY):  
CT IN MINUTES: 1 NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED:	LIMIT	
MAX FOR IND GRID	1000 PASS	1273
Avg - SURVEY UNIT	267 PASS	1273
STD X	297	
MU SUB ALPHA	310 PASS	1273
MAX HOT SPOT	NONE	PASS
		3818

ID #	GRID ID	LOCATION	COORDINATES	BETA	BETA	SCAN	TOTAL	WEIGHTED			INST. EFF.	
				INST.	INST. AREA COUNTS/	MAX BETA	CONT. AREA	MATER-	BETA	MAX		
				BKG	1 COUNSTS	CM^2	CODE	MDA	DPM/	Avg	100 MAX	CPM/CPM
				CPM	MINUTES		100 CM^2		100 CM^2 TEST	100 CM^2 TEST		
502.8 INTERIOR	1	11	640	840	0	0	8	448	744 +/- 281	NA	0.2756	
502.8 N TOP	2	11	640	665	0	0	8	448	93 +/- 263	NA	0.2756	
502.8	3	11	640	750	0	0	8	448	409 +/- 272	NA	0.2756	
502.8	4	11	640	850	0	0	8	448	782 +/- 282	NA	0.2756	
502.8	5	11	640	785	0	0	8	448	540 +/- 275	NA	0.2756	
502.8 E TOP	1	11	640	550	0	0	8	448	-335 +/- 252	NA	0.2756	
502.8	2	11	640	725	0	0	8	448	316 +/- 269	NA	0.2756	
502.8	3	11	640	610	0	0	8	448	-112 +/- 258	NA	0.2756	
502.8	4	11	640	810	0	0	8	448	633 +/- 278	NA	0.2756	
502.8	5	11	640	670	0	0	8	448	112 +/- 264	NA	0.2756	
502.8 S TOP	1	11	640	765	0	0	8	448	465 +/- 273	NA	0.2756	
502.8	2	11	640	600	0	0	8	448	-149 +/- 257	NA	0.2756	
502.8	3	11	640	775	0	0	8	448	502 +/- 274	NA	0.2756	
502.8	4	11	640	700	0	0	8	448	223 +/- 267	NA	0.2756	
502.8	5	11	640	725	0	0	8	448	316 +/- 269	NA	0.2756	
502.8 W TOP	1	11	640	675	0	0	8	448	130 +/- 265	NA	0.2756	
502.8	2	11	640	810	0	0	8	448	633 +/- 278	NA	0.2756	
502.8	3	11	640	730	0	0	8	448	335 +/- 270	NA	0.2756	
502.8	4	11	640	735	0	0	8	448	354 +/- 270	NA	0.2756	
502.8	5	11	640	735	0	0	8	448	354 +/- 270	NA	0.2756	
502.8 N BOTTOM	1	11	640	795	0	0	8	448	577 +/- 276	NA	0.2756	
502.8	2	11	640	635	0	0	8	448	-19 +/- 260	NA	0.2756	
502.8	3	11	640	730	0	0	8	448	335 +/- 270	NA	0.2756	
502.8	4	11	640	830	0	0	8	448	707 +/- 280	NA	0.2756	
502.8	5	11	640	745	0	0	8	448	391 +/- 271	NA	0.2756	
502.8 E BOTTOM	1	11	640	835	0	0	8	448	726 +/- 280	NA	0.2756	
502.8	2	11	640	645	0	0	8	448	19 +/- 261	NA	0.2756	
502.8	3	11	640	825	0	0	8	448	688 +/- 279	NA	0.2756	
502.8	4	11	640	620	0	0	8	448	-74 +/- 259	NA	0.2756	
502.8	5	11	640	880	0	0	8	448	893 +/- 284	NA	0.2756	

TABLE 502.8-1

502.8 S BOTTOM	1	11	640	655	0	0	8	448	56 +/- 262	NA	0.2756
502.8	2	11	640	750	0	0	8	448	409 +/- 272	NA	0.2756
502.8	3	11	640	615	0	0	8	448	-93 +/- 258	NA	0.2756
502.8	4	11	640	800	0	0	8	448	595 +/- 277	NA	0.2756
502.8	5	11	640	755	0	0	8	448	426 +/- 272	NA	0.2756
502.8 N BOTTOM	1	11	640	800	0	0	8	448	395 +/- 277	NA	0.2756
502.8	2	11	640	680	0	0	8	448	149 +/- 265	NA	0.2756
502.8	3	11	640	680	0	0	8	448	149 +/- 265	NA	0.2756
502.8	4	11	640	755	0	0	8	448	438 +/- 272	NA	0.2756
502.8	5	11	640	710	0	0	8	448	261 +/- 268	NA	0.2756
502.8 NE FLOOR	1	11	640	680	0	0	8	448	149 +/- 265	NA	0.2756
502.8	2	11	640	760	0	0	8	448	447 +/- 273	NA	0.2756
502.8	3	11	640	730	0	0	8	448	335 +/- 270	NA	0.2756
502.8	4	11	640	865	0	0	8	448	837 +/- 283	NA	0.2756
502.8	5	11	640	620	0	0	8	448	-74 +/- 259	NA	0.2756
502.8 SW FLOOR	1	11	640	700	0	0	8	448	223 +/- 267	NA	0.2756
502.8	2	11	640	830	0	0	8	448	707 +/- 280	NA	0.2756
502.8	3	11	640	690	0	0	8	448	186 +/- 266	NA	0.2756
502.8	4	11	640	815	0	0	8	448	651 +/- 278	NA	0.2756
502.8	5	11	640	730	0	0	8	448	335 +/- 270	NA	0.2756
502.8 EXTERIOR	1	3	600	840	0	0	8	432	889 +/- 275	NA	0.2769
502.8	2	3	600	705	0	0	8	432	389 +/- 262	NA	0.2769
502.8	3	3	600	730	0	0	8	432	482 +/- 265	NA	0.2769
502.8	4	3	600	770	0	0	8	432	630 +/- 269	NA	0.2769
502.8	5	3	600	790	0	0	8	432	704 +/- 271	NA	0.2769
502.8	6	3	600	695	0	0	8	432	352 +/- 261	NA	0.2769
502.8	7	3	600	535	0	0	8	432	-241 +/- 245	NA	0.2769
502.8	8	3	600	715	0	0	8	432	426 +/- 263	NA	0.2769
502.8	9	3	600	725	0	0	8	432	463 +/- 264	NA	0.2769
502.8	10	3	600	870	0	0	8	432	1000 +/- 278	NA	0.2769
502.8	11	3	600	560	0	0	8	432	-148 +/- 247	NA	0.2769
502.8	12	3	600	560	0	0	8	432	-148 +/- 247	NA	0.2769
502.8	13	3	600	490	0	0	8	432	-407 +/- 240	NA	0.2769
502.8	14	3	600	655	0	0	8	432	204 +/- 257	NA	0.2769
502.8	15	3	600	625	0	0	8	432	93 +/- 254	NA	0.2769
502.8	16	3	600	585	0	0	8	432	-56 +/- 250	NA	0.2769
502.8	17	3	600	585	0	0	8	432	-56 +/- 250	NA	0.2769
502.8	18	3	600	515	0	0	8	432	-315 +/- 242	NA	0.2769
502.8	19	3	600	665	0	0	8	432	241 +/- 258	NA	0.2769
502.8	20	3	600	640	0	0	8	432	148 +/- 256	NA	0.2769
502.8	21	3	600	775	0	0	8	432	648 +/- 269	NA	0.2769
502.8	22	3	600	690	0	0	8	432	333 +/- 261	NA	0.2769
502.8	23	3	600	665	0	0	8	432	241 +/- 258	NA	0.2769
502.8	24	3	600	725	0	0	8	432	463 +/- 264	NA	0.2769
502.8	25	3	600	675	0	0	8	432	278 +/- 259	NA	0.2769
502.8	26	3	600	745	0	0	8	432	537 +/- 266	NA	0.2769
502.8	27	3	600	635	0	0	8	432	130 +/- 255	NA	0.2769
502.8	28	3	600	750	0	0	8	432	556 +/- 267	NA	0.2769
502.8	29	3	600	495	0	0	8	432	389 +/- 240	NA	0.2769
502.8	30	3	600	625	0	0	8	432	93 +/- 254	NA	0.2769
502.8	31	3	600	705	0	0	8	432	100 +/- 262	NA	0.2769
502.8	32	3	600	700	0	0	8	432	370 +/- 262	NA	0.2769
502.8	33	3	600	560	0	0	8	432	-148 +/- 247	NA	0.2769
502.8	34	3	600	610	0	0	8	432	37 +/- 253	NA	0.2769
502.8	35	3	600	675	0	0	8	432	278 +/- 259	NA	0.2769
502.8	36	3	600	630	0	0	8	432	111 +/- 255	NA	0.2769
502.8	37	3	600	605	0	0	8	432	19 +/- 252	NA	0.2769
502.8	38	3	600	610	0	0	8	432	37 +/- 253	NA	0.2769
502.8	39	3	600	625	0	0	8	432	93 +/- 254	NA	0.2769
502.8	40	3	600	685	0	0	8	432	315 +/- 260	NA	0.2769

TABLE 502.8-1

502.8	41	3	600	695	0	0	8	432	352 +/- 261	NA	0.2769
502.8	42	3	600	640	0	0	8	432	148 +/- 256	NA	0.2769
502.8	43	3	600	585	0	0	8	432	-56 +/- 250	NA	0.2769
502.8	44	3	600	635	0	0	8	432	130 +/- 255	NA	0.2769
502.8	45	3	600	565	0	0	8	432	-130 +/- 248	NA	0.2769
502.8	46	3	600	650	0	0	8	432	185 +/- 257	NA	0.2769
502.8	47	3	600	600	0	0	8	432	0 +/- 251	NA	0.2769
502.8	48	3	600	595	0	0	8	432	-19 +/- 251	NA	0.2769
502.8	49	3	600	620	0	0	8	432	74 +/- 254	NA	0.2769
502.8	50	3	600	670	?	0	8	432	259 +/- 259	NA	0.2769
502.8	51	3	600	630	0	0	8	432	111 +/- 255	NA	0.2769
502.8	52	3	600	670	0	0	8	432	259 +/- 259	NA	0.2769
502.8	53	3	600	670	0	0	8	432	259 +/- 259	NA	0.2769
502.8	54	3	600	675	0	0	8	432	278 +/- 259	NA	0.2769
502.8	55	3	600	600	0	0	8	432	0 +/- 251	NA	0.2769
502.8	56	3	600	670	0	0	8	432	259 +/- 259	NA	0.2769
502.8	57	3	600	610	0	0	8	432	37 +/- 253	NA	0.2769
502.8	58	3	600	695	0	0	8	432	352 +/- 261	NA	0.2769
502.8	59	3	600	835	0	0	8	432	870 +/- 275	NA	0.2769
502.8	60	3	600	750	0	0	8	432	556 +/- 267	NA	0.2769
502.8	61	3	600	600	0	0	8	432	0 +/- 251	NA	0.2769
502.8	62	3	600	575	0	0	8	432	-93 +/- 249	NA	0.2769
502.8	63	3	600	690	0	0	8	432	333 +/- 261	NA	0.2769
502.8	64	3	600	600	0	0	8	432	0 +/- 251	NA	0.2769
502.8	65	3	600	685	0	0	8	432	315 +/- 260	NA	0.2769
502.8	66	3	600	595	0	0	8	432	-19 +/- 251	NA	0.2769
502.8	67	3	600	705	0	0	8	432	389 +/- 262	NA	0.2769
502.8	68	3	600	595	0	0	8	432	-19 +/- 251	NA	0.2769
502.8	69	3	600	670	?	0	8	432	259 +/- 259	NA	0.2769
502.8	70	3	600	640	0	0	8	432	148 +/- 256	NA	0.2769
502.8	71	3	600	640	0	0	8	432	148 +/- 256	NA	0.2769
502.8	72	3	600	850	0	0	8	432	926 +/- 276	NA	0.2769
502.8	73	3	600	660	0	0	8	432	222 +/- 258	NA	0.2769
502.8	74	3	600	635	0	0	8	432	130 +/- 255	NA	0.2769
502.8	75	3	600	605	0	0	8	432	19 +/- 252	NA	0.2769
502.8	76	3	600	570	0	0	8	432	-111 +/- 248	NA	0.2769
502.8	77	3	600	625	0	0	8	432	93 +/- 254	NA	0.2769
502.8	78	3	600	815	0	0	8	432	796 +/- 273	NA	0.2769
502.8	79	3	600	775	0	0	8	432	648 +/- 269	NA	0.2769
502.8	80	3	600	640	0	0	8	432	148 +/- 256	NA	0.2769

CINTICHEM DECOMMISSIONING PLAN  
 FINAL SURVEY DATA SHEET  
 DATA FOR AFFECTED AREA DESCRIPTION:  
 MANHOLE 10 - MALL ARCH  
 AREA 502.8 FOR PHA

06/17/97

PA ok  
*P. Reed*  
 6/17/92

RADIATION TYPE: ?

COMPLETION

DATE: 06/07/95

TECHNICIANS: ES/PS/PK/LT

## MATERIAL CODE

AREA: 502.0

1=CONCRETE

5=PLASTIC

UNIT: 502.8

2=ROCK

6=SOIL

MEDIA TYPE: BRICK/CONCRETE

3=WOOD

7=ASPHALT

# of POINTS: 130

4=METAL

8=OTHER(SPECIFY):

CT IN MINUTES: 1

NO MATERIAL BACKGROUND USED

DPM/100CM^2

REM.+ FIXED: LIMIT

MAX FOR IND GRID 79 PASS 5000

AVG - SURVEY UNIT 13 PASS 5000

STD X 19

MU SUB ALPHA 16 PASS 5000

MAX HOT SPOT NONE PASS 15000

## WEIGHTED

ID #	GRID	COORDINATES	INST.	ALPHA			SCAN	TOTAL	CONT.	MATER-	MDA	AVG.		MAX	INST. EFF.	
				BKG	INST.	FIXED						AREA	IAL	DPM/	100 CM^2	100 CM^2 TEST
				CPM	MINUTES									100 CM^2	TEST	
	502.8 INTERIOR	1	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8 N TOP	2	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	3	11	0	10	0	0	8	15	56	+/-	35	NA	0.1794		
	502.8	4	11	0	6	0	0	8	15	33	+/-	27	NA	0.1794		
	502.8	5	11	0	5	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8 E TOP	1	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	2	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	3	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	4	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	5	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8 S TOP	1	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	2	11	0	6	0	0	8	15	33	+/-	27	NA	0.1794		
	502.8	3	11	0	5	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8	4	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	5	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8 W TOP	1	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	2	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	3	11	0	5	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8	4	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	5	11	0	5	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8 N BOTTOM	1	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	2	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	3	11	0	10	0	0	8	15	56	+/-	35	NA	0.1794		
	502.8	4	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	5	11	0	0	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8 E BOTTOM	1	11	0	10	0	0	8	15	56	+/-	35	NA	0.1794		
	502.8	2	11	0	5	0	0	8	15	28	+/-	24	NA	0.1794		
	502.8	3	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	4	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		
	502.8	5	11	0	0	0	0	8	15	0	+/-	0	NA	0.1794		

TABLE 502.8-2

502.8 S BOTTOM	1	11	0	5	0	0	8	15	28 +/-	24	NA	0.1794
502.8	2	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	3	11	0	5	0	0	8	15	28 +/-	24	NA	0.1794
502.8	4	11	0	10	0	0	8	15	56 +/-	35	NA	0.1794
502.8	5	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8 W BOTTOM	1	11	0	5	0	0	8	15	28 +/-	24	NA	0.1794
502.8	2	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	3	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	4	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	5	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8 NE FLOOR	1	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	2	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	3	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	4	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	5	11	0	10	0	0	8	15	56 +/-	35	NA	0.1794
502.8 SW FLOOR	1	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	2	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	3	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	4	11	0	0	0	0	8	15	0 +/-	0	NA	0.1794
502.8	5	11	0	10	0	0	8	15	56 +/-	35	NA	0.1794
502.8 EXTERIOR	1	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	2	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	3	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	4	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	5	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	6	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	7	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	8	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	9	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	10	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	11	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	12	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	13	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	14	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	15	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	16	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	17	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	18	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	19	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	20	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	21	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	22	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	23	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	24	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	25	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	26	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	27	3	0	15	0	0	8	14	79 +/-	40	NA	0.1888
502.8	28	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	29	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	30	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	31	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	32	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	33	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	34	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	35	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	36	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	37	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	38	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	39	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	40	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888

TABLE 502.8-2

502.8	41	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	42	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	43	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	44	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	45	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	46	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	47	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	48	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	49	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	50	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	51	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	52	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	53	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	54	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	55	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	56	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	57	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	58	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	59	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	60	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	61	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	62	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	63	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	64	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	65	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	66	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	67	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	68	3	0	10	0	0	8	14	53 +/-	33	NA	0.1888
502.8	69	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	70	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	71	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	72	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	73	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	74	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	75	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	76	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888
502.8	77	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	78	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	79	3	0	5	0	0	8	14	26 +/-	23	NA	0.1888
502.8	80	3	0	0	0	0	8	14	0 +/-	0	NA	0.1888

QA OK

*PShel*

6/17/97

## CINTICHEM DECOMMISSIONING PLAN

06/17/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

MALL AREA 10K MANHOLE

AREA 502.8

RADIATION TYPE: SMEAR SURVEY

## COMPLETION

DATE: 6-06-95  
 TECHNICIANS: ES  
 AREA: 502.0  
 UNIT: 502.8  
 MEDIA TYPE: CONCRETE  
 # of POINTS: 140  
 CT IN MINUTES: 0.5

ALPHA MAX: 10.67 PASS

ALPHA AVG: 1.03 PASS

ALPHA LIMIT: 1000 DPM/100 CM<sup>2</sup>

ALPHA STD X: 2.21

ALPHA HL EFF: 0.3748

MU SUB ALPHA: 1.34 PASS

BETA MAX: 15.94 PASS

BETA AVG: -9.87 PASS

BETA LIMIT: 255 DPM/100 CM<sup>2</sup>

BETA STD X: 10.86

BETA HL EFF: 0.3765 SF: 0.975

MU SUB ALPHA: -8.34 PASS

BETA EFF: 0.3862

ID	GRID POINT LETTER	INST. #	ALPHA	BETA	ALPHA	BETA	ALPHA	BETA	ALPHA	BETA	ALPHA	BETA
			COUNTS	COUNTS	BKG	BKG	MDA	MDA	CPM	CPM	CPM	CPM
502.8	1	1	0	1	0	3	14	45	0	-4	0	-11
502.8	2	1	0	2	0	3	14	45	0	-2	0	-5
502.8	3	1	0	2	0	3	14	45	0	-2	0	-5
502.8	4	1	0	2	0	3	14	45	0	-2	0	-5
502.8	5	1	0	4	0	3	14	45	0	2	0	5
502.8	6	1	1	0	0	3	14	45	2	-6	5	-16
502.8	7	1	0	2	0	3	14	45	0	-2	0	-5
502.8	8	1	0	5	0	3	14	45	0	4	0	11
502.8	9	1	0	3	0	3	14	45	0	0	0	0
502.8	10	1	0	5	0	3	14	45	0	4	0	11
502.8	11	1	0	3	0	3	14	45	0	0	0	0
502.8	12	1	0	1	0	3	14	45	0	-4	0	-11
502.8	13	1	0	2	0	3	14	45	0	-2	0	-5
502.8	14	1	0	5	0	3	14	45	0	4	0	11
502.8	15	1	0	1	0	3	14	45	0	-4	0	-11
502.8	16	1	0	0	0	3	14	45	0	-6	0	-16
502.8	17	1	0	2	0	3	14	45	0	-2	0	-5
502.8	18	1	0	0	0	3	14	45	0	-6	0	-16
502.8	19	1	0	1	0	3	14	45	0	-4	0	-11
502.8	20	1	1	6	0	3	14	45	2	6	5	16
502.8	21	1	0	6	0	3	14	45	0	6	0	16
502.8	22	1	0	3	0	3	14	45	0	0	0	0
502.8	23	1	0	1	0	3	14	45	0	-4	0	-11
502.8	24	1	0	1	0	3	14	45	0	-4	0	-11
502.8	25	1	0	0	0	3	14	45	0	-6	0	-16
502.8	26	1	1	4	0	3	14	45	2	2	5	5
502.8	27	1	0	3	0	3	14	45	0	0	0	0
502.8	28	1	1	3	0	3	14	45	2	0	5	0
502.8	29	1	0	3	0	3	14	45	0	0	0	0

502.8	30	1	0	3	0	3	14	45	0	0	0	0
502.8	31	1	0	2	0	3	14	45	0	-2	0	-5
502.8	32	1	1	2	0	3	14	45	2	-2	5	-5
502.8	33	1	0	2	0	3	14	45	0	-2	0	-5
502.8	34	1	1	3	0	3	14	45	2	0	5	0
502.8	35	1	1	2	0	3	14	45	2	-2	5	-5
502.8	36	1	0	0	0	3	14	45	0	-6	0	-16
502.8	37	1	0	1	0	3	14	45	0	-4	0	-11
502.8	38	1	0	3	0	3	14	45	0	0	0	0
502.8	39	1	0	1	0	3	14	45	0	-4	0	-11
502.8	40	1	0	5	0	3	14	45	0	4	0	11
502.8	41	1	0	1	0	3	14	45	0	-4	0	-11
502.8	42	1	0	6	0	3	14	45	0	6	0	16
502.8	43	1	0	4	0	3	14	45	0	2	0	5
502.8	44	1	0	2	0	3	14	45	0	-2	0	-5
502.8	45	1	1	1	0	3	14	45	2	-4	5	-11
502.8	46	1	0	4	0	3	14	45	0	2	0	5
502.8	47	1	0	0	0	3	14	45	0	-6	0	-16
502.8	48	1	1	2	0	3	14	45	2	-2	5	-5
502.8	49	1	2	1	0	3	14	45	4	-4	11	-11
502.8	50	1	0	2	0	3	14	45	0	-2	0	-5
502.8	51	1	1	2	0	4	14	49	2	-4	5	-11
502.8	52	1	0	1	0	4	14	49	0	-6	0	-16
502.8	53	1	0	0	0	4	14	49	0	-8	0	-21
502.8	54	1	0	4	0	4	14	49	0	0	0	0
502.8	55	1	0	4	0	4	14	49	0	0	0	0
502.8	56	1	0	6	0	4	14	49	0	4	0	11
502.8	57	1	0	5	0	4	14	49	0	2	0	5
502.8	58	1	0	2	0	4	14	49	0	-4	0	-11
502.8	59	1	0	2	0	4	14	49	0	-4	0	-11
502.8	60	1	0	3	0	4	14	49	0	-2	0	-5
502.8	61	1	0	3	0	4	14	49	0	-2	0	-5
502.8	62	1	1	1	0	4	14	49	2	-6	5	-16
502.8	63	1	0	3	0	4	14	49	0	-2	0	-5
502.8	64	1	0	1	0	4	14	49	0	-6	0	-16
502.8	65	1	0	1	0	4	14	49	0	-6	0	-16
502.8	66	1	0	0	0	4	14	49	0	-8	0	-21
502.8	67	1	0	2	0	4	14	49	0	-4	0	-11
502.8	68	1	0	2	0	4	14	49	0	-4	0	-11
502.8	69	1	0	3	0	4	14	49	0	-2	0	-5
502.8	70	1	0	2	0	4	14	49	0	-4	0	-11
502.8	71	1	1	2	0	4	14	49	2	-4	5	-11
502.8	72	1	0	4	0	4	14	49	0	0	0	0
502.8	73	1	0	2	0	4	14	49	0	-2	0	-5
502.8	74	1	0	1	0	4	14	49	0	-6	0	-16
502.8	75	1	1	3	0	4	14	49	2	-2	5	-5
502.8	76	1	0	3	0	4	14	49	0	-2	0	-5
502.8	77	1	0	3	0	4	14	49	0	-2	0	-5
502.8	78	1	1	3	0	4	14	49	2	-2	5	-5
502.8	79	1	0	1	0	4	14	49	0	-6	0	-16
502.8	80	1	0	2	0	4	14	49	0	-4	0	-11
502.8 INTERIOR	1	1	0	4	0	2	14	39	0	4	0	11
502.8	2	1	0	1	0	2	14	39	0	-2	0	-5
502.8	3	1	0	1	0	2	14	39	0	-2	0	-5
502.8	4	1	0	1	0	2	14	39	0	-2	0	-5
502.8	5	1	0	1	0	2	14	39	0	-2	0	-5
502.8	6	1	0	1	0	2	14	39	0	-2	0	-5
502.8	7	1	1	1	0	2	14	39	2	-2	5	-5
502.8	8	1	0	1	0	2	14	39	0	-2	0	-5

502.8	9	1	0	1	0	2	14	39	0	-2	0	-5
502.8	10	1	0	3	0	2	14	39	0	2	0	5
FLOOR	1	1	0	3	0	6	14	57	0	-6	0	-16
502.8	2	1	1	1	0	6	14	57	2	-10	5	-27
502.8	3	1	0	3	0	6	14	57	0	-6	0	-16
502.8	4	1	0	5	0	6	14	57	0	-2	0	-5
502.8	5	1	0	2	0	6	14	57	0	-8	0	-21
502.8	6	1	0	3	0	6	14	57	0	-6	0	-16
502.8	7	1	0	5	0	6	14	57	0	-2	0	-5
502.8	8	1	0	4	0	6	14	57	0	-4	0	-11
502.8	9	1	0	1	0	6	14	57	0	-10	0	-27
502.8	10	1	0	0	0	6	14	57	0	-12	0	-32
502.8	11	1	0	2	0	6	14	57	0	-8	0	-21
502.8	12	1	0	3	0	6	14	57	0	-6	0	-16
502.8	13	1	1	2	0	6	14	57	2	-8	5	-21
502.8	14	1	0	6	0	6	14	57	0	0	0	0
502.8	15	1	0	4	0	6	14	57	0	-4	0	-11
502.8	16	1	0	1	0	6	14	57	0	-10	0	-27
502.8	17	1	0	0	0	6	14	57	0	-12	0	-32
502.8	18	1	0	3	0	6	14	57	0	-6	0	-16
502.8	19	1	0	3	0	6	14	57	0	-6	0	-16
502.8	20	1	0	5	0	6	14	57	0	-2	0	-5
502.8	21	1	0	3	0	6	14	57	0	-6	0	-16
502.8	22	1	0	0	0	6	14	57	0	-12	0	-32
502.8	23	1	0	2	0	6	14	57	0	-8	0	-21
502.8	24	1	0	4	0	6	14	57	0	-4	0	-11
502.8	25	1	0	4	0	6	14	57	0	-4	0	-11
502.8	26	1	0	1	0	6	14	57	0	-10	0	-27
502.8	27	1	1	1	0	6	14	57	2	-10	5	-27
502.8	28	1	0	0	0	6	14	57	0	-12	0	-32
502.8	29	1	0	0	0	6	14	57	0	-12	0	-32
502.8	30	1	1	1	0	6	14	57	2	-10	5	-27
502.8	31	1	1	2	0	6	14	57	2	-8	5	-21
502.8	32	1	0	6	0	6	14	57	0	0	0	0
502.8	33	1	0	3	0	6	14	57	0	-6	0	-16
502.8	34	1	0	2	0	6	14	57	0	-8	0	-21
502.8	35	1	0	3	0	6	14	57	0	-6	0	-16
502.8	36	1	1	3	0	6	14	57	2	-6	5	-16
502.8	37	1	0	6	0	6	14	57	0	0	0	0
502.8	38	1	0	3	0	6	14	57	0	-6	0	-16
502.8	39	1	0	2	0	6	14	57	0	-8	0	-21
502.8 NE FLOOR	40	1	1	0	0	6	14	57	2	-12	5	-32
502.8	41	1	1	2	0	6	14	57	2	-8	5	-21
502.8	42	1	0	4	0	6	14	57	0	-4	0	-11
502.8	43	1	0	4	0	6	14	57	0	-4	0	-11
502.8	44	1	0	4	0	6	14	57	0	-4	0	-11
502.8 SW FLOOR	45	1	0	0	0	6	14	57	0	-12	0	-32
502.8	46	1	1	4	0	6	14	57	2	-4	5	-11
502.8	47	1	0	0	0	6	14	57	0	-12	0	-32
502.8	48	1	1	2	0	6	14	57	2	-8	5	-21
502.8	49	1	0	0	0	6	14	57	0	-12	0	-32
502.8	50	1	0	3	0	6	14	57	0	-6	0	-16

## CINTICHEM FINAL STATUS SURVEY PLAN AND REPORT

The 502.9 survey unit was surveyed on an affected area basis. 132 surface soil contamination measurement locations were placed in this area. One sample was taken at each grid. 132 gamma exposure rate measurement locations were placed in this area. In addition a 100% scan was performed in each grid location. The location of these measurements is shown in the map at the beginning of this volume.

Measurement and sampling results for the 502.9 survey unit are provided in 2 attached tables as follows:

Table 502.9-1 S-4 Trench  
gamma exposure rate data

Table 502.9-2 S-4 Trench  
surface soil contamination data

11000-74-47

## CINTICHEM DECOMMISSIONING PLAN

06/18/97

## FINAL SURVEY DATA SHEET

## DATA FOR AFFECTED AREA DESCRIPTION:

S-4 TRENCH

AREA 502.9 FOR UR/HR

RADIATION TYPE: GAMMA SURVEY IN UREM/HR

## COMPLETION

DATE: 12/96

TECHNICIANS: TA MATERIAL CODE

AREA: 502.0 1=CONCRETE 5=PLASTIC

UNIT: 502.9 2=ROCK 6=SOIL

MEDIA TYPE: SOIL 3=WOOD 7=ASPHALT

# of POINTS: 132 4=METAL 8=OTHER(SPECIFY):

NO MATERIAL BACKGROUND USED

## MICRO REM

PER HOUR: LIMIT

MAX: 11.00 FAIL 10

AVG: 5.13 FAIL 5

STD X: 1.69

MU SUB ALPHA: 5.37 FAIL 5

ID #	GRID POINT	INST.	ID #	MATER-			
				BKG	READING	IAL	NET
				UREM/HR	UREM/HR	UREM/HR	UREM/HR
	N	N					
502.9	98	43	A	6	13	8	7
502.9	99	43	A	6	13	8	7
502.9	100	43	A	6	14	8	8
502.9	98	42	A	6	16	8	10
502.9	99	42	A	6	16	8	10
502.9	100	42	A	6	15	8	9
502.9	97	41	A	6	15	8	9
502.9	98	41	A	6	16	8	10
502.9	99	41	A	6	17	8	11
502.9	97	40	A	6	13	8	7
502.9	98	40	A	6	14	8	8
502.9	99	40	A	6	13	8	7
502.9	96	39	A	6	13	8	7
502.9	97	39	A	6	14	8	8
502.9	98	39	A	6	15	8	9
502.9	96	38	A	6	11	8	5
502.9	97	38	A	6	11	8	5
502.9	98	38	A	6	11	8	5
502.9	95	37	A	6	11	8	5
502.9	96	37	A	6	11	8	5
502.9	97	37	A	6	12	8	6
502.9	95	36	A	6	15	8	9
502.9	96	36	A	6	12	8	6
502.9	97	36	A	6	12	8	6
502.9	94	35	A	6	10	8	4
502.9	95	35	A	6	10	8	4
502.9	96	35	A	6	12	8	6
502.9	94	34	A	6	10	8	4
502.9	95	34	A	6	10	8	4
502.9	96	34	A	6	10	8	4

TABLE 502.9-1

502.9	93	33	A	6	11	8	5
502.9	94	33	A	6	10	8	4
502.9	95	33	A	6	10	8	4
502.9	95	32	A	6	11	8	5
502.9	94	32	A	6	9	8	3
502.9	93	32	A	6	10	8	4
502.9	95	31	A	6	11	8	5
502.9	94	31	A	6	11	8	5
502.9	93	31	A	6	12	8	6
502.9	95	30	A	6	9	8	3
502.9	94	30	A	6	10	8	4
502.9	93	30	A	6	10	8	4
502.9	95	29	A	6	9	8	3
502.9	94	29	A	6	10	8	4
502.9	93	29	A	6	9	8	3
502.9	95	28	A	6	9	8	3
502.9	94	28	A	6	10	8	4
502.9	93	28	A	6	10	8	4
502.9	95	27	A	6	11	8	5
502.9	94	27	A	6	10	8	4
502.9	93	27	A	6	10	8	4
502.9	95	26	A	6	10	8	4
502.9	94	26	A	6	10	8	4
502.9	93	26	A	6	11	8	5
502.9	95	25	A	6	10	8	4
502.9	94	25	A	6	11	8	5
502.9	93	25	A	6	14	8	8
502.9	95	24	A	6	10	8	4
502.9	94	24	A	6	9	8	3
502.9	93	24	A	6	9	8	3
502.9	95	23	A	6	12	8	6
502.9	94	23	A	6	11	8	5
502.9	93	23	A	6	10	8	4
502.9	95	22	A	6	10	8	4
502.9	94	22	A	6	9	8	3
502.9	93	22	A	6	11	8	5
502.9	95	21	A	6	9	8	3
502.9	94	21	A	6	10	8	4
502.9	93	21	A	6	11	8	5
502.9	95	20	A	6	10	8	4
502.9	94	20	A	6	10	8	4
502.9	93	20	A	6	10	8	4
502.9	95	19	A	6	11	8	5
502.9	94	19	A	6	11	8	5
502.9	93	19	A	6	11	8	5
502.9	95	18	A	6	12	8	6
502.9	94	18	A	6	11	8	5
502.9	93	18	A	6	12	8	6
502.9	95	17	A	6	12	8	6
502.9	94	17	A	6	13	8	7
502.9	93	17	A	6	12	8	6
502.9	95	16	A	6	9	8	3
502.9	94	16	A	6	10	8	4
502.9	93	16	A	6	10	8	4
502.9	95	15	A	6	10	8	4
502.9	94	15	A	6	10	8	4
502.9	93	15	A	6	12	8	6
502.9	95	14	A	6	12	8	6
502.9	94	14	A	6	11	8	5
502.9	93	14	A	6	11	8	5

TABLE 502.9-1

502.9	95	13	A	6	10	8	4
502.9	94	13	A	6	9	8	3
502.9	93	13	A	6	11	8	5
502.9	95	12	A	6	10	8	4
502.9	94	12	A	6	9	8	3
502.9	93	12	A	6	11	8	5
502.9	95	11	A	6	10	8	4
502.9	94	11	A	6	13	8	7
502.9	93	11	A	6	15	8	9
502.9	95	10	A	6	11	8	5
502.9	94	10	A	6	12	8	6
502.9	93	10	A	6	10	8	4
502.9	95	9	A	6	12	8	6
502.9	94	9	A	6	14	8	8
502.9	93	9	A	6	10	8	4
502.9	95	8	A	6	11	8	5
502.9	94	8	A	6	12	8	6
502.9	93	8	A	6	10	8	4
502.9	95	7	A	6	10	8	4
502.9	94	7	A	6	10	8	4
502.9	93	7	A	6	11	8	5
502.9	95	6	A	6	11	8	5
502.9	94	6	A	6	10	8	4
502.9	93	6	A	6	9	8	3
502.9	95	5	A	6	11	8	5
502.9	94	5	A	6	11	8	5
502.9	93	5	A	6	10	8	4
502.9	95	4	A	6	10	8	4
502.9	94	4	A	6	10	8	4
502.9	93	4	A	6	11	8	5
502.9	95	3	A	6	10	8	4
502.9	94	3	A	6	10	8	4
502.9	93	3	A	6	11	8	5
502.9	95	2	A	6	11	8	5
502.9	94	2	A	6	11	8	5
502.9	93	2	A	6	11	8	5
502.9	95	1	A	6	10	8	4
502.9	94	1	A	6	12	8	6
502.9	93	1	A	6	11	8	5
502.9	95	0	A	6	12	8	6
502.9	94	0	A	6	11	8	5
502.9	93	0	A	6	11	8	5

REF ID: A12345  
TABLE 502.9-2

CINTICHEM DECOMMISSIONING PLAN 06/18/97

FINAL SURVEY DATA SHEET

DATA FOR Affected AREA DESCRIPTION:

S-4 TRENCH

AREA 502.9

RADIATION TYPE: SOIL DATA FOR SUM OF THE FRACTIONS

COMPLETION

DATE: 12/96

TECHNICIANS: TA

AREA: 502.0

UNIT: 502.9

MEDIA TYPE: SOIL

# of POINTS: 132

SOIL DATA IN

SUM OF FRACTIONS:

LIMIT

MAX 0.75 PASS 1

AVG 0.05 PASS 1

STD X 0.14

MU SUB ALPHA 0.07 PASS 1

## ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)

ID #	GRID COORDINATES OR OTHER ID	ISOTOPES OF CONCERN IN PCI/G (WITH BACKGROUND INCLUDED)						SOIL CODE
		SR-90 LIMIT	CO-60 LIMIT	AG-108M LIMIT	CS-134 LIMIT	CS-137 LIMIT	CE-144 LIMIT	
		17	0.9	1.1	1.8	3.8	63	2

N	N	SR-90 LIMIT	CO-60 LIMIT	AG-108M LIMIT	CS-134 LIMIT	CS-137 LIMIT	CE-144 LIMIT	EU-152 LIMIT
502.9	98	43 < 0.10 <	0.05 < 0.05 <	0.05 < 0.05 <	0.05 < 0.45 <	0.05 < 0.28 <		1
502.9	99	43 < 0.10 <	0.09 < 0.04 <	0.05 < 0.06 <	0.06 < 0.16 <	0.06 < 0.10 <		1
502.9	100	43 < 0.10 <	0.05 < 0.05 <	0.05 < 0.03 <	0.03 < 0.29 <	0.03 < 0.12 <		1
502.9	98	42 < 0.12 <	0.02 < 0.05 <	0.05 < 0.06 <	0.06 < 0.37 <	0.06 < 0.13 <		1
502.9	99	42 < 0.12 <	0.09 < 0.06 <	0.06 < 0.09 <	0.09 < 0.47 <	0.09 < 0.17 <		1
502.9	100	42 < 0.10 <	0.05 < 0.02 <	0.02 < 0.06 <	0.04 < 0.04 <	0.04 < 0.27 <		1
502.9	97	41 < 0.12 <	0.04 < 0.04 <	0.04 < 0.05 <	0.07 < 0.07 <	0.07 < 0.49 <		1
502.9	98	41 < 0.10 <	0.03 < 0.03 <	0.03 < 0.05 <	0.04 < 0.04 <	0.04 < 0.20 <		1
502.9	99	41 < 0.11 <	0.02 < 0.05 <	0.06 < 0.07 <	0.07 < 0.18 <	0.07 < 0.11 <		1
502.9	97	40 < 0.12 <	0.05 < 0.02 <	0.02 < 0.06 <	0.07 < 0.07 <	0.07 < 0.30 <		1
502.9	98	40 < 0.12 <	0.04 < 0.02 <	0.02 < 0.06 <	0.06 < 0.06 <	0.06 < 0.33 <		1
502.9	99	40 < 0.12 <	0.06 < 0.02 <	0.02 < 0.04 <	0.03 < 0.36 <	0.03 < 0.11 <		1
502.9	96	39 < 0.12 <	0.07 < 0.03 <	0.03 < 0.06 <	0.07 < 0.07 <	0.07 < 0.39 <		1
502.9	97	39 < 0.10 <	0.07 < 0.05 <	0.05 < 0.04 <	0.04 < 0.30 <	0.04 < 0.08 <		1
502.9	98	39 < 0.10 <	0.04 < 0.05 <	0.05 < 0.07 <	0.05 < 0.05 <	0.05 < 0.18 <		1
502.9	96	38 < 0.12 <	0.04 < 0.04 <	0.04 < 0.06 <	0.09 < 0.09 <	0.09 < 0.34 <		1
502.9	97	38 < 0.11 <	0.09 < 0.06 <	0.06 < 0.09 <	0.09 < 0.17 <	0.09 < 0.12 <		1
502.9	98	38 < 0.10 <	0.04 < 0.02 <	0.02 < 0.07 <	0.11 < 0.11 <	0.11 < 0.23 <		1
502.9	95	37 < 0.10 <	0.05 < 0.02 <	0.02 < 0.05 <	0.14 < 0.14 <	0.14 < 0.09 <		1
502.9	96	37 < 0.10 <	0.03 < 0.02 <	0.02 < 0.06 <	0.07 < 0.07 <	0.07 < 0.09 <		1
502.9	97	37 < 0.10 <	0.08 < 0.02 <	0.02 < 0.06 <	0.11 < 0.11 <	0.11 < 0.11 <		1
502.9	95	36 < 0.10 <	0.05 < 0.02 <	0.02 < 0.05 <	0.08 < 0.08 <	0.08 < 0.07 <		1
502.9	96	36 < 0.10 <	0.08 < 0.05 <	0.05 < 0.08 <	0.58 < 0.58 <	0.58 < 0.07 <		1
502.9	97	36 < 0.10 <	0.10 < 0.02 <	0.02 < 0.06 <	0.29 < 0.29 <	0.29 < 0.08 <		1
502.9	94	35 < 0.09 <	0.04 < 0.04 <	0.04 < 0.06 <	0.13 < 0.13 <	0.13 < 0.10 <		1
502.9	95	35 < 0.12 <	0.06 < 0.01 <	0.01 < 0.04 <	0.04 < 0.14 <	0.04 < 0.08 <		1
502.9	96	35 < 0.12 <	0.06 < 0.04 <	0.04 < 0.04 <	0.07 < 0.34 <	0.07 < 0.06 <		1
502.9	94	34 < 0.11 <	0.06 < 0.04 <	0.04 < 0.06 <	0.07 < 0.07 <	0.07 < 0.17 <		1
502.9	95	34 < 0.13 <	0.08 < 0.03 <	0.03 < 0.07 <	0.10 < 0.10 <	0.10 < 0.07 <		1
502.9	96	34 < 0.12 <	0.05 < 0.04 <	0.04 < 0.05 <	0.11 < 0.40 <	0.11 < 0.10 <		1
502.9	93	33 < 0.12 <	0.04 < 0.05 <	0.05 < 0.15 <	0.57 < 0.57 <	0.57 < 0.11 <		1
502.9	94	33 < 0.84 <	0.07 < 0.03 <	0.03 < 0.06 <	0.32 < 0.32 <	0.29 < 0.06 <		1

(1) 6-18-97

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

ISOTOPES OF CONCERN IN FRACTION OF LIMIT

-90	CO-60	AG-108M	CS-134	CS-137	CE-144	EU-152	SUM
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0.006 <	0.056 <	0.045 <	0.028 <	0.000 <	0.007 <	0.140	0.000
0.006 <	0.100 <	0.036 <	0.028 <	0.000 <	0.003 <	0.050	0.000
0.006 <	0.056 <	0.045 <	0.028 <	0.000 <	0.005 <	0.060	0.000
0.007 <	0.022 <	0.045 <	0.028 <	0.000 <	0.006 <	0.065	0.000
0.007 <	0.100 <	0.055 <	0.033 <	0.000 <	0.007 <	0.085	0.000
0.006 <	0.056 <	0.018 <	0.033 <	0.000 <	0.004 <	0.055	0.000
0.007 <	0.044 <	0.036 <	0.028 <	0.000 <	0.008 <	0.035	0.000
0.006 <	0.033 <	0.027 <	0.028 <	0.000 <	0.003 <	0.045	0.000
0.006 <	0.022 <	0.045 <	0.033 <	0.000 <	0.003 <	0.055	0.000
0.007 <	0.056 <	0.018 <	0.033 <	0.000 <	0.005 <	0.040	0.000
0.007 <	0.044 <	0.018 <	0.033 <	0.000 <	0.005 <	0.095	0.000
0.007 <	0.067 <	0.018 <	0.022 <	0.000 <	0.006 <	0.055	0.000
0.007 <	0.078 <	0.027 <	0.033 <	0.000 <	0.006 <	0.040	0.000
0.006 <	0.078 <	0.045 <	0.028 <	0.000 <	0.005 <	0.040	0.000
0.006 <	0.044 <	0.045 <	0.039 <	0.000 <	0.003 <	0.035	0.000
0.007 <	0.044 <	0.036 <	0.033 <	0.000 <	0.005 <	0.060	0.000
0.006 <	0.100 <	0.055 <	0.033 <	0.000 <	0.003 <	0.060	0.000
0.006 <	0.044 <	0.018 <	0.039 <	0.000 <	0.007 <	0.115	0.000
0.006 <	0.056 <	0.018 <	0.028	0.000 <	0.005 <	0.045	0.000
0.006 <	0.033 <	0.018 <	0.033	0.000 <	0.003 <	0.045	0.000
0.006 <	0.089 <	0.018 <	0.033 <	0.000 <	0.007 <	0.055	0.000
0.006 <	0.056 <	0.018 <	0.028 <	0.000 <	0.006 <	0.035	0.000
0.006 <	0.089 <	0.045 <	0.044	0.000 <	0.004 <	0.035	0.000
0.006 <	0.111 <	0.018 <	0.033	0.000 <	0.003 <	0.040	0.000
0.005 <	0.014 <	0.036 <	0.033 <	0.000 <	0.002 <	0.050	0.000
0.007 <	0.067 <	0.009 <	0.022 <	0.000 <	0.002 <	0.040	0.000
0.007 <	0.067 <	0.036 <	0.022 <	0.000 <	0.005 <	0.030	0.000
0.006 <	0.067 <	0.036 <	0.033 <	0.000 <	0.005 <	0.085	0.000
0.008 <	0.089 <	0.027 <	0.039 <	0.000 <	0.009 <	0.035	0.000
0.007 <	0.056 <	0.036 <	0.028 <	0.000 <	0.006 <	0.050	0.000
0.007 <	0.044 <	0.045	0.083	0.000 <	0.005 <	0.055	0.083
0.049 <	0.078 <	0.027 <	0.033	0.000 <	0.005 <	0.030	0.049

9707240076-43

TABLE 502.9-2

502.9	95	33	< 0.11	< 0.04	< 0.03	0.13	0.56	< 0.47	< 0.09	1	<
502.9	93	32	0.53	< 0.07	< 0.03	< 0.05	0.48	< 0.26	< 0.05	1	<
502.9	94	32	< 0.11	< 0.03	< 0.06	< 0.06	< 0.08	< 0.14	< 0.16	1	<
502.9	95	32	0.16	< 0.04	< 0.04	< 0.05	< 0.10	< 0.24	< 0.11	1	<
502.9	93	31	< 0.11	< 0.04	< 0.01	< 0.04	< 0.03	< 0.17	< 0.05	1	<
502.9	94	31	< 0.11	< 0.04	< 0.04	< 0.05	< 0.11	< 0.36	< 0.06	1	<
502.9	95	31	< 0.12	< 0.04	< 0.03	< 0.06	0.11	< 0.19	< 0.13	1	<
502.9	93	30	< 0.11	< 0.08	< 0.05	< 0.05	< 0.07	< 0.32	< 0.08	1	<
502.9	94	30	< 0.11	< 0.07	< 0.09	< 0.05	< 0.06	< 0.26	< 0.13	1	<
502.9	95	30	< 0.11	< 0.04	< 0.02	< 0.04	0.16	< 0.30	< 0.10	1	<
502.9	93	29	< 0.13	< 0.05	< 0.05	< 0.05	< 0.06	< 0.37	< 0.05	1	<
502.9	94	29	< 0.11	< 0.04	< 0.01	< 0.04	< 0.04	< 0.35	< 0.11	1	<
502.9	95	29	< 0.11	< 0.03	< 0.02	< 0.07	< 0.06	< 0.31	< 0.11	1	<
502.9	93	28	< 0.11	< 0.03	< 0.01	< 0.04	< 0.02	< 0.14	< 0.12	1	<
502.9	94	28	< 0.11	< 0.03	< 0.02	< 0.04	< 0.05	< 0.39	< 0.06	1	<
502.9	95	28	< 0.10	< 0.03	< 0.03	< 0.04	< 0.02	< 0.28	< 0.05	1	<
502.9	93	27	< 0.10	< 0.04	< 0.02	< 0.06	< 0.05	< 0.29	< 0.17	1	<
502.9	94	27	< 0.11	< 0.03	< 0.03	< 0.05	< 0.05	< 0.38	< 0.08	1	<
502.9	95	27	< 0.13	< 0.03	< 0.04	< 0.04	< 0.06	< 0.21	< 0.11	1	<
502.9	93	26	< 0.10	< 0.02	< 0.03	< 0.04	< 0.04	< 0.30	< 0.17	1	<
502.9	94	26	< 0.11	< 0.04	< 0.03	< 0.04	< 0.06	< 0.24	< 0.11	1	<
502.9	95	26	< 0.11	< 0.03	< 0.03	< 0.06	< 0.06	< 0.20	< 0.08	1	<
502.9	93	25	< 0.11	< 0.05	< 0.03	< 0.04	< 0.03	< 0.19	< 0.04	1	<
502.9	94	25	< 0.12	< 0.04	< 0.03	< 0.06	< 0.07	< 0.31	< 0.07	1	<
502.9	95	25	< 0.13	< 0.03	< 0.04	< 0.05	0.10	< 0.30	< 0.12	1	<
502.9	93	24	< 0.13	< 0.03	< 0.04	< 0.05	< 0.06	< 0.25	< 0.11	1	<
502.9	94	24	< 0.12	< 0.03	< 0.03	< 0.05	< 0.05	< 0.19	< 0.15	1	<
502.9	95	24	< 0.10	< 0.05	< 0.02	< 0.04	< 0.08	< 0.19	< 0.09	1	<
502.9	93	23	< 0.13	< 0.08	< 0.05	< 0.06	< 0.10	< 0.24	< 0.17	1	<
502.9	94	23	< 0.12	< 0.03	< 0.04	< 0.06	< 0.04	< 0.30	< 0.15	1	<
502.9	95	23	< 0.13	< 0.03	< 0.03	< 0.05	< 0.06	< 0.25	< 0.06	1	<
502.9	93	22	< 0.10	< 0.03	< 0.02	< 0.04	< 0.02	< 0.21	< 0.10	1	<
502.9	94	22	< 0.12	< 0.06	< 0.03	< 0.04	< 0.05	< 0.22	< 0.21	1	<
502.9	95	22	< 0.10	< 0.07	< 0.04	< 0.04	< 0.05	< 0.40	< 0.11	1	<
502.9	93	21	< 0.11	< 0.05	< 0.03	< 0.05	< 0.03	< 0.31	< 0.08	1	<
502.9	94	21	< 0.11	< 0.06	< 0.02	< 0.04	< 0.03	< 0.20	< 0.12	1	<
502.9	95	21	< 0.11	< 0.04	< 0.04	< 0.04	< 0.06	< 0.32	< 0.11	1	<
502.9	93	20	< 0.11	< 0.03	< 0.03	< 0.05	< 0.08	< 0.35	< 0.08	1	<
502.9	94	20	< 0.11	< 0.04	< 0.04	< 0.05	< 0.05	< 0.13	< 0.13	1	<
502.9	95	20	< 0.11	< 0.04	< 0.02	< 0.05	< 0.08	< 0.33	< 0.11	1	<
502.9	93	19	< 0.11	< 0.06	< 0.03	< 0.05	< 0.06	< 0.24	< 0.14	1	<
502.9	94	19	< 0.11	< 0.07	< 0.05	< 0.05	< 0.05	< 0.30	< 0.16	1	<
502.9	95	19	< 0.11	< 0.06	< 0.02	< 0.04	< 0.02	< 0.26	< 0.05	1	<
502.9	93	18	< 0.11	< 0.03	< 0.03	< 0.04	< 0.05	< 0.28	< 0.09	1	<
502.9	94	18	< 0.11	< 0.04	< 0.03	< 0.04	< 0.04	< 0.32	< 0.14	1	<
502.9	95	18	< 0.11	< 0.07	< 0.02	< 0.06	< 0.04	< 0.29	< 0.11	1	<
502.9	93	17	0.24	< 0.05	< 0.04	< 0.07	< 0.07	< 0.24	< 0.17	1	<
502.9	94	17	0.39	< 0.04	< 0.03	< 0.05	< 0.06	< 0.36	< 0.09	1	<
502.9	95	17	< 0.20	< 0.04	< 0.03	< 0.06	< 0.11	< 0.42	< 0.11	1	<
502.9	93	16	0.24	< 0.03	< 0.05	< 0.05	< 0.03	< 0.34	< 0.07	1	<
502.9	94	16	0.39	< 0.06	< 0.02	< 0.06	< 0.05	< 0.25	< 0.06	1	<
502.9	95	16	< 0.20	< 0.05	< 0.06	< 0.06	< 0.06	< 0.29	< 0.12	1	<
502.9	93	15	0.24	< 0.03	< 0.03	< 0.05	< 0.06	< 0.29	< 0.07	1	<
502.9	94	15	0.39	< 0.04	< 0.02	< 0.05	< 0.02	< 0.34	< 0.05	1	<
502.9	95	15	< 0.20	< 0.03	< 0.02	< 0.05	< 0.02	< 0.18	< 0.18	1	<
502.9	93	14	0.24	< 0.07	< 0.04	< 0.05	< 0.04	< 0.22	< 0.06	1	<
502.9	94	14	0.39	< 0.23	< 0.03	< 0.06	< 0.03	< 0.40	< 0.08	1	<
502.9	95	14	< 0.20	< 0.06	< 0.04	< 0.07	< 0.03	< 0.26	< 0.07	1	<
502.9	93	13	0.24	< 0.09	< 0.03	< 0.06	< 0.09	< 0.16	< 0.10	1	<
502.9	94	13	0.39	< 0.03	< 0.02	< 0.06	< 0.07	< 0.30	< 0.16	1	<

**ANSTEC  
APERTURE  
CARD**

**Also Available on  
Aperture Card**

0.006 <	0.044 <	0.027	0.072	0.000 <	0.007 <	0.045	0.072
0.031 <	0.078 <	0.027 <	0.028	0.000 <	0.004 <	0.025	0.031
0.006 <	0.033 <	0.055 <	0.033 <	0.000 <	0.002 <	0.080	0.000
0.009 <	0.044 <	0.036 <	0.028 <	0.000 <	0.004 <	0.055	0.009
0.006 <	0.044 <	0.009 <	0.022 <	0.000 <	0.003 <	0.025	0.000
0.006 <	0.044 <	0.036 <	0.028 <	0.000 <	0.006 <	0.030	0.000
0.007 <	0.044 <	0.027 <	0.033	0.000 <	0.003 <	0.065	0.000
0.006 <	0.089 <	0.045 <	0.028 <	0.000 <	0.005 <	0.040	0.000
0.006 <	0.078 <	0.082 <	0.028 <	0.000 <	0.004 <	0.065	0.000
0.006 <	0.044 <	0.018 <	0.022	0.000 <	0.005 <	0.050	0.000
0.008 <	0.056 <	0.045 <	0.028 <	0.000 <	0.006 <	0.025	0.000
0.006 <	0.044 <	0.009 <	0.022 <	0.000 <	0.006 <	0.055	0.000
0.006 <	0.033 <	0.018 <	0.039 <	0.000 <	0.005 <	0.055	0.000
0.006 <	0.033 <	0.009 <	0.022 <	0.000 <	0.002 <	0.060	0.000
0.006 <	0.033 <	0.018 <	0.022 <	0.000 <	0.006 <	0.030	0.000
0.006 <	0.033 <	0.027 <	0.022 <	0.000 <	0.004 <	0.025	0.000
0.006 <	0.044 <	0.018 <	0.033 <	0.000 <	0.005 <	0.085	0.000
0.006 <	0.033 <	0.027 <	0.028 <	0.000 <	0.006 <	0.040	0.000
0.008 <	0.033 <	0.036 <	0.022 <	0.000 <	0.003 <	0.055	0.000
0.006 <	0.022 <	0.027 <	0.022 <	0.000 <	0.005 <	0.085	0.000
0.006 <	0.044 <	0.027 <	0.022 <	0.000 <	0.004 <	0.055	0.000
0.006 <	0.033 <	0.027 <	0.033 <	0.000 <	0.003 <	0.040	0.000
0.006 <	0.056 <	0.027 <	0.022 <	0.000 <	0.003 <	0.020	0.000
0.007 <	0.044 <	0.027 <	0.033 <	0.000 <	0.005 <	0.035	0.000
0.008 <	0.033 <	0.036 <	0.028	0.000 <	0.005 <	0.060	0.000
0.008 <	0.033 <	0.036 <	0.028 <	0.000 <	0.004 <	0.055	0.000
0.007 <	0.033 <	0.027 <	0.028 <	0.000 <	0.003 <	0.075	0.000
0.006 <	0.056 <	0.018 <	0.022 <	0.000 <	0.003 <	0.045	0.000
0.008 <	0.089 <	0.045 <	0.033 <	0.000 <	0.004 <	0.085	0.000
0.007 <	0.033 <	0.036 <	0.033 <	0.000 <	0.005 <	0.075	0.000
0.008 <	0.033 <	0.027 <	0.028 <	0.000 <	0.004 <	0.030	0.000
0.006 <	0.033 <	0.018 <	0.022 <	0.000 <	0.003 <	0.050	0.000
0.007 <	0.067 <	0.027 <	0.022 <	0.000 <	0.003 <	0.105	0.000
0.006 <	0.078 <	0.036 <	0.022 <	0.000 <	0.006 <	0.055	0.000
0.006 <	0.056 <	0.027 <	0.028 <	0.000 <	0.005 <	0.040	0.000
0.006 <	0.067 <	0.018 <	0.022 <	0.000 <	0.003 <	0.060	0.000
0.006 <	0.044 <	0.036 <	0.022 <	0.000 <	0.005 <	0.055	0.000
0.006 <	0.033 <	0.027 <	0.028 <	0.000 <	0.006 <	0.040	0.000
0.006 <	0.044 <	0.036 <	0.028 <	0.000 <	0.002 <	0.065	0.000
0.006 <	0.044 <	0.018 <	0.028 <	0.000 <	0.005 <	0.055	0.000
0.006 <	0.067 <	0.027 <	0.028 <	0.000 <	0.004 <	0.070	0.000
0.006 <	0.078 <	0.045 <	0.028 <	0.000 <	0.005 <	0.080	0.000
0.006 <	0.057 <	0.018 <	0.022 <	0.000 <	0.004 <	0.025	0.000
0.006 <	0.033 <	0.027 <	0.022 <	0.000 <	0.004 <	0.045	0.000
0.006 <	0.044 <	0.027 <	0.028 <	0.000 <	0.004 <	0.045	0.000
0.006 <	0.044 <	0.027 <	0.022 <	0.000 <	0.005 <	0.070	0.000
0.006 <	0.078 <	0.018 <	0.033 <	0.000 <	0.005 <	0.055	0.000
0.014 <	0.056 <	0.036 <	0.039 <	0.000 <	0.004 <	0.085	0.014
0.023 <	0.044 <	0.027 <	0.028 <	0.000 <	0.006 <	0.045	0.023
0.012 <	0.044 <	0.027 <	0.033 <	0.000 <	0.007 <	0.055	0.000
0.014 <	0.033 <	0.045 <	0.028 <	0.000 <	0.005 <	0.035	0.014
0.023 <	0.067 <	0.018 <	0.033 <	0.000 <	0.004 <	0.030	0.023
0.012 <	0.056 <	0.055 <	0.033 <	0.000 <	0.005 <	0.060	0.000
0.014 <	0.033 <	0.027 <	0.028 <	0.000 <	0.005 <	0.035	0.014
0.023 <	0.044 <	0.018 <	0.028 <	0.000 <	0.005 <	0.025	0.023
0.012 <	0.033 <	0.018 <	0.028 <	0.000 <	0.003 <	0.090	0.000
0.014 <	0.078 <	0.036 <	0.028 <	0.000 <	0.003 <	0.030	0.014
0.023 <	0.256 <	0.027 <	0.033 <	0.000 <	0.006 <	0.040	0.023
0.012 <	0.067 <	0.036 <	0.039 <	0.000 <	0.004 <	0.035	0.000
0.014 <	0.100 <	0.027 <	0.033 <	0.000 <	0.003 <	0.050	0.014
0.023 <	0.033 <	0.018 <	0.033 <	0.000 <	0.005 <	0.080	0.023

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TABLE 502.9-2

502.9	95	13	0.28	<	0.06	<	0.05	<	0.05	<	0.07	<	0.32	<	0.14	1	
502.9	93	12	<	0.20	<	0.05	<	0.02	<	0.05	<	0.05	<	0.35	<	0.10	1
502.9	94	12	<	0.20	<	0.06	<	0.02	<	0.05	<	0.07	<	0.34	<	0.11	1
502.9	95	12	0.28	<	0.13	<	0.03	<	0.06	<	0.09	<	0.38	<	0.19	1	
502.9	93	11	<	0.20	<	0.04	<	0.03	<	0.06	<	0.12	<	0.31	<	0.07	1
502.9	94	11	<	0.20	<	0.05	<	0.04	<	0.06	<	0.06	<	0.15	<	0.07	1
502.9	95	11	0.28	<	0.04	<	0.02	<	0.05	<	0.10	<	0.24	<	0.15	1	
502.9	93	10	<	0.20	<	0.05	<	0.03	<	0.06	<	0.09	<	0.43	<	0.13	1
502.9	94	10	<	0.20	<	0.04	<	0.05	<	0.05	<	0.10	<	0.36	<	0.09	1
502.9	95	10	0.28	<	0.09	<	0.03	<	0.04	<	0.15	<	0.34	<	0.13	1	
502.9	93	9	<	0.20	<	0.05	<	0.05	<	0.08	<	0.12	<	0.17	<	0.17	1
502.9	94	9	<	0.20	<	0.06	<	0.04	<	0.06	<	0.19	<	0.33	<	0.07	1
502.9	95	9	0.28	<	0.05	<	0.05	<	0.07	<	0.14	<	0.13	<	0.07	1	
502.9	93	8	<	0.20	<	0.09	<	0.04	<	0.05	<	0.21	<	0.32	<	0.13	1
502.9	94	8	<	0.20	<	0.09	<	0.06	<	0.07	<	0.38	<	0.60	<	0.13	1
502.9	95	8	0.18	<	0.04	<	0.05	<	0.07	<	0.09	<	0.24	<	0.14	1	
502.9	93	7	0.36	<	0.12	<	0.02	<	0.06	<	0.35	<	0.38	<	0.07	1	
502.9	94	7	0.35	<	0.05	<	0.05	<	0.07	<	0.29	<	0.24	<	0.18	1	
502.9	95	7	0.12	<	0.40	<	0.05	<	0.05	<	0.29	<	0.52	<	0.11	1	
502.9	93	6	<	0.12	<	0.09	<	0.03	<	0.05	<	0.10	<	0.37	<	0.07	1
502.9	94	6	0.14	<	0.17	<	0.05	<	0.06	<	0.31	<	0.47	<	0.16	1	
502.9	95	6	0.32	<	0.07	<	0.03	<	0.07	<	0.45	<	0.45	<	0.16	1	
502.9	93	5	0.35	<	0.18	<	0.02	<	0.04	<	0.28	<	0.40	<	0.07	1	
502.9	94	5	0.35	<	0.20	<	0.03	<	0.05	<	0.24	<	0.41	<	0.12	1	
502.9	95	5	0.35	<	0.19	<	0.05	<	0.05	<	0.42	<	0.31	<	0.11	1	
502.9	93	4	1.90	<	0.10	<	0.04	<	0.08	<	0.28	<	0.43	<	0.21	1	
502.9	94	4	1.30	<	0.08	<	0.03	<	0.05	<	0.22	<	0.41	<	0.06	1	
502.9	95	4	1.20	<	0.27	<	0.06	<	0.06	<	0.42	<	0.21	<	0.07	1	
502.9	93	3	1.90	<	0.16	<	0.05	<	0.05	<	0.44	<	0.17	<	0.22	1	
502.9	94	3	1.30	<	0.56	<	0.02	<	0.06	<	0.34	<	0.37	<	0.17	1	
502.9	95	3	1.20	<	0.15	<	0.05	<	0.06	<	0.31	<	0.15	<	0.09	1	
502.9	93	2	1.90	<	0.21	<	0.03	<	0.06	<	0.37	<	0.39	<	0.24	1	
502.9	94	2	1.30	<	0.10	<	0.04	<	0.08	<	0.44	<	0.14	<	0.12	1	
502.9	95	2	1.20	<	0.28	<	0.05	<	0.06	<	0.32	<	0.41	<	0.19	1	
502.9	93	1	1.90	<	0.50	<	0.04	<	0.06	<	0.22	<	0.33	<	0.11	1	
502.9	94	1	1.30	<	0.19	<	0.03	<	0.06	<	0.24	<	0.27	<	0.08	1	
502.9	95	1	1.20	<	0.61	<	0.06	<	0.07	<	0.41	<	0.33	<	0.18	1	
502.9	93	0	1.90	<	0.09	<	0.02	<	0.05	<	0.16	<	0.29	<	0.13	1	
502.9	94	0	1.30	<	0.06	<	0.04	<	0.06	<	0.28	<	0.16	<	0.13	1	
502.9	95	0	1.20	<	0.32	<	0.04	<	0.04	<	0.38	<	0.22	<	0.12	1	

0.016 <	0.067 <	0.045 <	0.028 <	0.000 <	0.005 <	0.070	0.016
0.012 <	0.056 <	0.018 <	0.026 <	0.000 <	0.006 <	0.050	0.000
0.012 <	0.067 <	0.018 <	0.028 <	0.000 <	0.005 <	0.055	0.000
0.016 <	0.144 <	0.027 <	0.033 <	0.000 <	0.006 <	0.095	0.016
0.012 <	0.044 <	0.027 <	0.033 <	0.000 <	0.005 <	0.035	0.000
0.012 <	0.056 <	0.036 <	0.033 <	0.000 <	0.002 <	0.035	0.000
0.016 <	0.044 <	0.018 <	0.028 <	0.000 <	0.004 <	0.075	0.016
0.012 <	0.056 <	0.027 <	0.033 <	0.000 <	0.007 <	0.065	0.000
0.012 <	0.044 <	0.045 <	0.028 <	0.000 <	0.006 <	0.045	0.000
0.016 <	0.100 <	0.027 <	0.022	0.000 <	0.005 <	0.065	0.016
0.012 <	0.056 <	0.045 <	0.044 <	0.000 <	0.003 <	0.085	0.000
0.012 <	0.067 <	0.036 <	0.033	0.000 <	0.005 <	0.035	0.000
0.016 <	0.056 <	0.045 <	0.039 <	0.000 <	0.002 <	0.035	0.016
0.012 <	0.100 <	0.036 <	0.028	0.000 <	0.005 <	0.065	0.000
0.012 <	0.100 <	0.055 <	0.039	0.000 <	0.010 <	0.065	0.000
0.011 <	0.044 <	0.045 <	0.039 <	0.000 <	0.004 <	0.070	0.011
0.021 <	0.133 <	0.018 <	0.033	0.000 <	0.006 <	0.035	0.021
0.021 <	0.056 <	0.045 <	0.039	0.000 <	0.004 <	0.090	0.021
0.007	0.444 <	0.045 <	0.028	0.000 <	0.008 <	0.055	0.452
0.007 <	0.100 <	0.027 <	0.028 <	0.000 <	0.006 <	0.035	0.000
0.008	0.189 <	0.045 <	0.033	0.000 <	0.007 <	0.080	0.197
0.019 <	0.078 <	0.027 <	0.039	0.000 <	0.007 <	0.080	0.019
0.021	0.200 <	0.018 <	0.022	0.000 <	0.006 <	0.035	0.221
0.021	0.222 <	0.027 <	0.028	0.000 <	0.007 <	0.060	0.243
0.021	0.211 <	0.045 <	0.028	0.000 <	0.005 <	0.055	0.232
0.112 <	0.111 <	0.036 <	0.044	0.000 <	0.007 <	0.105	0.112
0.076 <	0.089 <	0.027 <	0.028	0.000 <	0.007 <	0.030	0.076
0.071	0.300 <	0.055 <	0.033	0.000 <	0.003 <	0.035	0.371
0.112	0.178 <	0.045 <	0.028	0.000 <	0.003 <	0.110	0.290
0.076	0.622 <	0.018 <	0.033	0.000 <	0.006 <	0.085	0.699
0.071	0.167 <	0.045 <	0.033	0.000 <	0.002 <	0.045	0.237
0.112	0.233 <	0.027 <	0.033	0.000 <	0.006 <	0.120	0.345
0.076 <	0.111 <	0.036 <	0.044	0.000 <	0.002 <	0.060	0.076
0.071	0.311 <	0.045 <	0.033	0.000 <	0.007 <	0.095	0.382
0.112	0.556 <	0.036 <	0.033	0.000 <	0.005 <	0.055	0.667
0.076	0.211 <	0.027 <	0.033	0.000 <	0.004 <	0.040	0.288
0.071	0.678 <	0.055 <	0.039	0.000 <	0.005 <	0.090	0.748
0.112 <	0.100 <	0.018 <	0.028	0.000 <	0.005 <	0.065	0.112
0.076 <	0.067 <	0.036 <	0.033	0.000 <	0.003 <	0.065	0.076
0.071	0.356 <	0.036 <	0.022	0.000 <	0.003 <	0.060	0.426

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