

Pu-Plant Supply Fan Room (MCC)

This room contains three supply fan units, associated duct work and our main electrical system for the entire building. Normal access to this room was from the yard and it was maintained as a clean area, but it provided access to the exhaust fan room which was maintained as a radiation area. Because of this, and numerous changes and additions to this electrical system, an extensive survey was performed to identify all contaminated items. Some of these items still had U-plant release stickers on them at old Plutonium release limits of 500 dpm/100 cm² fixed and 100 dpm/100 cm² smearable. These items were either cleaned or removed.

Because of the proximity to the U-plant and the identification of enriched uranium contamination problems in the Pu-plant yard and the outside of Pu-plant building, (only depleted and natural uranium were blended with plutonium), no attempt was made to decon the inside of the supply fan units. The normal walk paths in this room had spot contamination of 100 dpm/100 cm² to 300 dpm/100 cm². A section of the landing floor, just outside the entry door of MCC known to have come from the U-plant, was found to be contaminated with high levels of enriched uranium. This deck plate was replaced and we cleaned the floor in the supply fanroom. I believe no further decon is required to meet release limits in this room.

We used a Ludlum 2220 with a Ludlum 43-17 low energy gamma probe to identify all cracks and seams that might need decontamination. A Ludlum 2220 with a Ludlum 43-68, 43-4, or 43-27 was used with P-10 gas for all alpha release surveys. All smears were taken on Whatman smear paper and counted in a Hewlett-Packard 5560A (low background) automatic sample counter.

W. A. Rogers

W. A. Rogers

Pu PLANT RELEASE SURVEY PLAN

1. For initial decontamination all surfaces will be scanned with an Eberline PRM-6 with a Radeco alpha scintillation probe. Background will be maintained at less than 100 CPM(200 dpm). All areas greater than twice background will be marked and reading will be taken with a release survey instrument to document contamination levels and random large area smears will be taken.
2. After these initial areas are decontaminated, all floor surfaces and the base of each wall will be completely surveyed with a digital readout release instrument and a Ludlum large area gas proportional alpha detector and random smear samples will be taken. Release instrumentation shall have a minimum detectable level of at least 50 dpm/100 cm².
3. All hot spots greater than or equal to 100 dpm/100 cm² identified will be decontaminated.
4. A random survey with a release instrument will be taken on the walls and ceiling to try to identify any other problem areas.
5. If no problems are identified, each room will be gridded off into approximately 2 meter on a side square on the walls and floor and five readings will be taken in each grid. Readings shall be taken in the center and at the midpoint from the center to each corner.
6. Each ceiling has closely spaced rafters that will not be easily divided into 2 meter squares. Because of this, we will take readings on the bottom of each rafter at 2 meter intervals and one reading centered on the ceiling between rafters. Readings on each rafter will be staggered one meter.
7. These release readings will be documented on a map that is drawn to approximately scale measurements in meters.
8. Data provided on each map:
 1. Survey block numbers, identifiable on a scale drawings.
 - a. room or area name or number.
 - b. surface surveyed.
 - c. type of measurement and units.
 2. Name of surveyor taking measurements, date of survey, and location.

3. Type, model number, calibration data, sensitivity limit, background, and source response of instruments used in survey.
4. When a block surveyed is below the sensitivity of the instrument, the fact that such a measurement was made should be included as significant data.
9. All release survey smears will be taken on Whatman smear paper and counted in the automatic sample counters. Each smear will cover approximately 100 cm².
10. There will be at least 30 survey blocks in each area to be released.
11. Piping and ductwork will be surveyed on all accessible sides at 2 meter intervals. If more than one line is running parallel in a pipe rack, readings shall be staggered at one meter intervals.
12. All readings taken that only cover part of a probe area will be corrected to dpm/100 cm².
13. No survey block will measure less than one meter on a side.
14. No survey block will measure more than 3 meters on a side.
15. All portable release survey instruments will be calibrated quarterly and all instruments in use will be source checked daily.

Table I-1. Acceptable surface contamination levels

| Nuclides ^a | Average ^{b,c,d,f} | Maximum ^{b,d,f} | Removable ^{b,e,f} |
|--|--|---|--|
| U-nat, U-235, U-238, and associated decay products | 5,000 dpm α /100 cm ² | 15,000 dpm α /100 cm ² | 1,000 dpm α /100 cm ² |
| Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129 | 100 dpm/100 cm ² | 500 dpm/100 cm ² | 20 dpm/100 cm ² |
| Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133 | 1,000 dpm/100 cm ² | 3,000 dpm/100 cm ² | 200 dpm/100 cm ² |
| Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and other noted above. | 5,000 dpm $\beta\gamma$ /100 cm ² | 15,000 dpm $\beta\gamma$ /100 cm ² | 1,000 dpm $\beta\gamma$ /100 cm ² |

^a Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

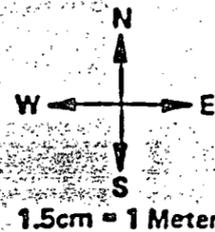
^b As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

^c Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

^d The maximum contamination level applies to an area of not more than 100 cm².

^e The amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

^f The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.



AREA PL-PLANT MOTOR CONTROL

TYPE OF SURVEY α DIRECT & SMEAR

COMPLETION DATE 4-10-89

SURVEY UNITS

WALLS
FINAL GRID

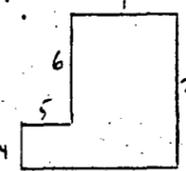
TYPE OF INSTRUMENT L4DLUM 2220/DET. 43-6F

H.P. SIGNATURE W. G. Ryan

DPM/100cm²

SERIAL NUMBER 50068

AUTO. SAMPLE COUNTER#: 2 SN 83600115

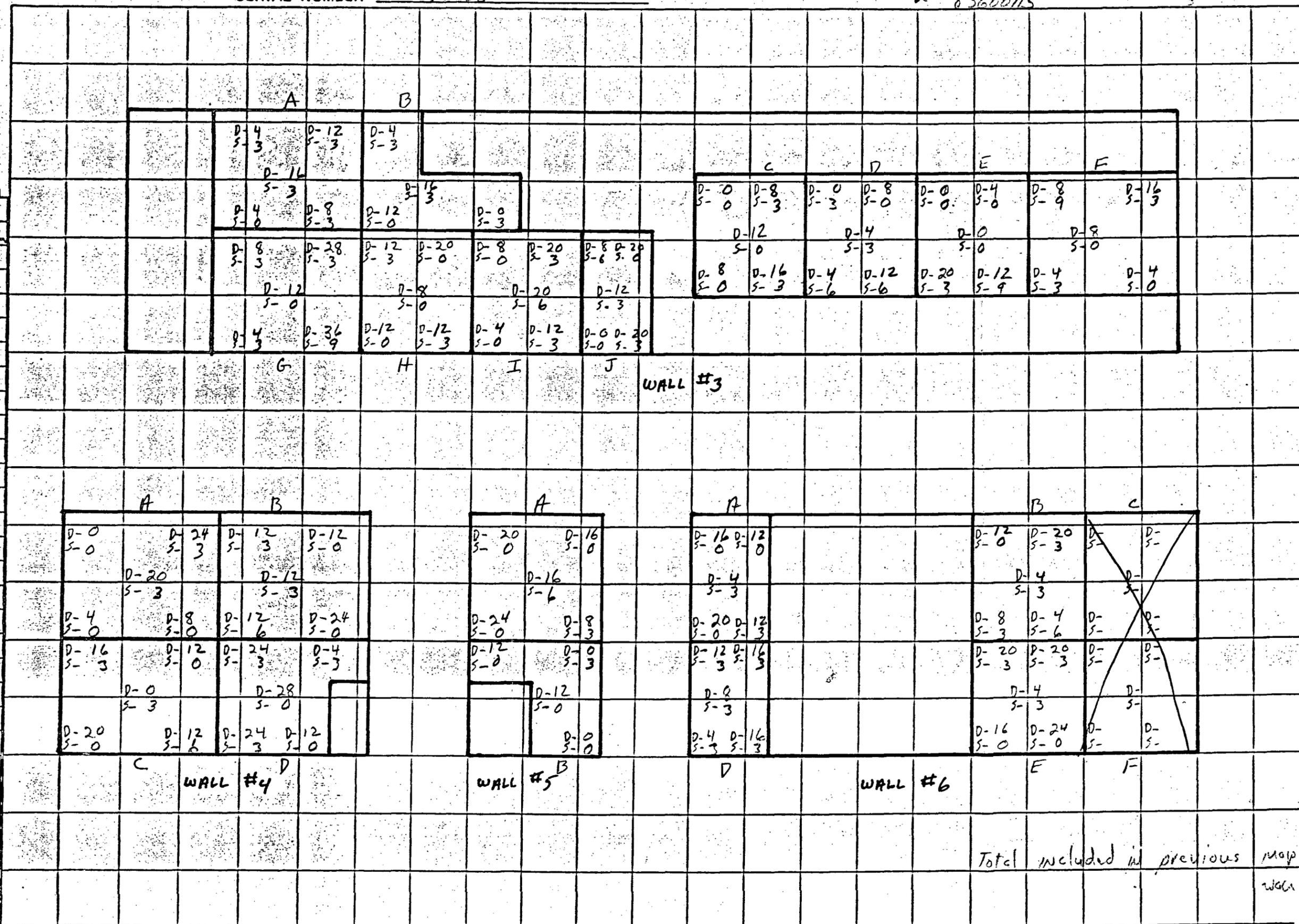


D - DIRECT
S - SMEAR
F - FLOOR
C - CEILING
N - NORTH WALL
S - SOUTH WALL
E - EAST WALL
W - WEST WALL

SOURCE#: 6468 VALUE: 1055 DPM

INSTRUMENT

| DATE | SOURCE RESPONSE %/m | BKGD %/m |
|---------|---------------------|----------|
| 4-5-89 | 285-279 | 1 |
| 4-5-89 | 261-265 | 1 |
| 4-6-89 | 231-266 | 2 |
| 4-6-89 | 273-237 | 1 |
| 4-7-89 | 250-247 | 2 |
| | ASC#2 | |
| 4-10-89 | 29 | 12 |



Total included in previous map

PLANT PU AREA Winter Control Room
 SURVEYED BY I Powell
 INST. INDIUM 2220 *# 50068 DET. 43-68
 SOURCE CK 245-257 BKG. 1
 DATE: 3-28-89 SOURCE # 6268 VALUE: 1050 DPM

ASC # 1 ^{SP} 83600115
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 32
 BKG. 3
 DATE: 4-3-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR | |
|-------------------------|------------|-----------|-----------|-----------|----------|
| | CPM | DPH | | | |
| <u>Locking</u> | | | | | |
| | <u>C-1</u> | <u>1</u> | <u>7</u> | <u>28</u> | <u>0</u> |
| | | <u>3</u> | <u>3</u> | <u>12</u> | <u>0</u> |
| | | <u>5</u> | <u>12</u> | <u>48</u> | <u>9</u> |
| | <u>C-2</u> | <u>1</u> | <u>5</u> | <u>20</u> | <u>0</u> |
| | | <u>3</u> | <u>8</u> | <u>32</u> | <u>0</u> |
| | | <u>5</u> | <u>6</u> | <u>24</u> | <u>3</u> |
| | <u>C-3</u> | <u>1</u> | <u>8</u> | <u>32</u> | <u>0</u> |
| | | <u>3</u> | <u>2</u> | <u>8</u> | <u>0</u> |
| | | <u>5</u> | <u>6</u> | <u>24</u> | <u>3</u> |
| | | <u>7</u> | <u>6</u> | <u>24</u> | <u>0</u> |
| | | <u>9</u> | <u>9</u> | <u>36</u> | <u>0</u> |
| | | <u>11</u> | <u>4</u> | <u>16</u> | <u>0</u> |
| | | <u>13</u> | <u>4</u> | <u>16</u> | <u>6</u> |
| | <u>C-4</u> | <u>1</u> | <u>8</u> | <u>32</u> | <u>0</u> |
| | | <u>3</u> | <u>6</u> | <u>24</u> | <u>0</u> |
| | | <u>5</u> | <u>3</u> | <u>12</u> | <u>6</u> |
| | | <u>7</u> | <u>1</u> | <u>4</u> | <u>3</u> |
| | | <u>9</u> | <u>6</u> | <u>24</u> | <u>0</u> |
| | | <u>11</u> | <u>4</u> | <u>16</u> | <u>0</u> |
| | | <u>13</u> | <u>4</u> | <u>16</u> | <u>0</u> |
| | <u>C-5</u> | <u>1</u> | <u>5</u> | <u>20</u> | <u>0</u> |
| | | <u>3</u> | <u>4</u> | <u>16</u> | <u>0</u> |
| | | <u>5</u> | <u>1</u> | <u>4</u> | <u>0</u> |
| | | <u>7</u> | <u>1</u> | <u>4</u> | <u>3</u> |
| | | <u>9</u> | <u>5</u> | <u>20</u> | <u>0</u> |
| | | <u>11</u> | <u>3</u> | <u>12</u> | <u>0</u> |
| | | <u>13</u> | <u>3</u> | <u>12</u> | <u>0</u> |
| | <u>C-6</u> | <u>1</u> | <u>6</u> | <u>24</u> | <u>0</u> |
| | | <u>3</u> | <u>1</u> | <u>4</u> | <u>0</u> |
| | | <u>5</u> | <u>4</u> | <u>16</u> | <u>3</u> |
| | | <u>7</u> | <u>3</u> | <u>12</u> | <u>0</u> |
| | | <u>9</u> | <u>4</u> | <u>16</u> | <u>0</u> |
| | | <u>11</u> | <u>7</u> | <u>28</u> | <u>0</u> |
| | | <u>13</u> | <u>2</u> | <u>8</u> | <u>0</u> |

PLANT Pu AREA Metric Control Room
 SURVEYED BY A B-Boskin
 INST. I.I.D.I.M 2220 *# 37800 DET. 43-68
 SOURCE CK 230-232 BKG. 1
 DATE: 271-273 SOURCE # 6868 VALUE: 105 DPM
3-29-89
3-30-89

ASC # 83600115
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 22
 BKG. .3
 DATE: 4-3-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | |
|-------------------------|--------|-----|-------|
| | CPH | DPH | SHEAR |
| <u>Piling</u> C-7 | 1 | 4 | 16 |
| | 3 | 2 | 8 |
| | 5 | 5 | 20 |
| | 7 | 4 | 16 |
| | 9 | 0 | 0 |
| | 11 | 10 | 40 |
| | 13 | 6 | 24 |
| C-8 | 1 | 6 | 24 |
| | 3 | 1 | 4 |
| | 5 | 4 | 16 |
| | 7 | 2 | 8 |
| | 9 | 4 | 16 |
| | 11 | 3 | 12 |
| | 13 | 6 | 24 |
| C-9 | 1 | 5 | 20 |
| | 3 | 5 | 20 |
| | 5 | 6 | 24 |
| | 7 | 3 | 12 |
| | 9 | 2 | 8 |
| | 11 | 2 | 8 |
| | 13 | 4 | 16 |
| C-10 | 1 | 2 | 8 |
| | 3 | 5 | 20 |
| | 5 | 4 | 16 |
| | 7 | 0 | 0 |
| | 9 | 7 | 28 |
| | 11 | 4 | 16 |
| | 13 | 5 | 20 |
| C-11 | 1 | 4 | 16 |
| | 3 | 2 | 8 |
| | 5 | 2 | 8 |
| | 7 | 3 | 12 |
| | 9 | 6 | 24 |
| | 11 | 2 | 8 |
| | 13 | 6 | 24 |

PLANT Pu AREA Metric Control Room
 SURVEYED BY A B-Boskin
 INST. I.I.D.I.M 2220 *# 50068 DET. 43-68
 SOURCE CK 279-235 BKG. 1
 DATE: 3-31-89 SOURCE # 6868 VALUE: 105 DPM

ASC # 83600115
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 32
 BKG. .3
 DATE: 4-3-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | |
|-------------------------|--------|-----|-------|
| | CPH | DPH | SHEAR |
| <u>Piling</u> C-13 | 1 | 4 | 16 |
| | 3 | 6 | 24 |
| | 5 | 4 | 16 |
| | 7 | 5 | 20 |
| | 9 | 10 | 40 |
| | 11 | 8 | 32 |
| | 13 | 2 | 8 |
| C-14 | 1 | 4 | 16 |
| | 3 | 7 | 28 |
| | 5 | 2 | 8 |
| | 7 | 6 | 24 |
| | 9 | 2 | 8 |
| | 11 | 5 | 20 |
| | 13 | 5 | 20 |
| C-15 | 1 | 2 | 8 |
| | 3 | 0 | 0 |
| | 5 | 4 | 16 |
| | 7 | 4 | 16 |
| | 9 | 5 | 20 |
| | 11 | 3 | 12 |
| | 13 | 2 | 8 |
| C-16 | 1 | 10 | 40 |
| | 3 | 3 | 12 |
| | 5 | 1 | 4 |
| | 7 | 2 | 8 |
| | 9 | 0 | 0 |
| | 11 | 4 | 16 |
| | 13 | 2 | 8 |



1.5cm = 1 METER

F - FLOOR
 C - CEILING
 N - NORTH WALL
 S - SOUTH WALL
 E - EAST WALL
 W - WEST WALL
 SOURCE # 6816
 VALUE: 1078 DPM

AREA PL - PLMNT CEILING BEAMS
MOTOR CONTROL ROOM

TYPE OF SURVEY DIRECT & SMEAR

TYPE OF INSTRUMENT LUDLUM 2220/DET. 4368

SERIAL NUMBER 50068 & 37800

COMPLETION DATE 3-31-89

H.P. SIGNATURE W.A. Rogers

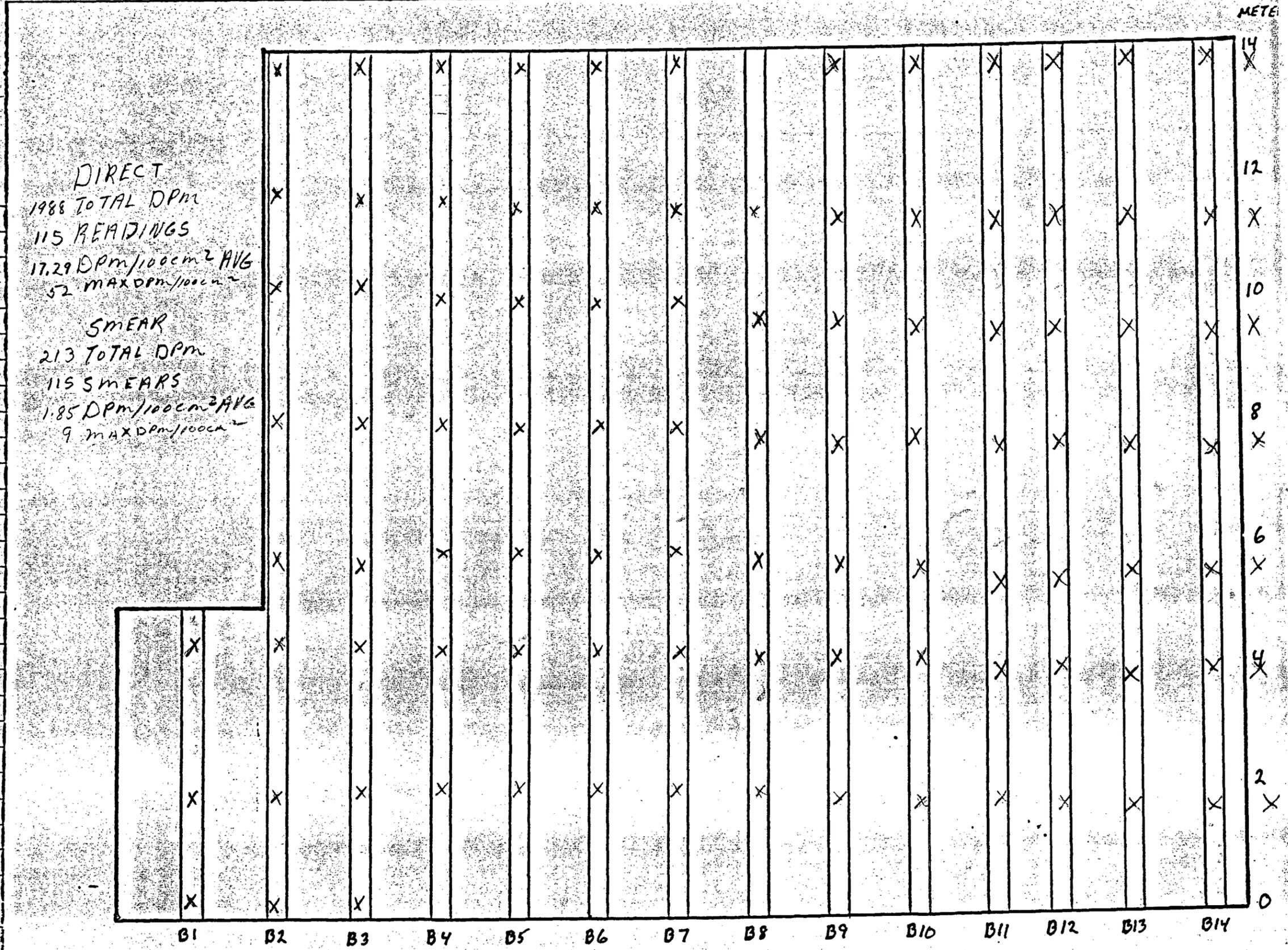
AUTO. SAMPLE COUNTER # 15M93600115 + 5M283600108

SURVEY UNITS
 DPM/100cm²

| DATE | SOURCE RESPONSE | EXCD. |
|------------|-----------------|-------|
| 3-28-89 AM | 253 + 268 | 1 |
| 3-28-89 AM | 245 + 257 | 1 |
| 3-29-89 AM | 271 + 273 | 1 |
| 3-29-89 PM | 255 + 237 | 1 |
| 3-30-89 AM | 240 + 271 | 1 |
| 3-30-89 PM | 230 + 232 | 2 |
| 3-31-89 AM | 279 + 235 | 1 |
| 3-31-89 PM | 222 + 256 | 2 |
| | ASC# 1 | |
| 3-30-89 | 32 | .3 |
| | 32 | .3 |
| | ASC# 2 | |
| 4-7-89 | 28 | .1 |

DIRECT
 1988 TOTAL DPM
 115 READINGS
 17.29 DPM/100cm² AVG
 52 MAX DPM/100cm²

SMEAR
 213 TOTAL DPM
 115 SMEARS
 1.85 DPM/100cm² AVG
 9 MAX DPM/100cm²



METERS

B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14

PLANT PH AREA Main Control Room
 SURVEYED BY J. Paull Black
 INST. INDIUM 2220 U# 50068 DET. 4368
 SOURCE CK 253-268 BKG. 1
 DATE: 3-28-89 SOURCE # 1832 VALUE: 3420PM

ASC # 250 83600108
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 28
 BKG. 1
 DATE: 4-7-89

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|------------------------------|--------|-----|----|-------|
| | CPH | DPH | | |
| <u>Coiling Beams</u> Beam #1 | 0 | 4 | 16 | 6 |
| | 2 | 7 | 28 | 0 |
| | 4 | 8 | 32 | 6 |
| Beam #2 | 0 | 5 | 20 | 0 |
| | 2 | 10 | 40 | 0 |
| | 4 | 1 | 4 | 0 |
| | 6 | 4 | 16 | 0 |
| | 8 | 2 | 8 | 0 |
| | 10 | 5 | 20 | 0 |
| | 12 | 5 | 20 | 0 |
| | 14 | 4 | 16 | 3 |
| Kind #3 | 0 | 8 | 32 | 0 |
| | 2 | 7 | 28 | 9 |
| | 4 | 3 | 12 | 3 |
| | 6 | 6 | 24 | 6 |
| | 8 | 4 | 16 | 0 |
| | 10 | 2 | 8 | 0 |
| | 12 | 5 | 20 | 0 |
| | 14 | 4 | 16 | 3 |
| Beam #4 | 0 | 12 | 48 | 0 |
| | 2 | 5 | 20 | 0 |
| | 4 | 1 | 4 | 0 |
| | 6 | 5 | 20 | 9 |
| | 8 | 2 | 8 | 0 |
| | 10 | 4 | 16 | 0 |
| | 12 | 7 | 28 | 0 |
| | 14 | 2 | 8 | 0 |
| Beam #5 | 0 | 1 | 4 | 0 |
| | 2 | 5 | 20 | 6 |
| | 4 | 4 | 16 | 0 |
| | 6 | 5 | 20 | 0 |
| | 8 | 6 | 24 | 0 |
| | 10 | 7 | 28 | 0 |
| | 12 | 4 | 16 | 6 |

PLANT PH AREA Main Control Room
 SURVEYED BY JR+IP
 INST. INDIUM 2220 *# 50068 DET. 4368
 SOURCE CK 253-268 BKG. 1
 DATE: 3-28-89 SOURCE # 1832 VALUE: 3420PM

ASC # 83600108
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 28
 BKG. 1
 DATE: 4-7-89

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|----|-------|
| | CPH | DPH | | |
| Beam #5 | 14 | 6 | 24 | 6 |
| Beam #6 | 0 | 2 | 8 | 3 |
| | 2 | 7 | 28 | 0 |
| | 4 | 4 | 16 | 3 |
| | 6 | 4 | 16 | 0 |
| | 8 | 4 | 16 | 0 |
| | 10 | 4 | 16 | 0 |
| | 12 | 3 | 12 | 0 |
| | 14 | 5 | 20 | 3 |
| Beam #7 | 0 | 1 | 4 | 3 |
| | 2 | 6 | 24 | 3 |
| | 4 | 7 | 28 | 0 |
| | 6 | 4 | 16 | 3 |
| | 8 | 4 | 16 | 0 |
| | 10 | 5 | 20 | 0 |
| | 12 | 4 | 16 | 0 |
| | 14 | 6 | 24 | 3 |
| Beam #8 | 0 | 2 | 8 | 0 |
| | 2 | 3 | 12 | 6 |
| | 4 | 5 | 20 | 0 |
| | 6 | 1 | 4 | 0 |
| | 8 | 4 | 16 | 0 |
| | 10 | 1 | 4 | 0 |
| | 12 | 4 | 16 | 3 |
| | 14 | 4 | 16 | 6 |
| Beam #9 | 0 | 3 | 12 | 0 |
| | 2 | 6 | 24 | 0 |
| | 4 | 4 | 16 | 3 |
| | 6 | 13 | 52 | 3 |
| | 8 | 4 | 16 | 0 |
| | 10 | 3 | 12 | 0 |
| | 12 | 9 | 36 | 3 |
| | 14 | 6 | 24 | 3 |

PLANT PH AREA Matin Lin T. Room
 SURVEYED BY J.B. + I.P.
 INST. INDIUM 2220 *# 50068 DET. 4368
 SOURCE CK 253-268 BKG. 1
 DATE: 3-28-89 SOURCE # 1832 VALUE: 3420PM

ASC # 83600108
 CTD. BY Dennis Ford
 SOURCE CK. AVG. 28
 BKG. 1
 DATE: 4-7-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------------|--------|-----|----|-------|
| | CPH | DPH | | |
| <u>Railing Beans Bean #10</u> | 0 | 4 | 16 | 6 |
| | 2 | 5 | 20 | 0 |
| | 4 | 4 | 16 | 0 |
| | 6 | 4 | 16 | 0 |
| | 8 | 8 | 32 | 3 |
| | 10 | 5 | 20 | 0 |
| | 12 | 6 | 24 | 6 |
| | 14 | 3 | 12 | 6 |
| <u>Bean #11</u> | 0 | 2 | 8 | 3 |
| | 2 | 3 | 12 | 0 |
| | 4 | 4 | 16 | 3 |
| | 6 | 6 | 24 | 0 |
| | 8 | 3 | 12 | 0 |
| | 10 | 3 | 12 | 3 |
| | 12 | 5 | 20 | 3 |
| | 14 | 5 | 20 | 9 |
| <u>Bean #12</u> | 0 | 1 | 4 | 0 |
| | 2 | 1 | 4 | 3 |
| | 4 | 6 | 24 | 0 |
| | 6 | 6 | 24 | 3 |
| | 8 | 4 | 16 | 0 |
| | 10 | 2 | 8 | 0 |
| | 12 | 6 | 24 | 0 |
| | 14 | 4 | 16 | 0 |
| <u>Bean #13</u> | 0 | 3 | 12 | 0 |
| | 2 | 4 | 16 | 6 |
| | 4 | 2 | 8 | 0 |
| | 6 | 5 | 20 | 0 |
| | 8 | 8 | 32 | 3 |
| | 10 | 6 | 24 | 6 |
| | 12 | 0 | 0 | 0 |
| | 14 | 4 | 16 | 6 |

PLANT PH AREA Matin Lin T. Room
 SURVEYED BY J.B. + I.P.
 INST. INDIUM 2220 *# 50068 DET. 4368
 SOURCE CK 253-268 BKG. 1
 DATE: 3-28-89 SOURCE # 1832 VALUE: 3420PM

ASC # 83600108
 CTD. BY D. Ford
 SOURCE CK. AVG. 28
 BKG. 1
 DATE: 4-7-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------------|--------|-----|----|-------|
| | CPH | DPH | | |
| <u>Railing Beans Bean #14</u> | 0 | 5 | 20 | 0 |
| | 2 | 6 | 24 | 3 |
| | 4 | 6 | 24 | 6 |
| | 6 | 5 | 20 | 0 |
| | 8 | 6 | 24 | 0 |
| | 10 | 0 | 0 | 0 |
| | 12 | 6 | 24 | 3 |
| | 14 | 4 | 16 | 3 |
| <u>Bean #15</u> | 0 | 1 | 4 | 0 |
| | 2 | 1 | 4 | 9 |
| | 4 | 1 | 4 | 0 |
| | 6 | 4 | 16 | 6 |
| | 8 | 1 | 4 | 0 |
| | 10 | 2 | 8 | 3 |
| | 12 | 4 | 16 | 0 |
| | 14 | 1 | 4 | 0 |

PLANT Pu AREA MCC
 SURVEYED BY J. Hartgraves
 INST. 1.1" DIAM 2220 *# 48395 DET. 43-68
 SOURCE CK 173/188 BKG. 1
 DATE: 11-22-88 SOURCE # 7272 VALUE: 850 DPM

ASC # 83600108
 CTD. BY D. Ford
 SOURCE CK. AVG. 28
 BKG. .2
 DATE: 12-5-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | # | DIRECT | | SNEAR |
|-------------------------|----|--------|-----|-------|
| | | CPH | DPH | |
| Inside Supply Fan #25 | 1 | 24 | 96 | 0 |
| | 2 | 11 | 44 | 3 |
| | 3 | 16 | 64 | 0 |
| | 4 | 18 | 72 | 6 |
| | 5 | 5 | 20 | 6 |
| | 6 | 17 | 68 | 3 |
| | 7 | 17 | 68 | 0 |
| | 8 | 13 | 52 | 3 |
| | 9 | 10 | 40 | 6 |
| | 10 | 19 | 76 | 6 |
| | 11 | 16 | 64 | 0 |
| | 12 | 7 | 28 | 0 |
| | 13 | 17 | 68 | 0 |
| | 14 | 17 | 68 | 0 |
| | 15 | 6 | 24 | 3 |
| | 16 | 8 | 32 | 0 |
| | 17 | 13 | 52 | 3 |
| | 18 | 15 | 60 | 3 |
| | 19 | 4 | 20 | 6 |
| | 20 | 12 | 48 | 0 |
| | 21 | 4 | 16 | 3 |
| | 22 | 32 | 128 | 9 |
| | 23 | 4 | 16 | 3 |
| | 24 | 5 | 20 | 3 |
| | 25 | 17 | 68 | 3 |
| | 26 | 4 | 16 | 3 |
| | 27 | 22 | 88 | 0 |
| | 28 | 15 | 60 | 6 |
| | 29 | 15 | 60 | 3 |
| | 30 | 15 | 60 | 3 |
| | 31 | 14 | 56 | 0 |
| | 32 | 7 | 28 | 0 |
| | 33 | 5 | 20 | 12 |
| | 34 | 10 | 40 | 3 |

PLANT Pu AREA MCC
 SURVEYED BY J. Hartgraves
 INST. 1.1" DIAM 2220 *# 48395 DET. 43-68
 SOURCE CK 173/192 BKG. 1
 DATE: 11-22-88 SOURCE # 7272 VALUE: 850 DPM

ASC # 83600108
 CTD. BY D. Ford
 SOURCE CK. AVG. 28
 BKG. .2
 DATE: 12-5-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | # | DIRECT | | SNEAR |
|-------------------------|----|--------|-----|-------|
| | | CPH | DPH | |
| Inside Supply Fan #25 | 35 | 19 | 76 | 6 |
| | 36 | 14 | 56 | 0 |
| | 37 | 5 | 20 | 3 |
| | 38 | 22 | 88 | 6 |
| | 39 | 22 | 88 | 6 |
| | 40 | 5 | 20 | 3 |
| | 41 | 3 | 12 | 3 |
| | 42 | 4 | 16 | 9 |
| | 43 | 18 | 72 | 0 |
| | 44 | 7 | 28 | 3 |
| | 45 | 2 | 8 | 3 |
| | 46 | 18 | 72 | 0 |
| | 47 | 12 | 48 | 0 |
| | 48 | 10 | 40 | 3 |
| | 49 | 2 | 8 | 3 |
| | 50 | 3 | 12 | 3 |
| | 51 | 5 | 20 | 0 |
| | 52 | 12 | 48 | 3 |
| | 53 | 20 | 80 | 3 |
| | 54 | 19 | 76 | 3 |
| | 55 | 13 | 52 | 3 |
| | 56 | 5 | 20 | 3 |
| | 57 | 14 | 56 | 3 |
| | 58 | 7 | 28 | 3 |
| | 59 | 18 | 72 | 3 |
| | 60 | 9 | 36 | 0 |
| | 61 | 16 | 64 | 0 |
| | 62 | 7 | 28 | 0 |
| | 63 | 6 | 24 | 0 |
| | 64 | 12 | 48 | 0 |
| | 65 | 11 | 44 | 3 |
| | 66 | 10 | 40 | 3 |
| | 67 | 17 | 68 | 0 |
| | 68 | 10 | 40 | 6 |

PLANT Pu AREA MCC
 SURVEYED BY J Hartgrave
 INST. LINDUM 2220 # 48 DET. 43-68
 SOURCE CK 173-188 BKG. 1
 DATE: 11-22-88 SOURCE #: 777 VALUE: 858 DPM

ASC # 83600108
 CTD. BY D Ford
 SOURCE CK. AVG. 28
 BKG. .2
 DATE: 12-5-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan #25 | 69 | 10 | 40 | 0 |
| | 70 | 4 | 16 | 0 |
| | 71 | 6 | 24 | 9 |
| | 72 | 7 | 28 | 6 |
| | 73 | 6 | 24 | 6 |
| | 74 | 10 | 40 | 6 |
| | 75 | 8 | 32 | 3 |
| | 76 | 8 | 32 | 3 |
| | 77 | 7 | 28 | 0 |
| | 78 | 8 | 32 | 9 |
| | 79 | 11 | 44 | 3 |
| | 80 | 1 | 4 | 6 |
| | 81 | 2 | 8 | 0 |
| | 82 | 0 | 0 | 0 |
| | 83 | 3 | 12 | 0 |
| | 84 | 3 | 12 | 3 |
| | 85 | 2 | 8 | 3 |
| | 86 | 6 | 24 | 0 |
| | 87 | 5 | 20 | 3 |
| | 88 | 1 | 4 | 0 |
| | 89 | 2 | 8 | 3 |
| | 90 | 10 | 40 | 3 |
| | 91 | 9 | 36 | 0 |
| | 92 | 14 | 56 | 3 |
| | 93 | 7 | 28 | 3 |
| | 94 | 6 | 24 | 0 |
| | 95 | 8 | 32 | 0 |
| | 96 | 12 | 48 | 0 |
| | 97 | 14 | 56 | 3 |
| | 98 | 18 | 72 | 0 |
| | 99 | 20 | 80 | 0 |
| | 100 | 8 | 32 | 3 |
| | 101 | 3 | 12 | 3 |
| | 102 | 13 | 52 | 6 |

PLANT Pu AREA MCC
 SURVEYED BY J HARTGRAVE
 INST. LINDUM 2220 * # 48395 DET. 43-68
 SOURCE CK 173-188 BKG. 1
 DATE: 11-22-88 SOURCE #: 777 VALUE: 858 DPM
11-23-88

ASC # 83600108
 CTD. BY D Ford
 SOURCE CK. AVG. 29
 BKG. .2
 DATE: 12-6-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan # 25 | 103 | 21 | 84 | 3 |
| | 104 | 17 | 68 | 0 |
| | 105 | 31 | 124 | 0 |
| | 106 | 12 | 48 | 3 |
| | 107 | 17 | 68 | 3 |
| | 108 | 12 | 48 | 0 |
| | 109 | 8 | 32 | 0 |
| | 110 | 10 | 40 | 3 |
| | 111 | 4 | 24 | 3 |
| | 112 | 20 | 80 | 6 |
| | 113 | 7 | 28 | 0 |
| | 114 | 9 | 36 | 3 |
| | 115 | 2 | 8 | 3 |
| | 116 | 6 | 24 | 3 |
| | 117 | 2 | 12 | 0 |
| | 118 | 7 | 28 | 3 |
| | 119 | 7 | 28 | 0 |
| | 120 | 7 | 28 | 3 |
| | 121 | 16 | 64 | 0 |
| | 122 | 2 | 12 | 0 |
| | 123 | 6 | 24 | 3 |
| | 124 | 6 | 24 | 0 |
| | 125 | 6 | 24 | 3 |
| | 126 | 12 | 48 | 3 |
| | 127 | 14 | 56 | 0 |
| | 128 | 20 | 80 | 0 |
| | 129 | 16 | 64 | 3 |
| | 130 | 12 | 48 | 3 |
| | 131 | 23 | 92 | 3 |
| | 132 | 7 | 28 | 0 |
| | 133 | 4 | 16 | 3 |
| | 134 | 16 | 64 | 0 |
| | 135 | 4 | 16 | 0 |
| | 136 | 6 | 24 | 6 |

PLANT Pu AREA MCC
 SURVEYED BY T Hartogwe
 INST. INDIUM 2220 # 48395 DET. 43-68
 SOURCE CK 199-193 BKG. 1
 DATE: 11-22-88 11-23-88 SOURCE # 7272 VALUE: RS DPM

ASC # 83600115
 CTD. BY D Ford
 SOURCE CK. AVG. 32
 BKG. .3
 DATE: 11-21-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan #26 | 1 | 9 | 36 | 0 |
| | 2 | 11 | 44 | 9 |
| | 3 | 20 | 80 | 3 |
| | 4 | 18 | 72 | 3 |
| | 5 | 16 | 56 | 0 |
| | 6 | 5 | 20 | 0 |
| | 7 | 16 | 64 | 0 |
| | 8 | 21 | 84 | 0 |
| | 9 | 11 | 44 | 3 |
| | 10 | 12 | 48 | 3 |
| | 11 | 18 | 72 | 3 |
| | 12 | 12 | 48 | 0 |
| | 13 | 12 | 48 | 6 |
| | 14 | 18 | 72 | 0 |
| | 15 | 10 | 40 | 0 |
| | 16 | 10 | 40 | 0 |
| | 17 | 18 | 72 | 3 |
| | 18 | 20 | 80 | 9 |
| | 19 | 10 | 40 | 0 |
| | 20 | 12 | 48 | 3 |
| | 21 | 8 | 32 | 3 |
| | 22 | 16 | 64 | 3 |
| | 23 | 12 | 48 | 3 |
| | 24 | 5 | 20 | 0 |
| | 25 | 22 | 88 | 3 |
| | 26 | 3 | 12 | 3 |
| | 27 | 3 | 12 | 3 |
| | 28 | 5 | 20 | 0 |
| | 29 | 0 | 0 | 9 |
| | 30 | 3 | 12 | 3 |
| | 31 | 5 | 20 | 0 |
| | 32 | 2 | 8 | 3 |
| | 33 | 12 | 48 | 3 |
| | 34 | 12 | 48 | 0 |

PLANT Pu AREA MCC
 SURVEYED BY T Hartogwe
 INST. INDIUM 2220 # 48395 DET. 43-68
 SOURCE CK 199-193 BKG. 1
 DATE: 11-22-88 SOURCE # 7272 VALUE: 850 DPM

ASC # 83600115
 CTD. BY D Ford
 SOURCE CK. AVG. 32
 BKG. .3
 DATE: 11-21-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan #26 | 35 | 12 | 48 | 0 |
| | 36 | 9 | 36 | 6 |
| | 37 | 14 | 56 | 0 |
| | 38 | 10 | 40 | 3 |
| | 39 | 25 | 100 | 0 |
| | 40 | 13 | 52 | 3 |
| | 41 | 12 | 48 | 3 |
| | 42 | 9 | 36 | 6 |
| | 43 | 4 | 16 | 0 |
| | 44 | 8 | 32 | 6 |
| | 45 | 3 | 12 | 0 |
| | 46 | 0 | 0 | 0 |
| | 47 | 3 | 12 | 0 |
| | 48 | 12 | 48 | 0 |
| | 49 | 0 | 0 | 3 |
| | 50 | 5 | 20 | 3 |
| | 51 | 20 | 80 | 0 |
| | 52 | 25 | 100 | 0 |
| | 53 | 3 | 12 | 0 |
| | 54 | 7 | 28 | 0 |
| | 55 | 20 | 80 | 3 |
| | 56 | 25 | 100 | 0 |
| | 57 | 25 | 100 | 0 |
| | 58 | 10 | 40 | 6 |
| | 59 | 12 | 48 | 6 |
| | 60 | 10 | 40 | 0 |
| | 61 | 11 | 44 | 0 |
| | 62 | 6 | 24 | 0 |
| | 63 | 8 | 32 | 0 |
| | 64 | 8 | 32 | 0 |
| | 65 | 12 | 48 | 0 |
| | 66 | 12 | 48 | 0 |
| | 67 | 10 | 40 | 3 |
| | 68 | 9 | 36 | 3 |

PLANT PU AREA MCC
 SURVEYED BY J. Hartarow
 INST. INDIUM 2220 *# 48395 DET. 43-68
 SOURCE CK 199-193 BKG. 1
 DATE: 11-22-88 SOURCE # 7272 VALUE: 850 DPM

ASC # 83600108
 CTD. BY D. Ford
 SOURCE CK. AVG. 24
 BKG. 13
 DATE: 11-22-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|----|-------|
| | CPH | DPH | | |
| Inside Supply Fan #26 | 69 | 2 | 8 | 0 |
| | 70 | 1 | 4 | 3 |
| | 71 | 0 | 0 | 0 |
| | 72 | 4 | 16 | 0 |
| | 73 | 15 | 60 | 0 |
| | 74 | 8 | 32 | 6 |
| | 75 | 0 | 0 | 6 |
| | 76 | 1 | 4 | 6 |
| | 77 | 0 | 0 | 3 |
| | 78 | 20 | 80 | 0 |
| | 79 | 3 | 12 | 0 |
| | 80 | 1 | 4 | 0 |
| | 81 | 1 | 4 | 6 |
| | 82 | 5 | 20 | 6 |
| | 83 | 4 | 16 | 0 |
| | 84 | 0 | 0 | 0 |
| | 85 | 1 | 4 | 6 |
| | 86 | 0 | 0 | 3 |
| | 87 | 5 | 20 | 0 |
| | 88 | 1 | 4 | 3 |
| | 89 | 5 | 20 | 0 |
| | 90 | 16 | 64 | 9 |
| | 91 | 2 | 8 | 0 |
| | 92 | 5 | 20 | 0 |
| | 93 | 1 | 4 | 0 |
| | 94 | 0 | 0 | 0 |
| | 95 | 3 | 12 | 0 |
| | 96 | 3 | 12 | 0 |
| | 97 | 2 | 8 | 3 |
| | 98 | 3 | 12 | 0 |
| | 99 | 0 | 0 | 0 |
| | 100 | 1 | 4 | 0 |
| | 101 | 2 | 8 | 0 |
| | 102 | 3 | 12 | 0 |

PLANT PU AREA MCC
 SURVEYED BY J. Hartarow
 INST. INDIUM 2220 *# 48395 DET. 43-68
 SOURCE CK 199-193 BKG. 1
 DATE: 11-22-88 SOURCE # 7272 VALUE: 850 DPM

ASC # 83600115
 CTD. BY D. Ford
 SOURCE CK. AVG. 32
 BKG. 11
 DATE: 11-23-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|-----|-------|
| | CPH | DPH | | |
| Inside Supply Fan #26 | 103 | 2 | 8 | 0 |
| | 104 | 16 | 64 | 9 |
| | 105 | 26 | 104 | 0 |
| | 106 | 25 | 100 | 0 |
| | 107 | 6 | 24 | 0 |
| | 108 | 10 | 40 | 0 |
| | 109 | 5 | 20 | 3 |
| | 110 | 4 | 16 | 0 |
| | 111 | 10 | 40 | 0 |
| | 112 | 2 | 8 | 6 |
| | 113 | 3 | 12 | 3 |
| | 114 | 3 | 12 | 0 |
| | 115 | 2 | 8 | 0 |
| | 116 | 3 | 12 | 0 |
| | 117 | 3 | 12 | 3 |
| | 118 | 3 | 12 | 0 |
| | 119 | 2 | 8 | 3 |
| | 120 | 10 | 40 | 0 |
| | 121 | 7 | 28 | 0 |
| | 122 | 2 | 8 | 0 |
| | 123 | 5 | 20 | 6 |
| | 124 | 2 | 8 | 3 |
| | 125 | 4 | 16 | 0 |
| | 126 | 7 | 28 | 6 |
| | 127 | 15 | 60 | 0 |
| | 128 | 13 | 52 | 0 |
| | 129 | 19 | 76 | 0 |
| | 130 | 42 | 168 | 6 |
| | 131 | 61 | 244 | 6 |
| | 132 | 2 | 8 | 0 |
| | 133 | 3 | 12 | 3 |
| | 134 | 5 | 20 | 3 |
| | 135 | 2 | 8 | 0 |
| | 136 | 4 | 16 | 3 |

PLANT RU AREA MCC
 SURVEYED BY J. Hartmann
 INST. LIQUID 2220 * 50069 DET. 43-68
 SOURCE CK 199-167 BKG. 2
 DATE: 11-23-88 SOURCE # 7272 VALUE: 850 DPM
11-22-88

ASC # 83600108
 CTD. BY D Ford
 SOURCE CK. AVG. 31
 BKG. .1
 DATE: 11-29-88

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan #27 | 1 | 18 | 72 | 6 |
| | 2 | 17 | 68 | 3 |
| | 3 | 6 | 24 | 0 |
| | 4 | 16 | 64 | 0 |
| | 5 | 16 | 64 | 3 |
| | 6 | 10 | 40 | 3 |
| | 7 | 8 | 32 | 3 |
| | 8 | 14 | 56 | 0 |
| | 9 | 9 | 36 | 6 |
| | 10 | 15 | 60 | 3 |
| | 11 | 11 | 44 | 0 |
| | 12 | 16 | 64 | 3 |
| | 13 | 12 | 48 | 0 |
| | 14 | 12 | 48 | 0 |
| | 15 | 13 | 52 | 0 |
| | 16 | 15 | 60 | 9 |
| | 17 | 21 | 84 | 3 |
| | 18 | 38 | 152 | 9 |
| | 19 | 12 | 48 | 0 |
| | 20 | 13 | 52 | 0 |
| | 21 | 11 | 44 | 3 |
| | 22 | 20 | 80 | 0 |
| | 23 | 8 | 32 | 0 |
| | 24 | 12 | 48 | 0 |
| | 25 | 18 | 72 | 0 |
| | 26 | 16 | 64 | 0 |
| | 27 | 8 | 32 | 0 |
| | 28 | 3 | 12 | 0 |
| | 29 | 24 | 96 | 3 |
| | 30 | 17 | 68 | 3 |
| | 31 | 15 | 60 | 0 |
| | 32 | 16 | 64 | 3 |
| | 33 | 6 | 24 | 6 |
| | 34 | 20 | 80 | 0 |

PLANT RU AREA MCC
 SURVEYED BY J. Hartmann
 INST. LIQUID 2220 * 50069 DET. 43-68
 SOURCE CK 199-167 BKG. 2
 DATE: 11-23-88 SOURCE # 7272 VALUE: 850 DPM
11-22-88

ASC # 83600108
 CTD. BY A Ford
 SOURCE CK. AVG. 31
 BKG. .1
 DATE: 11-29-88

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Inside Supply Fan #27 | 35 | 21 | 84 | 0 |
| | 36 | 7 | 28 | 0 |
| | 37 | 14 | 56 | 3 |
| | 38 | 18 | 72 | 3 |
| | 39 | 17 | 68 | 3 |
| | 40 | 12 | 48 | 0 |
| | 41 | 12 | 48 | 3 |
| | 42 | 18 | 72 | 3 |
| | 43 | 20 | 80 | 6 |
| | 44 | 0 | 0 | 6 |
| | 45 | 3 | 12 | 0 |
| | 46 | 8 | 32 | 6 |
| | 47 | 11 | 44 | 6 |
| | 48 | 20 | 80 | 3 |
| | 49 | 3 | 12 | 0 |
| | 50 | 0 | 0 | 0 |
| | 51 | 23 | 92 | 9 |
| | 52 | 18 | 72 | 0 |
| | 53 | 10 | 40 | 3 |
| | 54 | 17 | 68 | 9 |
| | 55 | 20 | 80 | 6 |
| | 56 | 15 | 60 | 3 |
| | 57 | 22 | 88 | 6 |
| | 58 | 27 | 108 | 3 |
| | 59 | 22 | 88 | 9 |
| | 60 | 25 | 100 | 0 |
| | 61 | 1 | 4 | 6 |
| | 62 | 11 | 44 | 0 |
| | 63 | 16 | 64 | 6 |
| | 64 | 5 | 20 | 3 |
| | 65 | 10 | 40 | 9 |
| | 66 | 21 | 84 | 0 |
| | 67 | 16 | 64 | 9 |
| | 68 | 15 | 60 | 0 |

PLANT PH AREA MCC
 SURVEYED BY AH
 INST. INDIUM 2220 * 50069 DET. 43-68
 SOURCE CK 199-167 BKG. 2
 DATE: 11-22-88 SOURCE #: 7272 VALUE: 850 DPM
11-23-88

ASC # 283600108
 CTD. BY D Ford
 SOURCE CK. AVG. 31
 BKG. 1
 DATE: 11-29-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|-----|-------|
| | CPH | DPH | | |
| Inside Supply Fan #27 | 69 | 12 | 48 | 3 |
| | 70 | 7 | 28 | 0 |
| | 71 | 3 | 12 | 0 |
| | 72 | 18 | 72 | 6 |
| | 73 | 12 | 48 | 3 |
| | 74 | 19 | 76 | 3 |
| | 75 | 3 | 12 | 0 |
| | 76 | 1 | 4 | 0 |
| | 77 | 16 | 64 | 0 |
| | 78 | 12 | 48 | 3 |
| | 79 | 8 | 32 | 3 |
| | 80 | 7 | 28 | 0 |
| | 81 | 6 | 24 | 0 |
| | 82 | 5 | 20 | 0 |
| | 83 | 9 | 36 | 0 |
| | 84 | 7 | 28 | 0 |
| | 85 | 5 | 20 | 0 |
| | 86 | 6 | 24 | 6 |
| | 87 | 11 | 44 | 0 |
| | 88 | 10 | 40 | 3 |
| | 89 | 15 | 60 | 3 |
| | 90 | 5 | 20 | 0 |
| | 91 | 2 | 8 | 6 |
| | 92 | 7 | 28 | 0 |
| | 93 | 0 | 0 | 3 |
| | 94 | 0 | 0 | 3 |
| | 95 | 3 | 12 | 0 |
| | 96 | 20 | 80 | 3 |
| | 97 | 22 | 88 | 9 |
| | 98 | 30 | 120 | 0 |
| | 99 | 1 | 4 | 0 |
| | 100 | 3 | 12 | 0 |
| | 101 | 0 | 0 | 6 |
| | 102 | 32 | 128 | 0 |

PLANT PH AREA MCC
 SURVEYED BY AH
 INST. INDIUM 2220 * 50069 DET. 43-68
 SOURCE CK 199-167 BKG. 2
 DATE: 11-22-88 SOURCE #: 7272 VALUE: 858 DPM
11-23-88

ASC # 283600108
 CTD. BY D Ford
 SOURCE CK. AVG. 31
 BKG. 1
 DATE: 11-29-88

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|-----|-------|
| | CPH | DPH | | |
| Inside Supply Fan #27 | 103 | 30 | 120 | 0 |
| | 104 | 31 | 124 | 6 |
| | 105 | 29 | 116 | 3 |
| | 106 | 26 | 104 | 3 |
| | 107 | 16 | 64 | 0 |
| | 108 | 49 | 196 | 0 |
| | 109 | 31 | 124 | 0 |
| | 110 | 108 | 432 | 3 |
| | 111 | 60 | 240 | 0 |
| | 112 | 10 | 40 | 3 |
| | 113 | 8 | 32 | 0 |
| | 114 | 20 | 80 | 3 |
| | 115 | 6 | 24 | 0 |
| | 116 | 15 | 60 | 0 |
| | 117 | 19 | 76 | 9 |
| | 118 | 29 | 116 | 0 |
| | 119 | 17 | 68 | 0 |
| | 120 | 21 | 84 | 0 |
| | 121 | 16 | 64 | 0 |
| | 122 | 28 | 112 | 0 |
| | 123 | 29 | 116 | 6 |
| | 124 | 13 | 52 | 0 |
| | 125 | 35 | 140 | 0 |
| | 126 | 28 | 128 | 6 |
| | 127 | 26 | 104 | 0 |
| | 128 | 95 | 380 | 0 |
| | 129 | 34 | 136 | 3 |
| | 130 | 18 | 72 | 3 |
| | 131 | 22 | 88 | 3 |
| | 132 | 11 | 44 | 0 |
| | 133 | 17 | 68 | 0 |
| | 134 | 15 | 60 | 6 |
| | 135 | 10 | 40 | 0 |
| | 136 | 2 | 8 | 3 |

PLANT Pu AREA MCC
 SURVEYED BY McLain/Gentry
 INST. 11011M 2220 # 58308 DET. 43-4
 SOURCE CK 101-127 BKG. 1
 DATE: 7-28-89 SOURCE # 1832 VALUE: 3420cpm

ASC # 83600115
 CTD. BY J. Black
 SOURCE CK. AVG. 27
 BKG. .3
 DATE: 7-28-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------------------|--------|------|---|-------|
| | CPH | DPH | | |
| light # 1 East | | | | |
| shade 1 | 1 | 12 | 0 | |
| shade 2 | 4 | 48 | 9 | |
| shade 3 | 2 | 24 | 0 | |
| light # 2 East | | | | |
| drop E | 2 | 24 | 0 | |
| drop W | 8 | 96 | 0 | |
| shade 1 | 3 | 36 | 0 | |
| shade 2 | 3 | 36 | 0 | |
| shade 3 | 3 | 36 | 3 | |
| light # 3 East | | | | |
| drop N | 0 | 0 | 6 | |
| drop S | 4 | 48 | 3 | |
| shade 1 | 7 | 84 | 3 | |
| shade 2 | 2 | 24 | 6 | |
| shade 3 | 3 | 36 | 3 | |
| light # 4 East | | | | |
| shade 1 | 2 | 24 | 0 | |
| shade 2 | 6 | 72 | 0 | |
| shade 3 | 2 | 24 | 0 | |
| Direct | | | | |
| Smear | | | | |
| Total DPM | 2934 | 147 | | |
| # Readings | 87 | 95 | | |
| DPM/100cm ² Avg. | 33.72 | 1.55 | | |
| DPM/100cm ² Max. | 96 | 9 | | |
| MDA - 33.26 dpm/100 cm ² | | | | |

PLANT Pu AREA Water Control
 SURVEYED BY McLain/Hoskins
 INST. 11011M 2220 # 58308 DET. 43-4
 SOURCE CK 101-127 BKG. .3
 DATE: 7-12-89 SOURCE # 1832 VALUE: 3420cpm
 AM-1-85/76
 PM-0-84/80

ASC # 83600115
 CTD. BY J. Black
 SOURCE CK. AVG. 29
 BKG. .3
 DATE: 7-13-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | SHEAR |
|-------------------------|--------|-----|---|-------|
| | CPH | DPH | | |
| #1 drop & lite | | | | |
| Top N | 5 | 70 | 0 | |
| S | 3 | 42 | 0 | |
| E | 1 | 14 | 0 | |
| W | 5 | 70 | 0 | |
| GLB NE1 | 1 | 14 | 0 | |
| NW2 | 2 | 28 | 6 | |
| S3 | 4 | 56 | 3 | |
| #2 drop & lite | | | | |
| N | N/A | — | 0 | Smear |
| S | N/A | — | 0 | " |
| Gate | | | | |
| 1 | 1 | 14 | 0 | |
| 2 | 2 | 28 | 3 | |
| 3 | 2 | 28 | 3 | |
| #3 drop & lite | | | | |
| drop E | 1 | 14 | 0 | |
| W | 3 | 42 | 0 | |
| GLB | | | | |
| 1 | 4 | 56 | 0 | |
| 2 | 3 | 42 | 0 | |
| 3 | 5 | 70 | 0 | |
| #4 drop & lite | | | | |
| drop | 1 | N/A | — | 3 |
| 2 | N/A | — | — | 0 |
| GLB | | | | |
| 1 | 2 | 28 | 3 | |
| 2 | 2 | 28 | 0 | |
| 3 | 3 | 42 | 3 | |
| #5 lite | | | | |
| drop | | | | |
| T-N | 3 | 42 | 0 | |
| T-S | 2 | 28 | 6 | |
| R-E | 5 | 70 | 0 | |
| R-W | 1 | 14 | 0 | |
| GLB | | | | |
| 1 | 1 | 14 | 0 | |
| 2 | 0 | 0 | 0 | |
| 3 | 3 | 42 | 0 | |

PLANT Pu AREA M-Tor Control
 SURVEYED BY Melvin Hoskins
 INST. 1.INDIUM 2220 58308 DET. 43-4
 SOURCE CK _____ BKG. _____
 DATE: 7-12-89 SOURCE # 1892 VALUE: 34200

ASC # 836 00 108
 CTD. BY J. Black
 SOURCE CK. AVG. 30
 BKG. 03
 DATE: 7-14-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | SHEAR |
|-------------------------|--------|-----|-------|
| | CPH | DPH | |
| #6 Lites and drop | 1 | NA | 0 |
| | 2 | NA | 3 |
| glabe | 1 | 0 | 3 |
| | 2 | 28 | 0 |
| | 3 | 28 | 0 |
| #7 Lites floris | DRD | 5 | 0 |
| | W | 28 | 3 |
| | N | 42 | 0 |
| | G | 14 | 0 |
| TOP N | E | 35 | 0 |
| | W | 24 | 3 |
| TOP CENTER | E | 28 | 3 |
| | W | 21 | 0 |
| TOP S | E | 21 | 6 |
| | W | 14 | 0 |
| Inside N | E | 28 | 0 |
| | W | 21 | 3 |
| | S | 7 | 3 |
| | W | 49 | 0 |
| #8 Lites drop | 1 | NA | 0 |
| | 2 | NA | 6 |
| glabe | 1 | 28 | 3 |
| | 2 | 14 | 0 |
| | 3 | 28 | 0 |

PLANT Pu AREA M-Tor Control
 SURVEYED BY Melvin Hoskins
 INST. 1.INDIUM 2220 58308 DET. 43-4
 SOURCE CK _____ BKG. 1
 DATE: 7-13-89 SOURCE # 1892 VALUE: 34200

ASC # 836 00 108
 CTD. BY J. Black
 SOURCE CK. AVG. 31
 BKG. 2
 DATE: 7-14-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | SHEAR |
|-------------------------|--------|-----|-------|
| | CPH | DPH | |
| #9 Lites drop | T N | 28 | 0 |
| | S | 14 | 3 |
| | B E | 42 | 3 |
| | W | 14 | 6 |
| glabe | 1 | 14 | 6 |
| | 2 | 14 | 0 |
| | 3 | 42 | 6 |
| #10 Lites drop | T N | 84 | 0 |
| | S | 56 | 6 |
| | B E | 28 | 0 |
| | W | 56 | 0 |
| glabe | 1 | 0 | 0 |
| | 2 | 14 | 0 |
| | 3 | 42 | 0 |
| #11 Lites drop | E | 14 | 0 |
| | W | 56 | 0 |
| glabe | 1 | 0 | 3 |
| | 2 | 28 | 3 |
| | 3 | 56 | 0 |
| #12 Lites drop | T N | 28 | 0 |
| | S | 0 | 0 |
| | B E | 42 | 3 |
| | W | 84 | 6 |
| GLORF | 1 | 70 | 0 |
| | 2 | 42 | 0 |
| | 3 | 28 | 3 |

Supply Duct Work.

PLANT PU AREA MCC
SURVEYED BY A. Hester
INST. INDIUM 2220 # 48395 DET. 4368
SOURCE CK 175-179 BKG. 1
DATE: 11-29-88 SOURCE # 7772 VALUE: 850 DPM

ASC # 83600108
CTD. BY D. Ford
SOURCE CK. AVG. 29
BKG. 2
DATE: 12-6-88

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | DIRECT | | |
|-------------------------|--------|--------|-----|-------|
| | | CPH | DPH | SHEAR |
| Room 127 Zone 5 Sect #1 | A | 1 | 4 | 6 |
| | B | 0 | 0 | 6 |
| | C | 3 | 12 | 3 |
| | D | 3 | 12 | 0 |
| Sect #2 | A | 0 | 0 | 0 |
| | B | 0 | 0 | 6 |
| | C | - | N/A | 3 |
| | D | 0 | 0 | 3 |
| Sect #3 | A | 3 | 12 | 6 |
| | B | 0 | 0 | 0 |
| | C | 5 | 20 | 0 |
| | D | 3 | 12 | 0 |
| Sect #4 | A | 4 | 16 | 0 |
| | B | 2 | 8 | 0 |
| | C | 3 | 12 | 6 |
| | D | 2 | 8 | 3 |
| Sect #5 | A | 3 | 12 | 0 |
| | B | 0 | 0 | 3 |
| | C | 1 | 4 | 3 |
| | D | 1 | 4 | 3 |
| Room 118 Zone #9 | A | 3 | 12 | 12 |
| | B | 6 | 24 | 0 |
| | C | 0 | 0 | 9 |
| | D | 0 | 0 | 0 |

Supply Duct Work

PLANT PU AREA MCC
SURVEYED BY J. Hester
INST. INDIUM 2220 # 48395 DET. 4368
SOURCE CK 175-179 BKG. 1
DATE: 11-29-88 SOURCE # VALUE: 850 DPM

ASC # 83600108
CTD. BY D. Ford
SOURCE CK. AVG. 34
BKG. 2
DATE: 12-6-88

A=TOP B=RIGHT

C=BOTTOM D=LEFT

READINGS IN DPH/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | DIRECT | | |
|-------------------------|--------|--------|-----|-------|
| | | CPH | DPH | SHEAR |
| Room 128 Zone 4 Sect #1 | A | 1 | 4 | 9 |
| | B | 0 | 0 | 0 |
| | C | 0 | 0 | 0 |
| | D | 4 | 16 | 0 |
| Sect #2 | A | 6 | 24 | 3 |
| | B | 0 | 0 | 0 |
| | C | 1 | 4 | 12 |
| | D | - | N/A | 3 |
| Sect #3 | A | 1 | 4 | 3 |
| | B | 4 | 16 | 3 |
| | C | 0 | 0 | 3 |
| | D | 0 | 0 | 0 |
| Sect #4 | A | 4 | 16 | 3 |
| | B | 1 | 4 | 0 |
| | C | 1 | 4 | 3 |
| | D | 2 | 8 | 3 |

PLANT Rec 55 AREA Motor Control
 SURVEYED BY WFLAN
 INST. 1.101.11M 2220 * 50069 DET. 43-68
 SOURCE CK 86/84 BKG. 0
 DATE: 8-7-89 Source #: 183 VALUE: 342 DPM

ASC # 1 83600115
 CTD. BY J. Black
 SOURCE CK. AVG. 25
 BKG. 2
 DATE: 8-7-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | | |
|-------------------------|--------|-----|-------|---|
| | CPH | DPH | SHEAR | |
| Control panel grid #1 | 1 | 16 | 64 | 0 |
| #3 A-Panel | 2 | 5 | 20 | 0 |
| | 3 | 4 | 16 | 0 |
| FRONT | 4 | 0 | 0 | 0 |
| | 5 | 2 | 8 | 3 |
| #2 | 1 | 2 | 8 | 6 |
| | 2 | 2 | 8 | 0 |
| | 3 | 3 | 12 | 0 |
| | 4 | 2 | 8 | 0 |
| | 5 | 2 | 8 | 3 |
| #3 | 1 | 4 | 16 | 0 |
| | 2 | 6 | 24 | 0 |
| | 3 | 4 | 16 | 3 |
| | 4 | 0 | 0 | 0 |
| | 5 | 2 | 8 | 3 |
| #4 | 1 | 3 | 12 | 9 |
| | 2 | 2 | 8 | 0 |
| | 3 | 3 | 12 | 0 |
| | 4 | 3 | 12 | 3 |
| | 5 | 1 | 4 | 3 |
| #5 | 1 | 1 | 4 | 0 |
| | 2 | 5 | 20 | 0 |
| | 3 | 3 | 12 | 3 |
| | 4 | 5 | 20 | 0 |
| | 5 | 3 | 12 | 3 |
| #6 | 1 | 3 | 12 | 0 |
| | 2 | 2 | 8 | 3 |
| | 3 | 2 | 8 | 6 |
| | 4 | 3 | 12 | 0 |
| | 5 | 6 | 24 | 3 |

PLANT Rec AREA Motor Control
 SURVEYED BY WFLAN
 INST. 1.101.11M 2220 * 50069 DET. 43-68
 SOURCE CK 86/84 BKG. 0
 DATE: 8-7-89 Source #: 183 VALUE: 342 DPM

ASC # 83600115
 CTD. BY J. Black
 SOURCE CK. AVG. 33
 BKG. 12
 DATE: 8-8-89

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | |
|--------------------------|--------|-----|-------|
| | CPH | DPH | SHEAR |
| Control panel #2 grid #1 | 1 | 4 | 6 |
| B-Panel | 2 | 4 | 0 |
| FRONT | 3 | 12 | 3 |
| | 4 | 16 | 3 |
| | 5 | 8 | 6 |
| #2 | 1 | 8 | 0 |
| | 2 | 12 | 0 |
| | 3 | 8 | 0 |
| | 4 | 12 | 0 |
| | 5 | 16 | 6 |
| #3 | 1 | 12 | 0 |
| | 2 | 16 | 3 |
| | 3 | 16 | 0 |
| | 4 | 28 | 0 |
| | 5 | 0 | 0 |
| #4 | 1 | 16 | 3 |
| | 2 | 12 | 0 |
| | 3 | 0 | 0 |
| | 4 | 20 | 3 |
| | 5 | 0 | 3 |
| #5 | 1 | 4 | 3 |
| | 2 | 12 | 3 |
| | 3 | 4 | 3 |
| | 4 | 12 | 3 |
| | 5 | 8 | 0 |
| #6 | 1 | 4 | 0 |
| | 2 | 20 | 0 |
| | 3 | 4 | 3 |
| | 4 | 24 | 0 |
| | 5 | 28 | 0 |

PLANT Pu AREA Motor Control
 SURVEYED BY U. Melain 50069 43-68
 INST. INDIUM 2220 * 58308 DET. 43-4
 SOURCE CK _____ BKG. _____
 DATE: 8-8-89 SOURCE #: 1832 VALUE: 342 DPM

ASC # 83600108
 CTD. BY J. Black
 SOURCE CK. AVG. 27
 BKG. .3
 DATE: 8-8-89

50069 6kg-1 110-110
 58308 6kg-0 95-87

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | |
|-----------------------------|--------|-----|-------|
| | CPH | DPH | SHEAR |
| 150 KVA L-1,2,3 Transformer | | | |
| inside Top | | | |
| X4 S | 24 | 96 | 6 |
| C | 10 | 40 | 0 |
| | 23 | 92 | 9 |
| side M | | | |
| X7 S | 13 | 91 | 9 |
| | 8 | 56 | 3 |
| E | 12 | 84 | 0 |
| W | 8 | 56 | 3 |
| side coil N | 1 | 4 | 0 |
| X4 C | 1 | 4 | 9 |
| S | 3 | 12 | 3 |
| Bottom N | 10 | 70 | 0 |
| X7 S | 10 | 70 | 3 |
| E | 9 | 63 | 3 |
| outside | | | |
| Top S | 17 | 68 | 0 |
| X4 C | 2 | 8 | 9 |
| N | 2 | 8 | 3 |
| Front | | | |
| 1 | 0 | 0 | 3 |
| 2 | 2 | 8 | 0 |
| 3 | 0 | 0 | 0 |
| 4 | 0 | 0 | 3 |
| 5 | 0 | 0 | 0 |
| North side | | | |
| 1 | 2 | 8 | 3 |
| 2 | 0 | 0 | 3 |
| 3 | 2 | 8 | 0 |
| South side | | | |
| 1 | 5 | 20 | 0 |
| 2 | 0 | 0 | 3 |
| 3 | 2 | 8 | 3 |
| Back | | | |
| 1 | 0 | 0 | 0 |
| 2 | 1 | 4 | 9 |
| 3 | 0 | 0 | 3 |

PLANT Pu AREA Motor Control
 SURVEYED BY U. Melain 50069 43-68
 INST. INDIUM 2220 * 58308 DET. 43-4
 SOURCE CK _____ BKG. _____
 DATE: 8-8-89 SOURCE #: 1832 VALUE: 342 DPM

ASC # 83600108
 CTD. BY J. Black
 SOURCE CK. AVG. 27
 BKG. .3
 DATE: 8-8-89

50069 6kg-1 110-110
 58308 6kg-0 95-87

READINGS IN DPM/100 cm²

| SAMPLE # OR DESCRIPTION | DIRECT | | |
|-------------------------------------|--------|-------|-------|
| | CPH | DPH | SHEAR |
| 45 KVA E-1 Transformer | | | |
| inside Top | | | |
| X4 E | 14 | 56 | 0 |
| W | 8 | 32 | 9 |
| Coil N | 4 | 56 | 0 |
| X7 S | 5 | 70 | 3 |
| side E | 3 | 21 | 0 |
| X7 W | 3 | 21 | 3 |
| Bottom N | 6 | 24 | 0 |
| X4 S | 7 | 28 | 6 |
| 45 KVA E-2 Transformer | | | |
| inside Top | | | |
| X4 E | 7 | 28 | 9 |
| W | 0 | 0 | 3 |
| Coils N | 5 | 70 | 3 |
| X14 S | 7 | 98 | 0 |
| Sides E | 5 | 35 | 3 |
| X7 W | 7 | 49 | 0 |
| Bottom N | 7 | 28 | 0 |
| X4 W | 4 | 16 | 0 |
| | Direct | Smear | |
| Total DPM | 1510 | 129 | |
| # Readings | 46 | 46 | |
| Avg. DPM/100cm ² | 32.83 | 2.80 | |
| Max DPM/100cm ² | 98 | 9 | |
| MDA - 27.44 dpm/100 cm ² | | | |

LINE NUMBER #685 MOTOR CONTROL DATE 7-7-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 59358
 DETECTOR 43-4 OPERATOR McLAINE/HOSKINS
 SOURCE NUMBER AND VALUE 1832/1342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-92/84

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | 1cpm/100cm ² | Smearable dpm/100cm ² | |
|---|--------------|--------|------------------|------------|-------------------------|----------------------------------|--|
| At transformer | Conduit | 1 1/2" | OME | 1 | 14 | 0 | |
| 5 meters from West wall | | | D | 1 | 14 | 0 | |
| South of walkways to #1 panels east end | | | 2MT | 3 | 42 | 3 | |
| | | | W | 3 | 42 | 3 | |
| | | | 4MT | 1 | 14 | 3 | |
| | | | 4WB | 1 | 14 | 9 | |
| | | | 6MT | 2 | 28 | 3 | |
| | | | B | 1 | 14 | 0 | |
| | | | 8MT | 3 | 42 | 0 | |
| | | | B | 4 | 56 | 6 | |
| | | | 10MT | 5 | 70 | 9 | |
| | | | B | 4 | 56 | 0 | |
| | | | 12MT | 5 | 70 | 0 | |
| | | | S | 4 | 56 | 0 | |
| | | | Complete 7-7-89 | | | | |

LINE NUMBER 686 MOTOR CONTROL DATE
 INSTRUMENT Ludlum 2220 SERIAL NUMBER
 DETECTOR 43-4 OPERATOR McLAINE/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-45/74
 SOURCE RESPONSE AND BACKGROUND PM 1-79/73

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | 1cpm/100cm ² | Smearable dpm/100cm ² | |
|------------------------------|--------------|------|------------------|------------|-------------------------|----------------------------------|--|
| 4" Box 2m out From West Wall | Conduit | 3/4" | OM | T 2 | 28 | 0 | |
| | | | | B 1 | 14 | 9 | |
| | | | 2M | T 2 | 28 | 0 | |
| | | | | B 4 | 56 | 3 | |
| | | | 4M | T 1 | 14 | 0 | |
| | | | | B 5 | 70 | 0 | |
| | | | 6M | T 2 | 28 | 3 | |
| | | | | B 4 | 56 | 3 | |
| | | | 8M | T 2 | 28 | 0 | |
| | | | | B 3 | 42 | 3 | |
| | | | 10M | E 4 | 56 | 0 | |
| | | | | W 2 | 28 | 0 | |
| | | | Complete 7-13-89 | | | | |

LINE NUMBER 695 Meter Control DATE 7-11-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR RMH
 SOURCE NUMBER AND VALUE #1832 342 dpm
 SOURCE RESPONSE AND BACKGROUND AM 81/91 BKg 0
 SOURCE RESPONSE AND BACKGROUND PM —

LINE NUMBER 696 Meter Control DATE 7-11-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR RMH
 SOURCE NUMBER AND VALUE #1832 342 dpm
 SOURCE RESPONSE AND BACKGROUND AM 81/91 BKg 0
 SOURCE RESPONSE AND BACKGROUND PM —

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|--|--------------|------|------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Panel L-3 top to 1" Base 6 meters from west wall in ceiling | Conduit | 1/2" | 0 meters N | 2 | 28 | 6 |
| | | | " " S | 4 | 56 | 0 |
| | | | 2 meters T | 3 | 42 | 0 |
| | | | " " B | 4 | 56 | 0 |
| | | | 4 meters T | 4 | 56 | 0 |
| | | | " " B | 2 | 28 | 0 |
| | | | 6 meters T | 0 | 0 | 0 |
| | | | " " B | 1 | 14 | 0 |
| | | | 8 meters T | 5 | 70 | 6 |
| | | | " " B | 5 | 70 | 0 |
| | | | 8 1/2 meters T | 5 | 70 | 3 |
| | | | " " B | 0 | 0 | 3 |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|--|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Panel L-3 top west wall for thorough check from 4 meters from west wall at north wall. | Conduit | 4" | 0 meters N | 2 | 28 | 3 |
| | | | " " S | 3 | 42 | 0 |
| | | | 2 meters T | 1 | 14 | 6 |
| | | | " " B | 5 | 70 | 3 |
| | | | 4 meters T | 2 | 28 | 0 |
| | | | " " B | 1 | 14 | 0 |
| | | | 6 meters T | 3 | 42 | 0 |
| | | | " " B | 2 | 28 | 0 |
| | | | 8 meters T | 5 | 70 | 9 |
| | | | " " B | 2 | 28 | 0 |
| | | | 10 meters T | 3 | 42 | 3 |
| | | | " " B | 4 | 56 | 3 |
| | | | 12 meters E | 6 | 84 | 0 |
| | | | " " W | 5 | 70 | 3 |
| | | | 14 meters E | 2 | 28 | 0 |
| " " W | 3 | 42 | 0 | | | |
| 15 meters E | 1 | 14 | 3 | | | |
| | W | 2 | 28 | 0 | | |

LINE NUMBER 697 Pu. Water *Contract* DATE 7-12-87
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/432
 SOURCE RESPONSE AND BACKGROUND AM 1-85/76
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | Direct LCPM/100cm ² | Smearable dpm/100cm ² | | | |
|---|--------------|-----|------------------|------------|--------------------------------|----------------------------------|--|--|--|
| Panel 4-3 runs conduit to north well 2 1/2 m up | 1" | | 0M N 3 | 42 | 3 | | | | |
| | | | 5 S 5 | 70 | 3 | | | | |
| | | | 2M T 5 | 70 | 0 | | | | |
| | | | B 4 | 56 | 9 | | | | |
| | | | 4M T 4 | 56 | 0 | | | | |
| | | | B 5 | 70 | 3 | | | | |
| | | | 6M T 1 | 14 | 3 | | | | |
| | | | B 6 | 84 | 0 | | | | |
| | | | 8M T 3 | 42 | 3 | | | | |
| | | | B 4 | 56 | 0 | | | | |
| | | | Complete 7-12-89 | | | | | | |

LINE NUMBER 698 Pu. Water *Contract* DATE 7-12-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/432
 SOURCE RESPONSE AND BACKGROUND AM 1-85/76
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | Direct LCPM/100cm ² | Smearable dpm/100cm ² | | | |
|--------------------------------|--------------|-----|------------------|------------|--------------------------------|----------------------------------|--|--|--|
| Panel 4-3 to Contract panel #3 | | | 0M N 5 | 70 | 9 | | | | |
| | | | 5 S 3 | 42 | 0 | | | | |
| | | | 2M B 2 | 28 | 3 | | | | |
| | | | E 5 | 70 | 0 | | | | |
| | | | 4M T 4 | 56 | 0 | | | | |
| | | | B 4 | 56 | 0 | | | | |
| | | | 6M N 6 | 84 | 3 | | | | |
| | | | S 2 | 28 | 0 | | | | |
| | | | Complete 7-12-89 | | | | | | |

LINE NUMBER 703 DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR VM/RMH
 SOURCE NUMBER AND VALUE #1832 342 dpm
 SOURCE RESPONSE AND BACKGROUND AM 0-88/83
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm/100cm ² |
|-----------------|--------------|-------------------|------------------|------------------------------------|----|-------------------------------------|
| at top of | Conduit | 3" | 0 meters E | 2 | 28 | 0 |
| unexposed | | | " " S | 2 | 28 | 0 |
| switch panel | | | | | | |
| sewer control | | 2m | T | 3 | 42 | 3 |
| panel #1 east | | | B | 1 | 14 | 0 |
| end | | | | | | |
| | | 4m | T | 0 | 0 | 0 |
| | | | B | 1 | 14 | 0 |
| | | | | | | |
| | | 6m | T | 1 | 14 | 0 |
| | | | B | 2 | 28 | 3 |
| | | | | | | |
| | | 8m | T | 3 | 42 | 3 |
| | | | B | 3 | 42 | 3 |
| | | | | | | |
| | | 10m | N | 3 | 42 | 0 |
| | | | S | 2 | 28 | 0 |
| | | | | | | |
| | | Completed 7-14-89 | | | | |

LINE NUMBER 704 DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR VM/RMH
 SOURCE NUMBER AND VALUE #1832 342 dpm
 SOURCE RESPONSE AND BACKGROUND AM 0-88/83
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm/100cm ² |
|-----------------|--------------|-------------------|------------------|------------------------------------|----|-------------------------------------|
| at top of | Conduit | 3" | 0 meters N | 1 | 14 | 6 |
| unexposed | | | " " S | 1 | 14 | 6 |
| switch panel | | | | | | |
| sewer control | | 2m | T | 1 | 14 | 3 |
| panel #1 east | | | B | 3 | 42 | 3 |
| end | | | | | | |
| | | 4m | T | 2 | 28 | 6 |
| | | | B | 1 | 14 | 3 |
| | | | | | | |
| | | 6m | T | 3 | 42 | 3 |
| | | | B | 3 | 42 | 0 |
| | | | | | | |
| | | 8m | T | 0 | 0 | 3 |
| | | | B | 2 | 28 | 6 |
| | | | | | | |
| | | 10m | N | 0 | 0 | 9 |
| | | | S | 3 | 42 | 0 |
| | | | | | | |
| | | Completed 7-14-89 | | | | |

LINE NUMBER 707-712 DATE 7-7-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR VM/RMH
 SOURCE NUMBER AND VALUE #1832 342 DPM
 SOURCE RESPONSE AND BACKGROUND AM 86/79 BKg 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|---|--------------|-----------------------------|-------------------|--------|-------------------------|-------------------------|
| | | | | cpm | lcpm/100cm ² | |
| Floor up about 1/2 meter to wiring tray | conduit | 1 1/2" 5 lines are 1" | 707 N | 2 | 28 | 0 |
| | | | S | 1 | 14 | 3 |
| | | | 708 E | 2 | 28 | 0 |
| | | | S | 0 | 0 | 3 |
| | | | 709 E | 3 | 42 | 6 |
| | | | 710 E | 9 | 126 | NO smear before cleaned |
| | | | 710 after cleaned | 3 | 42 | 3 |
| | | | 711 E | 4 | 56 | 0 |
| | | | 712 E | 4 | 56 | 0 |

LINE NUMBER 713, 714 & 715 DATE 7-7-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR VM/RMH
 SOURCE NUMBER AND VALUE #1832 342 DPM
 SOURCE RESPONSE AND BACKGROUND AM 79/86 BKg
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|---|--------------|--------------------------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Starts at floor goes up to box for auto switch for generator on West (opposite air lock side) Wall of MCC | Conduit | one 1 1/2" two 2 1/2" | 713 S | 3 | 42 | 0 |
| | | | E | 2 | 28 | 6 |
| | | | 714 E | 3 | 42 | 0 |
| | | | W | 4 | 56 | 0 |
| | | | 715 E | 3 | 42 | 0 |
| | | | W | 3 | 42 | 6 |

LINE NUMBER 741 MOTOR CONTROL DATE 7-12-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 1-85/16

SOURCE RESPONSE AND BACKGROUND PM 0-84/80

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Direct cpm | 10cpm/100cm ² | Smearable dpm/100cm ² |
|---|--------------|--------|------------------|-----|---------------|--------------------------|-------------------------------------|
| Keep 4 meters from west wall ceiling to | Horizontal | 1 1/2" | 0M | T | 2 | 28 | 3 |
| | | | | B | 4 | 56 | 0 |
| | | | 2M | T | 7 | 98 | 0 |
| | | | | B | 4 | 56 | 3 |
| | | | 4M | T | 2 | 28 | 0 |
| | | | | B | 4 | 56 | 0 |
| | | | 6M | T | 3 | 42 | 3 |
| | | | | B | 4 | 56 | 3 |
| | | | 8M | T | 5 | 70 | 0 |
| | | | | B | 5 | 70 | 3 |
| | | | 10M | (T) | 4 | (T) 56 | (T) 3 |
| | | | | (B) | 3 | (B) 42 | (B) 3 |
| | | | 12M | T | 2 | 28 | 3 |
| | | | | B | 5 | 70 | 0 |
| | | | 14M | T | 4 | 56 | 0 |
| | | | | B | 2 | 28 | 0 |
| | | | 16M | T | 4 | 56 | 0 |
| | | | | B | 6 | 84 | 3 |
| Completed 7-12-89 | | | | | | | |

LINE NUMBER 742 MOTOR CONTROL DATE 7-12-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McLean/Hoskins

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM

SOURCE RESPONSE AND BACKGROUND PM 7-13-80/84

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Direct cpm | 10cpm/100cm ² | Smearable dpm/100cm ² |
|--|--------------|------|------------------|---|---------------|--------------------------|-------------------------------------|
| 4" Port 2 METERS FROM WEST WALL at ceiling | Horizontal | 1/2" | 0M | T | 6 | 84 | 0 |
| | | | | B | 1 | 14 | 0 |
| under 9 METERS FROM WEST at ceiling | | | 2M | T | 1 | 14 | 9 |
| | | | | B | 3 | 42 | 3 |
| | | | 4M | T | 1 | 14 | 3 |
| | | | | B | 0 | 0 | 3 |
| | | | 6M | N | 6 | 784 | (T) 3 |
| | | | | S | 6 | 84 | (B) 0 |
| Completed 7-12-89 | | | | | | | |

LINE NUMBER 743 Motor Control DATE 7-12-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Haskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-75/74
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|--|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 4" Box 5 1/2 meters From West wall at ceiling to | | | 0M T 1 | 14 | 0 | |
| | | | B 1 | 14 | 3 | |
| 4" Box 4 meters from west wall at ceiling | | 2M | T 4 | 56 | 9 | |
| | | | B 6 | 84 | 3 | |
| | | 4M | T 3 | 42 | 3 | |
| | | | B 2 | 56 | 6 | |
| | | 6M | T 1 | 14 | 0 | |
| | | | B 1 | 14 | 0 | |
| | | 8M | B 4 | 56 | 3 | |
| | | | N 1 | 14 | 0 | |
| Complete 7-13-89 | | | | | | |

LINE NUMBER 744 Motor Control DATE 7-13-89
 INSTRUMENT Ludlum SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Haskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-75/74
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|---|--------------|------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 4" Box 2 meters from west wall to | Conduit | 1/2" | 0M T 5 | 70 | 0 | |
| | | | E 6 | 84 | 3 | |
| | | 2M | T 4 | 56 | 0 | |
| | | | B 2 | 28 | 0 | |
| | | 4M | T 3 | 42 | 0 | |
| | | | B 5 | 70 | 6 | |
| | | 6M | T 3 | 42 | 3 | |
| | | | B 6 | 0 | 3 | |
| Complete 7-13-89 | | | | | | |

LINE NUMBER 145 MOTOR CONTROL DATE 7-13-89
 INSTRUMENT Rudlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-75/74
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|---|--------------|--------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 4" Box 4 meter From WEST WALL at ceiling to 4" Box 1 meter south of west wall at ceiling | Conduit | 1 1/2" | 5M N | 2 | 28 | 0 |
| | | | 5 | 3 | 42 | 0 |
| | | | 2M T | 3 | 42 | 3 |
| | | | B | 4 | 56 | 3 |
| | | | 4M T | 5 | 70 | 0 |
| | | | B | 6 | 84 | 0 |
| Complete 7-13-89 | | | | | | |

LINE NUMBER 146 MOTOR CONTROL DATE 7-13-89
 INSTRUMENT Rudlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-79/73

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|--|--------------|--------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| at site south section meters from west wall and near up to 4" Box 4 meter from west wall at ceiling | Conduit | 1 1/2" | 0M N | 3 | 42 | 3 |
| | | | 5 | 2 | 28 | 3 |
| | | | 2M N | 1 | 14 | 0 |
| | | | 5 | 2 | 28 | 3 |
| | | | 4M T | 4 | 56 | 3 |
| | | | B | 3 | 42 | 0 |
| Complete 7-13-89 | | | | | | |

LINE NUMBER 747 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1838/342
 SOURCE RESPONSE AND BACKGROUND AM 0-88/83
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable dpm/100cm ² | |
|------------------------------|--------------|-----------|--------------------------|---------------------------------------|----------|-------------------------------------|----------|
| <u>Exposing Coiled Cond.</u> | | <u>3"</u> | <u>OM</u> | <u>E</u> | <u>3</u> | <u>42</u> | <u>3</u> |
| <u>for Boiler Room</u> | | | | <u>S</u> | <u>3</u> | <u>42</u> | <u>3</u> |
| <u>To #3 location</u> | | | | | | | |
| <u>paid vent</u> | | | <u>2m</u> | <u>T</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| <u>cond</u> | | | | <u>B</u> | <u>5</u> | <u>70</u> | <u>3</u> |
| | | | <u>4m</u> | <u>N</u> | <u>2</u> | <u>28</u> | <u>3</u> |
| | | | | <u>S</u> | <u>2</u> | <u>28</u> | <u>6</u> |
| | | | <u>Completed 7-14-89</u> | | | | |

LINE NUMBER 748 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1836/348
 SOURCE RESPONSE AND BACKGROUND AM 0-88/83
 SOURCE RESPONSE AND BACKGROUND PM 0-83/84

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable dpm/100cm ² | |
|------------------------|--------------|-----------|--------------------------|---------------------------------------|----------|-------------------------------------|----------|
| <u>on top wire</u> | <u>cond</u> | <u>1"</u> | <u>OM</u> | <u>N/A</u> | <u>-</u> | <u>0</u> | |
| <u>control panel</u> | | | | <u>N/A</u> | <u>-</u> | <u>0</u> | |
| <u>for Boiler Room</u> | | | | | | | |
| <u>to vent cond</u> | | | <u>2m</u> | <u>T</u> | <u>6</u> | <u>84</u> | <u>3</u> |
| <u>of control</u> | | | | <u>B</u> | <u>1</u> | <u>14</u> | <u>0</u> |
| <u>panel #1</u> | | | | | | | |
| | | | <u>4m</u> | <u>T</u> | <u>0</u> | <u>0</u> | <u>6</u> |
| | | | | <u>B</u> | <u>1</u> | <u>14</u> | <u>0</u> |
| | | | <u>6m</u> | <u>T</u> | <u>2</u> | <u>28</u> | <u>6</u> |
| | | | | <u>B</u> | <u>3</u> | <u>42</u> | <u>6</u> |
| | | | <u>8m</u> | <u>N</u> | <u>1</u> | <u>14</u> | <u>3</u> |
| | | | | <u>S</u> | <u>5</u> | <u>70</u> | <u>3</u> |
| | | | <u>Completed 7-14-89</u> | | | | |

LINE NUMBER 749 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HASKINS
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable cpm/100cm ² |
|-------------------|--------------|-----|------------------|---------------------------------------|----|-------------------------------------|
| Control room | Cord | 3" | OM 17 | 2 | 28 | 6 |
| Box for pipes | | | 5 | 2 | 28 | 0 |
| Box to 10" x 4" | | | | | | |
| Box 4 meters | | 2M | T | 1 | 14 | 6 |
| near west wall at | | | B | 0 | 0 | 0 |
| Building | | 4M | T | 4 | 56 | 3 |
| | | | B | 1 | 14 | 3 |
| Complete 7-14-89 | | | | | | |

LINE NUMBER 750 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HASKINS
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM 7-17-89 7-19/95
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable cpm/100cm ² |
|-------------------|--------------|--------|------------------|---------------------------------------|----|-------------------------------------|
| Control room | Cord | 1 1/4" | N 1 | | 14 | 0 |
| Box for pipes | | | S 2 | | 56 | 6 |
| Box to 10" x 4" | | | | | | |
| near west wall at | | 2M | T 1 | | 14 | 6 |
| Building | | | B 4 | | 56 | 6 |
| | | 4M | T 1 | | 14 | 0 |
| | | | B 1 | | 14 | 3 |
| | | 6M | T 0 | | 0 | 0 |
| | | | R 3 | | 42 | 6 |
| | | 8M | T 2 | | 28 | 6 |
| | | | B 1 | | 14 | 3 |
| | | 10M | T 0 | | 0 | 0 |
| | | | B 2 | | 28 | 0 |
| | | 12M | N 3 | | 42 | 3 |
| | | | S 2 | | 28 | 3 |
| Complete 7-17-89 | | | | | | |

LINE NUMBER 751 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM 7-17-89
 SOURCE RESPONSE AND BACKGROUND PM 0-84-82 7-17-89
0-92/89

| START OF SURVEY | SIZE OF PIPE | DIA | READING LOCATION | Detect cpm 100cm ² | Smearable dpm/100cm ² |
|-----------------|--------------|-----|------------------|-------------------------------------|-------------------------------------|
| Control Wiring | Cord | 3" | 0M N | 14 | 3 |
| near for | | | S 2 | 28 | 0 |
| Boiler Room | | | | | |
| to east wall | | | 2M T 2 | 28 | 6 |
| at wiring | | | B 2 | 28 | 3 |
| full Board | | | | | |
| at ceiling | | | 4M T 0 | 0 | 3 |
| | | | B 0 | 0 | 0 |
| | | | | | |
| | | | 6M T 1 | 14 | 0 |
| | | | B 4 | 56 | 0 |
| | | | | | |
| | | | 8M T 1 | 14 | 0 |
| | | | B 0 | 0 | 0 |
| | | | | | |
| | | | 10M T 2 | 28 | 3 |
| | | | B 4 | 56 | 0 |
| | | | | | |
| | | | 12M T 1 | 14 | 0 |
| | | | B 4 | 56 | 3 |
| | | | | | |
| | | | 14M T 3 | 42 | 6 |
| | | | B 1 | 14 | 0 |
| | | | | | |
| | | | 16M T 3 | 42 | 0 |
| | | | B 3 | 14 | 0 |
| | | | | | |
| | | | 18M T 1 | 14 | 0 |
| | | | B 3 | 42 | 0 |
| | | | | | |
| | | | 19M T 5 | 70 | 0 |
| | | | B 1 | 14 | 3 |

Complete 7-17-89

LINE NUMBER 752 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/348
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF PIPE | DIA | READING LOCATION | Detect cpm 100cm ² | Smearable dpm/100cm ² |
|-------------------|--------------|-----|------------------|-------------------------------------|-------------------------------------|
| Control wiring | Cord | 1" | 0M E 2 | 28 | 0 |
| Back room, boiler | | | S 2 | 28 | 6 |
| Room to west | | | | | |
| wall at | | | 2M T 2 | 28 | 0 |
| wiring panel | | | B 3 | 42 | 3 |
| Back of | | | | | |
| ceiling | | | 4M T 3 | 42 | 0 |
| | | | B 0 | 0 | 6 |
| | | | | | |
| | | | 6M T 1 | 14 | 0 |
| | | | B 2 | 28 | 0 |
| | | | | | |
| | | | 8M T 1 | 14 | 0 |
| | | | B 1 | 14 | 0 |
| | | | | | |
| | | | 10M T 1 | 14 | 0 |
| | | | B 0 | 0 | 0 |
| | | | | | |
| | | | 12M T 5 | 70 | 3 |
| | | | B 3 | 42 | 3 |
| | | | | | |
| | | | 14M T 3 | 42 | 0 |
| | | | B 3 | 42 | 0 |
| | | | | | |
| | | | 16 T 0 | 0 | 0 |
| | | | 16M B 0 | 0 | 3 |
| | | | | | |
| | | | 18M T 4 | 56 | 3 |
| | | | B 0 | 0 | 0 |
| | | | | | |
| | | | 19M T 2 | 28 | 3 |
| | | | B 5 | 70 | 6 |

Complete 7-17-89

LINE NUMBER 753 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-U OPERATOR MCLAIN/HASKINS
 SOURCE NUMBER AND VALUE 1832/348
 SOURCE RESPONSE AND BACKGROUND AM 7-17-89 1-91/95
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect | | Smeatabig |
|------------------|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Using Control | Cond | 3/4 | 0m | E 0 | 0 | 3 |
| Bot for Probe | | | | N 3 | 42 | 3 |
| Lead to 8' x 3" | | | | | | |
| pull box | | 2m | | T 1 | 14 | 0 |
| at exhaust | | | | B 3 | 42 | 0 |
| of supply | | | | | | |
| air duct | | 4m | | T 3 | 42 | 0 |
| | | | | B 1 | 14 | 3 |
| | | | | | | |
| | | 1m | | T 3 | 42 | 0 |
| | | | | B 0 | 0 | 3 |
| | | | | | | |
| | | 8m | | T 1 | 14 | 6 |
| | | | | B 0 | 0 | 3 |
| | | | | | | |
| | | 10m | | T 4 | 56 | 0 |
| | | | | B 1 | 14 | 0 |
| | | | | | | |
| | | 12 | | N 1 | 14 | 6 |
| | | | | S 2 | 28 | 6 |
| | | | | | | |
| | | 13 | | E 4 | 56 | 3 |
| | | | | S 3 | 42 | 0 |
| Complete 7-17-89 | | | | | | |

LINE NUMBER 754 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-U OPERATOR MCLAIN/HASKINS
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect | | Smeatabig |
|-------------------|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 11x4 Push Box | | | DM | T 2 | 28 | 3 |
| at ceiling 4m | | | | B 2 | 28 | 0 |
| from west | | | | | | |
| walk down | | 2m | | T 1 | 14 | 0 |
| to top control | | | | B 2 | 28 | 3 |
| Panel # 2 | | | | | | |
| | | 4m | | N 1 | 14 | 0 |
| | | | | S 5 | 70 | 0 |
| Completed 7-14-89 | | | | | | |

LINE NUMBER 755 Motor Control DATE 7-14-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCHAINS/MSK125
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-84/83

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect cpm 100cm ² | | Smearable cpm/100cm ² |
|------------------|--------------|-------------------|------------------|----------------------------------|----|-------------------------------------|
| 12x4 pull box | | | DM | T | 0 | 3 |
| at ceiling 4m | | | | B | 28 | 0 |
| from lowest | | | | | | |
| wall to top | | 2M | | T | 42 | 0 |
| Control panel #1 | | | | B | 14 | 0 |
| | | 4M | | N | 14 | 3 |
| | | | | S | 28 | 0 |
| | | Completed 7-14-89 | | | | |

LINE NUMBER 756 Motor Control DATE 7-17-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCHAINS/MSK125
 SOURCE NUMBER AND VALUE 1832/346
 SOURCE RESPONSE AND BACKGROUND AM 1-91/95
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect cpm 100cm ² | | Smearable cpm/100cm ² |
|------------------|--------------|-------------------|------------------|----------------------------------|----|-------------------------------------|
| 12x4 box at | | 7" | DM | T | 0 | 0 |
| ceiling 4 meters | | | | B | 28 | 3 |
| to top control | | | | | | |
| panel #3 | | | DM | N | 42 | 0 |
| | | | | S | 28 | 0 |
| | | Completed 7-17-89 | | | | |

LINE NUMBER 957 Meter Central DATE 7-17-89
 INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hardley
 SOURCE NUMBER AND VALUE 1832/1346
 SOURCE RESPONSE AND BACKGROUND AM 1-9/95
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | OFF OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable dpm/100cm ² |
|------------------------------------|-------------|-----|------------------|----------------------------------|-------------------------------------|
| 11x4 full roof | Cloud | 14" | DM | T 0 | 0 |
| 4 meters from west wall | | | | R 4 | 56 |
| at ceiling to top of duct panel #3 | | | 2M | T 0 | 0 |
| | | | | R 7 | 14 |
| | | | 4M | T 0 | 0 |
| | | | | R 2 | 28 |
| | | | 6M | N 4 | 56 |
| | | | | S 0 | 0 |
| | | | Complete 7-17-89 | | |

LINE NUMBER 758 Meter Central DATE 7-17-89
 INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hardley
 SOURCE NUMBER AND VALUE 1832/1342
 SOURCE RESPONSE AND BACKGROUND AM 1-9/95
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | OFF OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable dpm/100cm ² |
|-----------------|-------------|-----|------------------|----------------------------------|-------------------------------------|
| | | | CM-EZ | 28 | 0 |
| | | | 2M-E | 5 | 70 |
| | | | T | 3 | 42 |
| | | | Complete 7-17-89 | | |

LINE NUMBER 759 DATE 7-18-89
 INSTRUMENT Ludlum 2420 SERIAL NUMBER 59308
 DETECTOR 43-4 OPERATOR McLain/Hawley
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 0-72/76
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm/100cm ² |
|--------------------------|--------------|-----|------------------|------------------------------------|----|-------------------------------------|
| 6x4 Best on #2 AIR HARD. | Coed | 1/2 | DM | 3 | 42 | 6 |
| Unit to #1 AIR HARD UNIT | | | 2M | 3 | 42 | 0 |
| | | | 4M | 2 | 28 | 0 |
| | | | 6M | 0 | 0 | 3 |
| | | | | 4 | 56 | 0 |
| Complete 7-18-89 | | | | | | |

LINE NUMBER 760 Meter Control DATE 7-17-89
 INSTRUMENT Ludlum SERIAL NUMBER 59308
 DETECTOR 43-4 OPERATOR McLain/Hawley
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-99/90

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm/100cm ² |
|-------------------------------------|--------------|-----|------------------|------------------------------------|----|-------------------------------------|
| At Proj AN Unit 21 to 24 3' full B) | Coed | 3 | DM E | 3 | 42 | 0 |
| at ceiling Unit 21 | | | W | 3 | 42 | 0 |
| | | | 2M TT | 4 | 56 | (2) 0 |
| | | | 1B | 2 | 28 | (5) 0 |
| Complete 7-17-89 | | | | | | |

LINE NUMBER 763 Meter Control DATE 7-18-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McNamee/Hendley
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 0-72/76
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 100cm ² | Scatterable cpm/100cm ² |
|-----------------|--------------|-----|------------------|-------------------------------|------------------------------------|
| Top of panel | Cond | 11 | 0 meters E 3 | 42 | 3 |
| E 1 up west | | | W | | |
| 1200 by 1200 | | | 2 meters N 1 | 14 | 0 |
| | | | S 0 | 0 | 0 |
| | | | Complete | | |

LINE NUMBER 764 Meter Control DATE 7-18-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McNamee/Hendley
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 0-72/76
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 100cm ² | Scatterable cpm/100cm ² |
|-----------------|--------------|-----|------------------|-------------------------------|------------------------------------|
| Top panel E-1 | Cond | 3 | 0 meters E 2 | 28 | 0 |
| to transformer | | | | | |
| 3 meters down | | | 2 meters T 1 | 14 | 6 |
| west wall 2 | | | O 7 | 98 | 0 |
| meter North | | | 4 meter E 1 | 14 | 0 |
| Control panel | | | W 1 | 14 | 0 |
| #3 | | | 6 meter E 2 | 28 | 0 |
| | | | W 3 | 42 | 0 |
| | | | Complete | | |

LINE NUMBER 765 Motor Control DATE 4-18-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 59308
 DETECTOR 43-4 OPERATOR McLean/Handley
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 0-12/76
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 766 DATE 7-18-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 50064
 DETECTOR 43-4 OPERATOR McLean-Handley
 SOURCE NUMBER AND VALUE 6816-1078
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-270-303

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable dpm/100cm ² |
|---|--------------|------|------------------|----------------------------------|-------------------------------------|
| on west wall up to ceiling at 4" hole | Lead | 3/4" | 0 meters E 0 | 0 | 0 |
| | | | 2 meters N 2 | 28 | 6 |
| | | | S 1 | 14 | 0 |
| | | | finished 7-18-89 | | |
| | | | Complete | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable dpm/100cm ² |
|--|--------------|-----|------------------|----------------------------------|-------------------------------------|
| West wall, end of west end of Control Panel #1 | conduit | 1" | 0 meters T 2 | 28 | 0 |
| | | | B 1 | 14 | 0 |
| | | | 2 meters T 3 | 42 | 9 |
| | | | B 2 | 28 | 0 |
| | | | 4 meters E 2 | 28 | 0 |
| | | | B 7 | 98 | 0 |
| | | | 6 meters E 2 | 28 | 6 |
| | | | B 1 | 14 | 3 |
| | | | 8 meters N 4 | 56 | 3 |
| | | | S 3 | 42 | 0 |
| | | | Complete | | |

LINE NUMBER 767 MCC DATE 7-18-89
 INSTRUMENT Levelum 220 SERIAL NUMBER 50064
 DETECTOR 43-4 OPERATOR McLean Handley
 SOURCE NUMBER AND VALUE 6816-1078
 SOURCE RESPONSE AND BACKGROUND AM 7-19-89 0-308/282
 SOURCE RESPONSE AND BACKGROUND PM 0-270-303

LINE NUMBER 768 DATE 7-18-89
 INSTRUMENT Levelum 220 SERIAL NUMBER 50064
 DETECTOR 43-4 OPERATOR McLean Handley
 SOURCE NUMBER AND VALUE 6816-1078
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-270-303

| START OF SURVEY | SIZE OF LINE | DI: | READING LOCATION | Defect cpb Lcpb/100cm ² | Smearable cpb/100cm ² |
|------------------|--------------|--------|------------------|---------------------------------------|-------------------------------------|
| Transformer | Conduit | 1 1/4" | 0 meter | E 1 14 | 3 |
| # E-1-X | | | | W 1 14 | 3 |
| Ends | | | 2 meter | E 1 14 | 0 |
| | | | | W 4 56 | 0 |
| | | | 4 meter | E 2 28 | 3 |
| | | | | W 2 28 | 0 |
| | | | 6 m | T 2 28 | 3 |
| | | | | B 1 14 | 0 |
| | | | 8 m | T 5 70 | 3 |
| | | | | B 5 70 | 0 |
| | | | 10m | T 3 42 | 3 |
| | | | | B 1 14 | 0 |
| | | | 12m | T 2 28 | 3 |
| | | | | B 1 14 | 3 |
| | | | 14m | N 4 56 | 3 |
| | | | | S 1 14 | 3 |
| Complete 7-19-89 | | | | | |

| START OF SURVEY | SIZE OF LINE | DI: | READING LOCATION | Defect cpb Lcpb/100cm ² | Smearable cpb/100cm ² |
|------------------|--------------|-----|------------------|---------------------------------------|-------------------------------------|
| Droid main | | 1" | 0 meter | T 3 42 | 0 |
| No top of | | | | B 6 84 | 0 |
| control Panel #2 | | | 2 meter | E 4 56 | 0 |
| | | | | W 4 56 | 0 |
| Complete | | | | | |

LINE NUMBER 769 DATE 7-18-89
 INSTRUMENT Indium 2220 SERIAL NUMBER 50064
 DETECTOR 43-4 OPERATOR McLean-Hardley
 SOURCE NUMBER AND VALUE 6816-1078
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-270-303

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect ppm/100cm ² | | Smearable ppm/100cm ² |
|-----------------------------|--------------|--------|------------------|-------------------------------|----|----------------------------------|
| Aid map to control panel #1 | | 2 1/2" | 0 meters T | 0 | 0 | 0 |
| | | | B | 4 | 56 | 0 |
| | | | 2 meters T | 4 | 56 | 0 |
| | | | B | 1 | 14 | 0 |
| | | | 4 meters K | 4 | 56 | 6 |
| | | | S | 6 | 84 | 3 |
| | | | Complete | | | |

LINE NUMBER 770 MCC DATE 7-18-89
 INSTRUMENT Indium 2220 SERIAL NUMBER 50064
 DETECTOR 43-4 OPERATOR Hardley-McLean
 SOURCE NUMBER AND VALUE 6816-1078
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 0-270-303

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Defect ppm/100cm ² | | Smearable ppm/100cm ² |
|-----------------------------|--------------|-----|------------------|-------------------------------|----|----------------------------------|
| Aid map to control panel #1 | Continued | 1" | 0 meters T | 2 | 28 | 3 |
| | | | B | 4 | 56 | 0 |
| | | | 2 meters T | 5 | 70 | 3 |
| | | | B | 5 | 70 | 0 |
| | | | 4 meters N | 2 | 28 | 0 |
| | | | S | 6 | 84 | 6 |
| | | | Complete | 7-18-89 | | |

LINE NUMBER 173 MOTOR CONTROL DATE 7-19-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

| START OF SURVEY | SIZE OF PIPE | DIA | READING LOCATION | Direct cpm 100cm ² | Scorable cpm/100cm ² | |
|------------------|--------------|--------|------------------|----------------------------------|------------------------------------|---|
| To #3 Control | Lead | 1 1/2" | DN | 2 | 24 | 6 |
| Panel to trip | | | S | 1 | 12 | 3 |
| #1 Control | | | T | 1 | 12 | 3 |
| | | | B | 2 | 24 | 6 |
| | | | N | 2 | 24 | 0 |
| | | | S | 2 | 24 | 6 |
| Complete 7-19-89 | | | | | | |

LINE NUMBER 174 Motor Control DATE 7-19-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

| START OF SURVEY | SIZE OF PIPE | DIA | READING LOCATION | Direct cpm 100cm ² | Scorable cpm/100cm ² | | |
|------------------|--------------|-----|------------------|-------------------------------------|------------------------------------|----|---|
| To #3 Control | Lead | 1" | DN | 4 | 48 | 6 | |
| Panel to trip | | | S | 3 | 36 | 0 | |
| #1 Control panel | | | | | | | |
| | | | 2M | E | 4 | 48 | 0 |
| | | | | W | 5 | 60 | 3 |
| | | | | | | | |
| | | | 3M | N | 3 | 36 | 0 |
| | | | | S | 5 | 60 | 0 |
| Complete 7-19-89 | | | | | | | |

LINE NUMBER 975 MOTOR CONTROL DATE 7-19-89
 INSTRUMENT LUDLUM 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

LINE NUMBER 976 MOTOR CONTROL DATE 7-19-89
 INSTRUMENT LUDLUM 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Direct | | Smearable |
|---|--------------|-----|------------------|---|--------|---------------------------|-----------|
| | | | | | cpm | 100cpm/100cm ² | |
| TOP #3 Control panel to top of #1 Control panel | Round | 3" | DM | N | 5 | 60 | 0 |
| | | | | S | 4 | 48 | 0 |
| | | 2M | T | S | 5 | 60 | 0 |
| | | | | B | 7 | 84 | 3 |
| | | 4M | T | 4 | 48 | 3 | 3 |
| | | | | B | 4 | 48 | 3 |
| | | 6M | T | 4 | 48 | 6 | 6 |
| | | | | B | 3 | 36 | 3 |
| | | 8M | N | 4 | 48 | 0 | 0 |
| | | | | S | 4 | 48 | 0 |
| Completed 7-19-89 | | | | | | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Direct | | Smearable |
|---|--------------|------|------------------|---|--------|---------------------------|-----------|
| | | | | | cpm | 100cpm/100cm ² | |
| TOP #3 Control panel to top of #1 Control panel | Round | 3/4" | DM | N | 7 | 36 | 3 |
| | | | | S | 6 | 72 | 6 |
| | | 2M | T | 2 | 24 | 0 | 0 |
| | | | | B | 6 | 72 | 3 |
| | | 4M | N | 2 | 24 | 0 | 0 |
| | | | | S | 4 | 48 | 3 |
| Completed 7-19-89 | | | | | | | |

LINE NUMBER 777 Motor Control DATE 7-19-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLean/Haskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 7-20-89 1-101/99
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm | Defect cpm/100cm ² | Shearable cpm/100cm ² |
|--|--------------|------|------------------|------------|-------------------------------|----------------------------------|
| Top #2 Control panel to top #1 Control panel | Coad | 1" | 0M N | 3 | 36 | 9 |
| | | | 5 | 5 | 60 | 3 |
| | | | 2M T | 3 | 36 | 6 |
| | | | B | D | 0 | 0 |
| | | | 4M N | 0 | 0 | 0 |
| | | | 5 | 1 | 12 | 0 |
| Completed 7-20-89 | | | | | | |

LINE NUMBER 778 Motor Control DATE 7-19-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLean/Haskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 7-20-89 1-99/101
 SOURCE RESPONSE AND BACKGROUND PM 1-93/103

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm | Defect cpm/100cm ² | Shearable cpm/100cm ² |
|--|--------------|------|------------------|------------|-------------------------------|----------------------------------|
| Top #2 Control panel to top #1 Control panel | Coad. | 3" | 0M N | 4 | 48 | 0 |
| | | | 5 | 3 | 36 | 0 |
| | | | 2M T | 4 | 48 | 0 |
| | | | B | 3 | 36 | 0 |
| | | | 4M T | 4 | 48 | 0 |
| | | | B | 2 | 24 | 0 |
| | | | 6M N | 3 | 36 | 3 |
| | | | 5 | 2 | 24 | 0 |
| Completed 7-20-89 | | | | | | |

LINE NUMBER 779 Motor Control DATE 7-20-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIR/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM

SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 780 Motor Control DATE 7-20-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIR/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 1-99/101

SOURCE RESPONSE AND BACKGROUND PM 1-91/102

| START OF SURVEY | TIME | DIA | READING LOCATION | Direct cpb/100cm ² | | Smearable cpb/100cm ² | |
|-----------------|-------|-------|------------------|----------------------------------|---|-------------------------------------|---|
| top #2 Control | Round | 1 1/2 | DN | N | 4 | 48 | 0 |
| | | | | S | 5 | 60 | 0 |
| Panel to top | | | | | | | |
| #1 Control | | | | | | | |
| Panel | | | 2M | T | 4 | 48 | 3 |
| | | | | B | 7 | 84 | 6 |
| | | | | | | | |
| | | | 4M | N | 4 | 48 | 0 |
| | | | | S | 2 | 24 | 6 |
| | | | | | | | |
| | | | Complete 7-20-89 | | | | |

| START OF SURVEY | TIME | DIA | READING LOCATION | Direct cpb/100cm ² | | Smearable cpb/100cm ² | |
|-----------------|-------|-------|------------------|----------------------------------|---|-------------------------------------|---|
| to #2 Control | Round | 1 1/2 | DN | N | 5 | 60 | 3 |
| Body to north | | | | S | 6 | 72 | 0 |
| Wall direction | | | | | | | |
| None read | | | 2M | T | 5 | 60 | 0 |
| Wall at | | | | S | 4 | 48 | 3 |
| airlock | | | | | | | |
| | | | 4M | T | 4 | 48 | 0 |
| | | | | B | 5 | 60 | 3 |
| | | | | | | | |
| | | | 6M | T | 3 | 36 | 9 |
| | | | | B | 4 | 48 | 0 |
| | | | | | | | |
| | | | 8M | T | 5 | 60 | 0 |
| | | | | B | 4 | 48 | 3 |
| | | | | | | | |
| | | | 10M | T | 4 | 48 | 3 |
| | | | | B | 5 | 60 | 6 |
| | | | | | | | |
| | | | 12M | T | 2 | 24 | 3 |
| | | | | B | 5 | 60 | 0 |
| | | | | | | | |
| | | | 14M | T | 2 | 24 | 3 |
| | | | | B | 4 | 48 | 3 |
| | | | | | | | |
| | | | 16M | T | 0 | 0 | 0 |
| | | | | B | 1 | 12 | 9 |
| | | | | | | | |
| | | | Complete 7-20-89 | | | | |

LINE NUMBER 781 Motor Control DATE 7-20-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-91/102

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|------------------|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Top #3 Control | Cond. | 1" | 0M N | 4 | 48 | 0 |
| Panel to top | | | S | 0 | 0 | 3 |
| #1 Control | | | 2M T | 5 | 60 | 3 |
| panel | | | R | 4 | 48 | 9 |
| | | | 4M N | 2 | 24 | 3 |
| | | | S | 3 | 36 | 3 |
| Complete 7-20-89 | | | | | | |

LINE NUMBER 782 Motor Control DATE
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-91/102

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|------------------|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Top #3 Control | Cond. | 3/4 | 0M N | 0 | 0 | 0 |
| Panel to de- | | | S | 5 | 60 | 3 |
| I water | | | 2M T | 2 | 24 | 0 |
| warmer | | | R | 4 | 48 | 3 |
| | | | 4M T | 6 | 72 | 0 |
| | | | B | 7 | 84 | 3 |
| | | | 6M E | 4 | 48 | 3 |
| | | | W | 0 | 0 | 3 |
| | | | 8M N | 1 | 12 | 0 |
| | | | S | 2 | 24 | 3 |
| Complete 7-20-89 | | | | | | |

LINE NUMBER 183 Meter Control DATE 7-20-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 1-91/102

| START OF SURVEY | SIZE OF TINE | DI | READING LOCATION | Direct cpm 100cm ² | Smearable dpm/100cm ² |
|---|--------------|----|------------------|-------------------------------------|-------------------------------------|
| Top #1 control panel to the 2 water evaporators | 1" | | DM W 1 | 12 | 3 |
| | | | S 1 | 12 | 3 |
| | | | 2M T 1 | 12 | 6 |
| | | | B 4 | 48 | 0 |
| | | | 4M E 2 | 24 | 0 |
| | | | W 5 | 60 | 3 |
| | | | 6M N 2 | 24 | 3 |
| | | | S 1 | 12 | 0 |
| | | | Samples 7-20-89 | | |

LINE NUMBER 784 Meter Control DATE 7-21-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR MCLAIN/HOSKINS
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM 2-97/102

| START OF SURVEY | SIZE OF TINE | DI | READING LOCATION | Direct cpm 100cm ² | Smearable dpm/100cm ² |
|---------------------------------|--------------|----|------------------|-------------------------------------|-------------------------------------|
| Phase line from still to floor | 1/2" | | DM W 5 | 60 | 6 |
| | | | S 0 | 0 | 0 |
| Phase 14 meters from west wall | | | 2M E 1 | 12 | 0 |
| Phase 11 meters from south wall | | | W 0 | 0 | 0 |
| | | | TEE | 8 | 96 |
| | | | 4M | 3 | 36 |
| | | | 6M | 2 | 24 |
| | | | 8M | 4 | 48 |
| | | | finished 7-21-89 | | |

LINE NUMBER 185 Meter Control DATE 7-24-89
 INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-105/102
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 186 Meter Control DATE 7-24-89
 INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Hoskins
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|------------------|--------------|-----|-------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| At bottom of | conduit | 3in | DM | N 4 | 48 | 0 |
| Panel E-1 South | | | | S 4 | 48 | 0 |
| side to top of | | | | | | |
| #1 conduit panel | | 2in | N | 1 | 12 | 0 |
| | | | E | 7 | 84 | 0 |
| | | | | | | |
| | | 4in | T | 6 | 72 | 6 |
| | | | E | 3 | 36 | 3 |
| | | | | | | |
| | | 6in | T | 3 | 36 | 9 |
| | | | B | 2 | 24 | 3 |
| | | | | | | |
| | | 8in | T | 0 | 0 | 3 |
| | | | B | 2 | 24 | 9 |
| | | | | | | |
| | | 10 | N | 5 | 60 | 0 |
| | | | S | 3 | 36 | 0 |
| | | | | | | |
| | | | Completed 7-24-89 | | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|-------------------|--------------|-----|-------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Top of #3 conduit | conduit | 4in | DM | N 4 | 48 | 3 |
| Panel to top | | | | S 6 | 72 | 6 |
| #1 conduit | | | | | | |
| Panel | | 2in | T | 2 | 24 | 6 |
| | | | B | 2 | 24 | 0 |
| | | | | | | |
| | | 4in | N | 0 | 0 | 0 |
| | | | S | 1 | 12 | 0 |
| | | | | | | |
| | | | Completed 7-24-89 | | | |

LINE NUMBER 191 *Meters Neutral* DATE 7-24-89
 INSTRUMENT *Ludlum 2220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *McLain/Hoskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-103/105 ⁷⁻²⁵⁻⁸⁹ 0-110/105 ⁷⁻²⁶⁻⁸⁹ 0-112/105
 SOURCE RESPONSE AND BACKGROUND PM 1-119/120 ⁷⁻²⁵⁻⁸⁹ 1-97/105 ⁷⁻²⁶⁻⁸⁹

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpr 1 cpr/100cm ² | | Smearable cpr/100cm ² |
|------------------------|--------------|---------------|------------------|-------------------------------------|----------------|----------------------------------|
| <i>Top of Penstock</i> | <i>Cond</i> | <i>1 1/2"</i> | <i>0M N</i> | 5 | 60 | 3 |
| <i>Panel #2 cond</i> | | | <i>S</i> | 3 | 36 | 3 |
| <i>Open cut to</i> | | | <i>2M T</i> | 4 | 48 | 0 |
| | | | <i>B</i> | 4 | 48 | 6 |
| | | | <i>4M T</i> | 5 | 60 | 3 |
| | | | <i>B</i> | 3 | 36 | 0 |
| | | | <i>6M T</i> | 0 | 0 | 3 |
| | | | <i>B</i> | 4 | 48 | 0 |
| | | | <i>8M T</i> | 4 | 48 | 3 |
| | | | <i>B</i> | 1 | 12 | 9 |
| | | | <i>10M T</i> | 3 | 36 | 3 |
| | | | <i>B</i> | 5 | 60 | 3 |
| | | | <i>12M F</i> | 5 | 60 | 0 |
| | | | <i>W</i> | 4 | 48 | 6 |
| | | | <i>Completed</i> | | <i>7-31-89</i> | |

LINE NUMBER 192 *Meters Neutral* DATE 7-24-89
 INSTRUMENT *Ludlum 2220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *McLain/Hoskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105 ⁷⁻²⁵⁻⁸⁹ 0-110/105 ⁷⁻²⁶⁻⁸⁹ 0-108-112
 SOURCE RESPONSE AND BACKGROUND PM 1-119/120 ⁷⁻²⁵⁻⁸⁹ 1-97/105 ⁷⁻²⁶⁻⁸⁹

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpr 1 cpr/100cm ² | | Smearable cpr/100cm ² |
|------------------------|--------------|---------------|------------------|-------------------------------------|----------------|----------------------------------|
| <i>Top of Penstock</i> | | <i>1 1/2"</i> | <i>0M N</i> | 2 | 24 | 0 |
| <i>Panel #2 cond</i> | | | <i>S</i> | 4 | 48 | 0 |
| <i>Open cut to</i> | | | <i>2M T</i> | 2 | 24 | 6 |
| | | | <i>B</i> | 4 | 48 | 0 |
| | | | <i>4M T</i> | 3 | 36 | 3 |
| | | | <i>B</i> | 4 | 48 | 3 |
| | | | <i>6M T</i> | 1 | 12 | 3 |
| | | | <i>B</i> | 4 | 48 | 3 |
| | | | <i>8M T</i> | 2 | 24 | 3 |
| | | | <i>B</i> | 0 | 0 | 3 |
| | | | <i>10M T</i> | 8 | 96 | 0 |
| | | | <i>B</i> | 1 | 12 | 3 |
| | | | <i>12M T</i> | 1 | 12 | 0 |
| | | | <i>B</i> | 4 | 48 | 0 |
| | | | <i>14M E</i> | 2 | 24 | 0 |
| | | | <i>W</i> | 4 | 48 | 3 |
| | | | <i>Completed</i> | | <i>7-26-89</i> | |

LINE NUMBER 793 Motor Venturi DATE 1-24-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 42-4 OPERATOR M. J. W. / K. SKISS
 SOURCE NUMBER AND VALUE 1832 / 1342
 SOURCE RESPONSE AND BACKGROUND AM 1-100/100 (7-31-89 111-113 Rly 0)
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm / 100cm ² |
|-----------------|--------------|-----|------------------|---------------------------------|----|------------------------------------|
| Top of venturi | Cond | 3/4 | 0M N | 3 | 36 | 0 |
| Panel #3 mid | | | S | 3 | 36 | 6 |
| Panel #3 bot | | | | | | |
| | | | 2M T | 3 | 36 | 3 |
| | | | B | 1 | 12 | 3 |
| | | | | | | |
| | | | 4M T | 3 | 36 | 3 |
| | | | B | 3 | 36 | 0 |
| | | | | | | |
| | | | 6M T | 4 | 48 | 3 |
| | | | B | 5 | 60 | 0 |
| | | | | | | |
| | | | 8M T | 2 | 24 | 3 |
| | | | B | 3 | 36 | 0 |
| | | | | | | |
| | | | 10M T | 2 | 24 | 0 |
| | | | B | 0 | 0 | 0 |
| | | | | | | |
| | | | 12M T | 4 | 48 | 0 |
| | | | B | 2 | 24 | 0 |
| | | | | | | |
| | | | 14M T | 1 | 12 | 0 |
| | | | B | 3 | 36 | 3 |
| | | | | | | |
| | | | 16M T | 4 | 48 | 3 |
| | | | B | 6 | 72 | 0 |
| | | | | | | |
| | | | 18M T | 5 | 60 | 6 |
| | | | B | 3 | 36 | 3 |
| | | | | | | |
| | | | 20M N | 3 | 36 | 0 |
| | | | S | 4 | 48 | 0 |

Completed 7-31-89

LINE NUMBER 794 Motor Venturi DATE 1-24-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. J. W. / K. SKISS
 SOURCE NUMBER AND VALUE 1932 / 1342
 SOURCE RESPONSE AND BACKGROUND AM 1-100/100
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable dpm / 100cm ² |
|-----------------|--------------|-----|-------------------|---------------------------------|----|------------------------------------|
| Top of Venturi | Cond | 3/4 | 0M N | 1 | 12 | 0 |
| Panel #3 mid | | | S | 1 | 12 | 0 |
| Panel #3 bot | | | | | | |
| | | | 2M T | 1 | 12 | 9 |
| | | | B | 0 | 0 | 3 |
| | | | | | | |
| | | | 4M T | 1 | 12 | 0 |
| | | | B | 4 | 48 | 6 |
| | | | | | | |
| | | | 6M T | 3 | 36 | 3 |
| | | | B | 5 | 60 | 3 |
| | | | | | | |
| | | | 8M T | 5 | 60 | 6 |
| | | | B | 3 | 36 | 0 |
| | | | | | | |
| | | | 10M T | 3 | 36 | 0 |
| | | | B | 1 | 12 | 0 |
| | | | | | | |
| | | | 12M T | 5 | 60 | 6 |
| | | | B | 2 | 24 | 0 |
| | | | | | | |
| | | | 14M T | 6 | 72 | 6 |
| | | | B | 4 | 48 | 0 |
| | | | | | | |
| | | | 16M E | 2 | 24 | 6 |
| | | | W | 3 | 36 | 3 |
| | | | | | | |
| | | | Completed 7-28-89 | | | |

LINE NUMBER 795 *Water Control* DATE 7-24-89
 INSTRUMENT *Leadline 2220* SERIAL NUMBER 58305
 DETECTOR 43-d OPERATOR *McLain/Waskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105 111-113-7-31-89 Bkg 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Duct cpm 1 cpm/100cm ² | | Smearable cpm/100cm ² |
|-----------------------|--------------|------------|------------------|--------------------------------------|--------------|-------------------------------------|
| <i>Top of Control</i> | <i>Round</i> | <i>3/4</i> | <i>BM</i> | <i>0</i> | <i>0</i> | <i>0</i> |
| <i>Panel #3 side</i> | | | <i>S</i> | <i>3</i> | <i>36</i> | <i>3</i> |
| <i>Panel #1 to</i> | | | <i>2M</i> | <i>T</i> | <i>2</i> | <i>24</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> |
| | | | <i>4M</i> | <i>T</i> | <i>4</i> | <i>48</i> |
| | | | | <i>B</i> | <i>5</i> | <i>60</i> |
| | | | <i>6M</i> | <i>T</i> | <i>2</i> | <i>24</i> |
| | | | | <i>B</i> | <i>5</i> | <i>60</i> |
| | | | <i>8M</i> | <i>T</i> | <i>3</i> | <i>36</i> |
| | | | | <i>B</i> | <i>1</i> | <i>12</i> |
| | | | <i>10M</i> | <i>T</i> | <i>2</i> | <i>24</i> |
| | | | | <i>B</i> | <i>2</i> | <i>24</i> |
| | | | <i>12M</i> | <i>T</i> | <i>2</i> | <i>24</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> |
| | | | <i>14M</i> | <i>T</i> | <i>8</i> | <i>96</i> |
| | | | | <i>B</i> | <i>4</i> | <i>48</i> |
| | | | <i>16</i> | <i>T</i> | <i>3</i> | <i>36</i> |
| | | | | <i>B</i> | <i>0</i> | <i>0</i> |
| | | | <i>18</i> | <i>N</i> | <i>7</i> | <i>84</i> |
| | | | | <i>S</i> | <i>5</i> | <i>60</i> |
| | | | <i>Completed</i> | <i>7-</i> | <i>31-89</i> | |

18M

LINE NUMBER 796 *Water Control* DATE 7-24-89
 INSTRUMENT *Leadline 2220* SERIAL NUMBER 58319
 DETECTOR 43-d OPERATOR *McLain/Waskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Duct cpm 1 cpm/100cm ² | | Smearable cpm/100cm ² |
|-----------------------|--------------|------------|------------------|--------------------------------------|-----------|-------------------------------------|
| <i>Top of Control</i> | | <i>3/4</i> | <i>BM</i> | <i>7</i> | <i>24</i> | <i>0</i> |
| <i>Panel #3 side</i> | | | <i>S</i> | <i>4</i> | <i>48</i> | <i>3</i> |
| <i>Panel #1 to</i> | | | <i>2M</i> | <i>T</i> | <i>5</i> | <i>60</i> |
| | | | | <i>B</i> | <i>5</i> | <i>60</i> |
| | | | <i>4M</i> | <i>T</i> | <i>4</i> | <i>48</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> |
| | | | <i>6M</i> | <i>T</i> | <i>2</i> | <i>24</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> |
| | | | <i>8M</i> | <i>T</i> | <i>3</i> | <i>36</i> |
| | | | | <i>B</i> | <i>1</i> | <i>12</i> |
| | | | <i>10M</i> | <i>T</i> | <i>4</i> | <i>48</i> |
| | | | | <i>B</i> | <i>0</i> | <i>0</i> |
| | | | <i>12M</i> | <i>T</i> | <i>7</i> | <i>84</i> |
| | | | | <i>B</i> | <i>5</i> | <i>60</i> |
| | | | <i>14M</i> | <i>T</i> | <i>3</i> | <i>36</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> |
| | | | <i>16M</i> | <i>E</i> | <i>5</i> | <i>60</i> |
| | | | | <i>W</i> | <i>6</i> | <i>72</i> |
| | | | <i>Completed</i> | <i>7-24-</i> | <i>89</i> | |

LINE NUMBER 797 Meter *Acoustic* DATE 7-24-89
 INSTRUMENT *Rudman 2220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *McLain/Hoskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Detect cpm 100cm ² | Smearable cpm/100cm ² | |
|------------------------|------------------|---------------|------------------|-----------|-------------------------------------|-------------------------------------|----------|
| <i>Top of concrete</i> | <i>11" round</i> | <i>3 1/4"</i> | <i>0m</i> | <i>of</i> | <i>2</i> | <i>24</i> | <i>0</i> |
| <i>Panel # 2 and</i> | | | | <i>S</i> | <i>2</i> | <i>24</i> | <i>3</i> |
| <i>gas vent to</i> | | | <i>2m</i> | <i>T</i> | <i>4</i> | <i>48</i> | <i>6</i> |
| | | | | <i>B</i> | <i>5</i> | <i>60</i> | <i>0</i> |
| | | | <i>4m</i> | <i>T</i> | <i>3</i> | <i>36</i> | <i>3</i> |
| | | | | <i>R</i> | <i>2</i> | <i>24</i> | <i>0</i> |
| | | | <i>6m</i> | <i>T</i> | <i>1</i> | <i>12</i> | <i>0</i> |
| | | | | <i>R</i> | <i>4</i> | <i>48</i> | <i>0</i> |
| | | | <i>8m</i> | <i>T</i> | <i>3</i> | <i>36</i> | <i>0</i> |
| | | | | <i>R</i> | <i>2</i> | <i>24</i> | <i>0</i> |
| | | | <i>10m</i> | <i>T</i> | <i>0</i> | <i>0</i> | <i>3</i> |
| | | | | <i>B</i> | <i>2</i> | <i>24</i> | <i>3</i> |
| | | | <i>12m</i> | <i>T</i> | <i>4</i> | <i>48</i> | <i>0</i> |
| | | | | <i>R</i> | <i>1</i> | <i>12</i> | <i>0</i> |
| | | | <i>14m</i> | <i>T</i> | <i>4</i> | <i>48</i> | <i>3</i> |
| | | | | <i>B</i> | <i>2</i> | <i>24</i> | <i>0</i> |
| | | | <i>16m</i> | <i>T</i> | <i>0</i> | <i>0</i> | <i>6</i> |
| | | | | <i>B</i> | <i>1</i> | <i>12</i> | <i>6</i> |
| | | | <i>18m</i> | <i>T</i> | <i>0</i> | <i>0</i> | <i>0</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> | <i>3</i> |
| | | | <i>20m</i> | <i>T</i> | <i>2</i> | <i>24</i> | <i>0</i> |
| | | | | <i>B</i> | <i>0</i> | <i>0</i> | <i>3</i> |

LINE NUMBER 798 Meter *Acoustic* DATE 7-24-89
 INSTRUMENT *Rudman 2220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *McLain/Hoskins*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102/105
 SOURCE RESPONSE AND BACKGROUND PM 1-117/120 7-27-89

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | Detect cpm 100cm ² | Smearable cpm/100cm ² | |
|-------------------------|--------------|---------------|------------------|----------|-------------------------------------|-------------------------------------|----------|
| <i>At 6x11/2 bal at</i> | <i>Round</i> | <i>3 1/4"</i> | <i>5m</i> | <i>T</i> | <i>6</i> | <i>72</i> | <i>3</i> |
| <i>culvert 8 meters</i> | | | | <i>B</i> | <i>3</i> | <i>36</i> | <i>0</i> |
| <i>fresh water</i> | | | | | | | |
| <i>wall and</i> | | | <i>2m</i> | <i>T</i> | <i>1</i> | <i>12</i> | <i>6</i> |
| <i>gas vent to</i> | | | | <i>B</i> | <i>1</i> | <i>12</i> | <i>3</i> |
| | | | <i>4m</i> | <i>T</i> | <i>5</i> | <i>60</i> | <i>3</i> |
| | | | | <i>B</i> | <i>4</i> | <i>48</i> | <i>3</i> |
| | | | <i>6m</i> | <i>T</i> | <i>2</i> | <i>24</i> | <i>6</i> |
| | | | | <i>B</i> | <i>3</i> | <i>36</i> | <i>3</i> |
| <i>Complete 7-27-89</i> | | | | | | | |

LINE NUMBER 799 Meter Postals DATE 7-25-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain/Blockers
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 1-102-105
 SOURCE RESPONSE AND BACKGROUND PM 1-117/120

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm | 100cm ² | Smearable dpm/100cm ² |
|-------------------|--------------|-----------|------------------|------------|--------------------|----------------------------------|
| 4x1/2 Box at | 100A | 1 1/2" | DM | N 4 | 48 | 0 |
| Building 5 meters | | | | S 5 | 60 | 0 |
| From East Wall | | | | | | |
| to going through | | 2M | T | 2 | 24 | 0 |
| floor 9 meters | | | B | 2 | 24 | 3 |
| from west wall | | | | | | |
| | | 4M | T | 2 | 24 | 3 |
| | | | B | 1 | 12 | 3 |
| | | 10M | N | 3 | 36 | 0 |
| | | | S | 2 | 24 | 0 |
| | | 8M | N | 1 | 12 | 3 |
| | | | S | 4 | 48 | 0 |
| | | 10M | N | 1 | 12 | 3 |
| | | | S | 3 | 36 | 0 |
| | | Completed | | 7-28-89 | | |

LINE NUMBER 800 Meter Control DATE 7-26-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR McLain
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM 0-112/108
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm | 100cm ² | Smearable dpm/100cm ² |
|-------------------|--------------|-----------|------------------|------------|--------------------|----------------------------------|
| 6x2" Box at | Conduit | 3/4" | DM | N 6 | 72 | 3 |
| Building 6 meters | | | | S 5 | 60 | 3 |
| from east wall | | | | | | |
| to meter 4 | | 2M | N | 2 | 24 | 3 |
| meters from | | | S | 6 | 72 | 3 |
| east wall | | | | | | |
| | | Completed | | 7-26-89 | | |

LINE NUMBER 801 Motor Control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-108/112

SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable dpm/100cm ² | |
|-----------------|--------------|--------|-------------------|---------------------------------------|---|-------------------------------------|---|
| 6x2" Box 6M | Lead | 2 1/4" | OW1 | T | 3 | 36 | 3 |
| from east wall | | | | B | 3 | 36 | 3 |
| to motor | | | | | | | |
| 4 meters north | | 2 M | | T | 4 | 48 | 0 |
| and 4 meters | | | | B | 3 | 36 | 0 |
| from east wall | | | | | | | |
| | | 4M | | T | 0 | 0 | 3 |
| | | | | B | 5 | 60 | 6 |
| | | | Completed 7-26-89 | | | | |

LINE NUMBER 802 Motor Control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-108-112

SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm 1cpm/100cm ² | | Smearable dpm/100cm ² | |
|-----------------|--------------|------|-------------------|---------------------------------------|---|-------------------------------------|---|
| at Box 4x2 | Lead | 1/2" | WEST END | 1 | 2 | 24 | 0 |
| ceiling 6M from | | | | 2 | 1 | 12 | 3 |
| and is wall to | | | | | | | |
| 4x2 Box 5M | | | EAST END | 1 | 3 | 36 | 3 |
| from east wall | | | | 2 | 4 | 48 | 3 |
| | | | Completed 7-26-89 | | | | |

LINE NUMBER 803 *Water Control* DATE 7-26-89

INSTRUMENT *Radline 2220* SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR *McLain*

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-109-112

SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | Scatter cpm/100cm ² | Smearable dpm/100cm ² |
|------------------------|---------------|------------|-------------------------|------------|--------------------------------|----------------------------------|
| <i>Red 4x2 at</i> | <i>Concl.</i> | <i>4in</i> | <i>DM</i> | <i>E 3</i> | <i>36</i> | <i>0</i> |
| <i>Circle to meter</i> | | | | <i>W 3</i> | <i>36</i> | <i>3</i> |
| <i>from east wall</i> | | | | | | |
| <i>to thermostat</i> | | | <i>2m</i> | <i>T 1</i> | <i>12</i> | <i>6</i> |
| <i>control box</i> | | | | <i>B 2</i> | <i>24</i> | <i>0</i> |
| <i>#27 Area</i> | | | | <i>E 7</i> | <i>84</i> | <i>0</i> |
| | | | | <i>W 3</i> | <i>36</i> | <i>0</i> |
| | | | <i>Complete 7-26-89</i> | | | |

LINE NUMBER 804 *Water Control* DATE 7-26-89

INSTRUMENT *Radline 2220* SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR *McLain*

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-112/108

SOURCE RESPONSE AND BACKGROUND PM 1-11/105

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm | Scatter cpm/100cm ² | Smearable dpm/100cm ² |
|-----------------------|---------------|-----------|-------------------------|------------|--------------------------------|----------------------------------|
| <i>11x5" Red 6m</i> | <i>Concl.</i> | <i>1"</i> | <i>DM</i> | <i>T 0</i> | <i>0</i> | <i>9</i> |
| <i>from east wall</i> | | | | <i>E 2</i> | <i>24</i> | <i>0</i> |
| <i>to</i> | | | | | | |
| | | | <i>2m</i> | <i>T 2</i> | <i>24</i> | <i>3</i> |
| | | | | <i>B 3</i> | <i>36</i> | <i>3</i> |
| | | | | | | |
| | | | <i>4m</i> | <i>T 3</i> | <i>36</i> | <i>6</i> |
| | | | | <i>K 1</i> | <i>12</i> | <i>3</i> |
| | | | | | | |
| | | | <i>6m</i> | <i>T 2</i> | <i>24</i> | <i>0</i> |
| | | | | <i>B 1</i> | <i>12</i> | <i>9</i> |
| | | | | | | |
| | | | <i>8m</i> | <i>N 2</i> | <i>36</i> | <i>0</i> |
| | | | | <i>S 1</i> | <i>12</i> | <i>3</i> |
| | | | <i>Complete 7-26-89</i> | | | |

LINE NUMBER 806 Motor Position DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIR

SOURCE NUMBER AND VALUE 1832/242

SOURCE RESPONSE AND BACKGROUND AM 0-112/108

SOURCE RESPONSE AND BACKGROUND PM 1-111/105

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm/100cm ² | | Smearable cpm/100cm ² |
|-------------------|--------------|------|------------------|-------------------------------|----|----------------------------------|
| 10x5 Red concrete | 3/4 | | South end T | 4 | 48 | 3 |
| from east wall | | | B | 3 | 36 | 3 |
| to motor house | | | | | | |
| near north wall | | | North end n | 6 | 72 | 0 |
| | | | S | 3 | 36 | 0 |
| Complete 7-26-89 | | | | | | |

LINE NUMBER 805 Motor Position DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIR

SOURCE NUMBER AND VALUE 1832/242

SOURCE RESPONSE AND BACKGROUND AM 0-112-108

SOURCE RESPONSE AND BACKGROUND PM 1-111/105

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct cpm/100cm ² | | Smearable cpm/100cm ² |
|-------------------|--------------|------|------------------|-------------------------------|----|----------------------------------|
| 11x5 Red concrete | 1 1/4 | | 0 m E | 7 | 84 | 0 |
| from east wall | | | W | 3 | 36 | 9 |
| to top AHU 27 | | | | | | |
| | | | 2 m E | 6 | 72 | 6 |
| | | | W | 2 | 24 | 6 |
| Complete 7-26-89 | | | | | | |

LINE NUMBER 807 motor control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McLain

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-112/108

SOURCE RESPONSE AND BACKGROUND PM 1-111/105

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable cpm/100cm ² |
|--|--------------|------------|------------------|-------------------------------|----------------------------------|
| at light 5 meters from east wall and 1 meter from north wall | Conduit | 1/2" | E 4 | 48 | 0 |
| | | | W 3 | 36 | 3 |
| | | 2M | T 3 | 36 | 0 |
| | | | B 6 | 72 | 0 |
| | | 3M | E 3 | 36 | 6 |
| | | | W 5 | 60 | 3 |
| | | 6M | T 6 | 72 | 0 |
| | | | B 5 | 60 | 0 |
| | at site | 1-4, 2-3-3 | | | 0-9-0 |
| | | 8M | T 2 | 24 | 3 |
| | | | B 3 | 36 | 3 |
| | | 10M | T 6 | 72 | 0 |
| | | | B 4 | 48 | 9 |
| | | 12M | T 2 | 24 | 3 |
| | | | B 2 | 24 | 3 |
| Complete 7-26-89 | | | | | |

LINE NUMBER 808 motor control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McLain

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-108/112

SOURCE RESPONSE AND BACKGROUND PM 7-105/111

| START OF SURVEY | TYPE OF LINE | DIA | READING LOCATION | Direct cpm/100cm ² | Smearable cpm/100cm ² |
|---|--------------|------|------------------|-------------------------------|----------------------------------|
| 4' box at cooling 3 meters from west wall to light switch on side of pipe | Pipe | 1/2" | T 6 | 72 | 3 |
| | | | B 3 | 36 | 0 |
| | | 2M | E 5 | 60 | 0 |
| | | | W 7 | 72 | 6 |
| Complete 7-27-89 | | | | | |

LINE NUMBER 809 Meter Control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-108/112 7-27-89 2-98/106

SOURCE RESPONSE AND BACKGROUND PM 1-105/111

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|-----------------------------------|--------------|---------|------------------|--------|---------------------------|-----------|
| | | | | cpm | 100cpm/100cm ² | |
| 4m Box at road | 1/2" | 1/2" DM | T | 3 | 36 | 3 |
| Top of Alu 27 | | | B | 1 | 72 | 0 |
| Alu 27 2 meters on side of Alu 27 | | 2m | E | 4 | 48 | 0 |
| | | | W | 8 | 96 | 3 |
| Complete 7-27-89 | | | | | | |

LINE NUMBER 810 Meter Control DATE 7-26-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-108/112

SOURCE RESPONSE AND BACKGROUND PM 1-105/111

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|--|--------------|---------|------------------|--------|---------------------------|-----------|
| | | | | cpm | 100cpm/100cm ² | |
| 4m Box on road | 1/2" | 1/2" DM | T | 6 | 72 | 3 |
| North side Alu 27 | | | R | 1 | 84 | 0 |
| to W Box on top of Alu 27-2m from South side | | 2m | W | 4 | 48 | 0 |
| | | 4m | S | 2 | 24 | 0 |
| Complete 7-27-89 | | | | | | |

LINE NUMBER 813 Meter Control DATE 7-27-89

INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCHIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-99/106

SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable cpm/100cm ² |
|------------------------|--------------|--------|------------------|------------------------------------|----|-------------------------------------|
| 12x5" East Abasco Pond | | 1/4" | DM T | 5 | 36 | 0 |
| At 26 2 miles | | | B | 4 | 48 | 9 |
| from control | | | | | | |
| to east wall | | 2 1/4" | T | 5 | 60 | 0 |
| at corner | | | K | 7 | 84 | 0 |
| | | 4 1/4" | N | 7 | 84 | 6 |
| | | | S | 2 | 24 | 0 |
| | | 6 1/4" | N | 7 | 84 | 0 |
| | | | S | 5 | 60 | 0 |
| Completed 7-29-89 | | | | | | |

LINE NUMBER 814 Meter Control DATE 7-27-89

INSTRUMENT Ludlum 2200 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCHIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-99/106

SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct cpm / 100cm ² | | Smearable cpm/100cm ² |
|-------------------|--------------|--------|------------------|------------------------------------|----|-------------------------------------|
| Side of Pond | | 1/4" | DM E | 5 | 60 | 3 |
| April 27 | | | W | 5 | 60 | 0 |
| | | | | | | |
| | | 2 1/4" | E | 1 | 12 | 3 |
| | | | W | 7 | 84 | 0 |
| Completed 7-27-89 | | | | | | |

LINE NUMBER 815 Motor Control DATE 7-27-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLMIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-95-106

SOURCE RESPONSE AND BACKGROUND PM 1-97-108

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|-------------------|--------------|-----|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 6" box to 8x4 | Cond | 1" | DM | T 5 | 60 | 0 |
| Box/standing | | | | B 5 | 60 | 6 |
| | | | 2M | E 3 | 36 | 6 |
| | | | | W 3 | 36 | 0 |
| Completed 7-27-89 | | | | | | |

LINE NUMBER 816 Motor Control DATE 7-27-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLMIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-95-106

SOURCE RESPONSE AND BACKGROUND PM 1-97-108

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|-------------------|--------------|--------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 8x6 box at | Cond | 1 1/4" | DM | E 5 | 60 | 0 |
| Control to top | | | | W 3 | 36 | 0 |
| 450 pipe | | | 2M | E 7 | 84 | 0 |
| | | | | W 2 | 24 | 0 |
| Completed 7-27-89 | | | | | | |

LINE NUMBER 819 *Meters Contained* DATE 7-27-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-98/106

SOURCE RESPONSE AND BACKGROUND PM 1-97/108

LINE NUMBER 820 *Meters Contained* DATE 7-27-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR MCLAIN

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM 0-98/106 ⁷⁻²⁸⁻⁸⁹ 7-14/117

SOURCE RESPONSE AND BACKGROUND PM 1-97/108

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | D-Test | | Smearable dpm/100cm ² |
|-------------------|--------------|-------|------------------|---|--------|-------------------------|-------------------------------------|
| | | | | | cpm | lcpm/100cm ² | |
| 8x4 Box Above | Coiled | 1 1/2 | DM | E | 2 | 24 | 3 |
| HN 26 to side | | | | W | 3 | 36 | 6 |
| HN 26 | | | SM | E | 4 | 48 | 3 |
| | | | | W | 2 | 24 | 0 |
| Completed 7-27-89 | | | | | | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | | D-Test | | Smearable dpm/100cm ² |
|-------------------|--------------|-------|------------------|---|--------|-------------------------|-------------------------------------|
| | | | | | cpm | lcpm/100cm ² | |
| 8x4 Box Above | Coiled | 1 1/2 | DM | E | 4 | 48 | 0 |
| HN 26 to side | | | | T | 3 | 36 | 0 |
| HN 26 | | | | B | 5 | 60 | 0 |
| | | | 4m | T | 3 | 36 | 0 |
| | | | | B | 1 | 12 | 0 |
| | | | 6m | N | 1/2 | 72 | 3 |
| | | | | S | 9 | 96 | 3 |
| Completed 7-28-89 | | | | | | | |

LINE NUMBER 821 - *Malm Ventral* DATE 7-28-89
 INSTRUMENT *Ludlum 220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *M. Lenty V. McLean*
 SOURCE NUMBER AND VALUE 1832 - 342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1 Bldg
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 822 DATE 7-28-89
 INSTRUMENT *Ludlum 2220* SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *M. Lenty V. McLean*
 SOURCE NUMBER AND VALUE 1832 - 342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1 Bldg
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|------------------------------|--------------|--------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| 8x4 Box above Pond. | | 1 1/4" | 0 M T | 3 | 36 | 0 |
| AHU #26 Ruins | | | B | 6 | 72 | 3 |
| North on the side of AHU #26 | | | 2 M T | 6 | 72 | 0 |
| | | | B | 2 | 24 | 0 |
| | | | 4 M F | 5 | 60 | 0 |
| | | | W | 2 | 24 | 3 |
| | | | 6 M F | 0 | 0 | 3 |
| | | | W | 4 | 48 | 0 |
| Completed 7-28-89 | | | | | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|---|--------------|------|------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Kerosene 4" Pond. | | 1/2" | 0 M T | 5 | 60 | 3 |
| Box Ruins there | | | B | 3 | 36 | 3 |
| side of AHU #26 goes to top center of AHU #26 | | | 2 M F | 1 | 12 | 0 |
| | | | W | 2 | 24 | 3 |
| | | | 4 M N | 6 | 72 | 6 |
| | | | S | 1 | 12 | 0 |
| Completed 7-28-89 | | | | | | |

LINE NUMBER 823 DATE 7-28-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58309
 DETECTOR 43-4 OPERATOR M. Henry V. McClure
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 Bldg-1
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|------------------|--------------|------|------------------|---------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| 4" Box over walk | Cond. | 1/2" | 0-M T | 8 | 96 | 0 |
| WAY 2m from | | | B | 5 | 60 | 3 |
| East Wall North | | | 2-M T | 3 | 36 | 3 |
| To Box over walk | | | B | 3 | 36 | 3 |
| Way 2-M from | | | 4-M T | 5 | 60 | 3 |
| Wall 6 meters | | | B | 2 | 24 | 6 |
| in between | | | 6-M T | 3 | 36 | 0 |
| | | | M | 4 | 48 | 0 |
| Completed | | | | 7-28-89 | | |

LINE NUMBER 824 DATE 7-28-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Henry V. McClure
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 Bldg-1
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|-----------------|--------------|------|------------------|---------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Box over walk | Cond. | 1/2" | 0-M T | 4 | 48 | 0 |
| 4" Box over | | | B | 2 | 24 | 0 |
| down side | | | 2-M E | 5 | 60 | 0 |
| AH4 #26 | | | W | 5 | 60 | 0 |
| | | | 4-M E | 3 | 36 | 0 |
| | | | W | 6 | 72 | 0 |
| Completed | | | | 7-28-89 | | |

LINE NUMBER 825 DATE 7-28-89
 INSTRUMENT Ludlum-2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Harty V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 Phy 1
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 826 DATE 7-28-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Harty V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 Phy 1
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|-----------------|--------------|------|------------------|---------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Comes out of | Cond. | 1/2" | DM N | 3 | 36 | 3 |
| 4x11" Box in | | | S | 5 | 60 | 0 |
| Top of AHU and | | 2m | W | 3 | 36 | 0 |
| Down into | | | N | 3 | 36 | 6 |
| AHU #26 | | | | | | |
| Completed | | | | 7-28-89 | | |

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|------------------|--------------|------|------------------|---------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Comes out of | | | DM N | 1 | 12 | 0 |
| 4x11" Box on top | | | S | 3 | 36 | 0 |
| of AHU #26 | | 2-m | E | 7 | 84 | 3 |
| goes down in | | | | | | |
| side of AHU | | | | | | |
| #26 | | | | | | |
| Completed | | | | 7-28-89 | | |

LINE NUMBER 827 DATE 7-28-89
 INSTRUMENT Sullivan 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shanty V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1 Bkg
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 828 DATE 7-28-89
 INSTRUMENT Sullivan 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shanty V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1 Bkg
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DI | READING LOCATION | Direct | | Smearable |
|--|--------------|------|-------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Comes out of 4x1" Elect Box on south side at TOP of AHU #26 & goes down on side of AHU #26 | Cond | 1/2" | 0-M T | 3 | 36 | 3 |
| | | | " W | 4 | 48 | 0 |
| | | | 2-M S | 4 | 48 | 3 |
| | | | " W | 8 | 96 | 6 |
| | | | Completed 7-28-89 | | | |

| START OF SURVEY | SIZE OF LINE | DI | READING LOCATION | Direct | | Smearable |
|---|--------------|--------|-------------------|--------|-------------------------|-----------|
| | | | | cpm | lcpm/100cm ² | |
| Comes out of 10x14 Pull Box goes South to Control Box AHU #25 | Cond | 1 1/2" | 0 M T | 3 | 36 | 3 |
| | | | " B | 4 | 48 | 3 |
| | | | 2 M T | 4 | 48 | 3 |
| | | | " B | 2 | 24 | 0 |
| | | | 4 M T | 6 | 72 | 3 |
| | | | " B | 2 | 24 | 0 |
| | | | 6 M W | 3 | 36 | 3 |
| | | | " W | 3 | 36 | 0 |
| | | | Completed 7-28-89 | | | |

LINE NUMBER 829 DATE 7-28-88
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hunt, V.M. Linn
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 - 1 B/g
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 830 DATE 7-28-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hunt, V.M. Linn
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 B/g
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|--|--------------|-------|------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Comes out of 4" Chut Bot. over Walk Way goes East to Switch Bot on East Wall | Cond. | 3/4" | 0-M T | 3 | 36 | 3 |
| | | | B | 3 | 36 | 0 |
| | | | 2-M W | 4 | 48 | 3 |
| | | | S | 3 | 36 | 6 |
| | | | 4-M T | 4 | 48 | 3 |
| | | | B | 4 | 48 | 3 |
| | | 6-M W | 6 | 72 | 3 | |
| | | S | 8 | 96 | 0 | |
| Completed 7-28-89 | | | | | | |

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|---|--------------|------|-------------------|--------|-------------------------|-----------|
| | | | | cpm | 1cpm/100cm ² | |
| Comes out of Central Bot on side of AHU #26 goes down side of Bot on floor of AHU #26 | | | 0-M S | 5 | 60 | 0 |
| | | | 2-M W | 5 | 60 | 0 |
| | | | S | 7 | 84 | 3 |
| | | | Completed 7-28-89 | | | |

LINE NUMBER 831 DATE 7-28
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shady V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 - Bldg 1 (111-113 Bldg D 7-31-89)
 SOURCE RESPONSE AND BACKGROUND PM 101-127 Bldg 1

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|-----------------------------------|--------------|-----|------------------|---------|---------------------------|-----------|
| | | | | cpm | 100cpm/100cm ² | |
| Comes out of Pond | 1 1/2" | | 0M W | 2 | 24 | 0 |
| Continues Bldg on East Wall | | | S | 4 | 48 | 6 |
| comes up turns | | | 2M T | 0 | 0 | 0 |
| Back West goes to a 10x30 ft. Bot | | | B | 6 | 72 | 0 |
| | | | 4M T | 4 | 48 | 3 |
| | | | B | 5 | 60 | 3 |
| | | | 6M T | 3 | 36 | 0 |
| | | | R | 6 | 72 | 0 |
| | | | 8M E | 3 | 36 | 3 |
| | | | W | 6 | 72 | 3 |
| Completed | | | | 7-31-89 | | |

LINE NUMBER 832 DATE 7-28-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shady V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 Bldg 1
 SOURCE RESPONSE AND BACKGROUND PM 101-127 Bldg 1

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable |
|----------------------------|--------------|------|------------------|---------|---------------------------|-----------|
| | | | | cpm | 100cpm/100cm ² | |
| Comes out of | Cond. | 1/2" | 0M T | 1 | 12 | 9 |
| Bottom of V. | | | B | 1 | 12 | 6 |
| Continues Bot on East Wall | | | 2M N | 0 | 0 | 0 |
| goes South | | | B | 0 | 0 | 6 |
| Turns West into AHU #25 | | | | | | |
| Completed | | | | 7-28-89 | | |

LINE NUMBER 835 DATE 7-28-89 7-31-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Smith, V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1 111-113 1 134 0 7-31-89
 SOURCE RESPONSE AND BACKGROUND PM 101-127 1

| START OF SURVEY | SIZE OF LINE | DI | READING LOCATION | Direct | | Smearable |
|-----------------|--------------|----|------------------|---------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| comes from | Round | 12 | 0 m E | 2 | 24 | 0 |
| side switch | | | W | 0 | 0 | 6 |
| or AHU #25 | | | 2 m E | 3 | 36 | 3 |
| goes up turns | | | W | 7 | 84 | 3 |
| South to top | | | 4 m N | 1 | 12 | 3 |
| of AHU #25 | | | S | 2 | 24 | 0 |
| | | | Completed | 7-31-89 | | |

LINE NUMBER 836 DATE 7-28-89
 INSTRUMENT Ludlum SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Smith, V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 116-117 1
 SOURCE RESPONSE AND BACKGROUND PM 101-127 1

| START OF SURVEY | SIZE OF LINE | DI | READING LOCATION | Direct | | Smearable |
|-------------------|--------------|-----|------------------|---------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Then out of 6X6 | | 12" | TE | 4 | 48 | 0 |
| Port goes down | | | BW | 3 | 36 | 3 |
| the side of | | | | | | |
| AHU 25 to contact | | | | | | |
| Rat | | | Completed | 7-28-89 | | |

LINE NUMBER 937 *water control* DATE 7-29-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McLain/Gentry

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM

SOURCE RESPONSE AND BACKGROUND PM 1-101/127

LINE NUMBER 938 *water control* DATE 7-29-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McLain/Gentry

SOURCE NUMBER AND VALUE 1832/342

SOURCE RESPONSE AND BACKGROUND AM

SOURCE RESPONSE AND BACKGROUND PM 1-101/127

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable | |
|-----------------|--------------|-----|------------------|--------|-------------------------|-----------|---|
| | | | | cpm | lcpm/100cm ² | | |
| 4 in best at | Cecond | 1/4 | 0 m | T | 4 | 48 | 3 |
| top side into | | | | B | 4 | 48 | 0 |
| to 4 in best | | | 2 m | N | 6 | 72 | 6 |
| over wall | | | | S | 3 | 36 | 0 |
| way | | | Completed | | 7-28-89 | | |

| START OF SURVEY | SIZE OF LINE | DIA | READING LOCATION | Direct | | Smearable | |
|-------------------|--------------|------|------------------|--------|-------------------------|-----------|---|
| | | | | cpm | lcpm/100cm ² | | |
| top vertical best | Cecond | 1/4" | 0 m | E | 2 | 24 | 3 |
| top side of pipe | | | | W | 2 | 24 | 3 |
| 25 to 4 in best | | | | | | | |
| over wall | | | 2 m | E | 7 | 84 | 0 |
| way | | | | W | 2 | 24 | 3 |
| | | | Completed | | 7-28-89 | | |

LINE NUMBER 839 *motor control* DATE 7-29-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *M. G. Gentry*
 SOURCE NUMBER AND VALUE 1832/342
 SOURCE RESPONSE AND BACKGROUND AM (111-113 Bldg 0 7-31-89)
 SOURCE RESPONSE AND BACKGROUND PM 1-101/127

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | | |
|-----------------|--------------|------|------------------|--------|-------------------------|-----------|---|--|
| | | | | cpm | lcpm/100cm ² | | | |
| at 4 in Port | Cross | 3/4 | DN | T | 4 | 48 | 0 | |
| over walk | | | | B | 2 | 24 | 0 | |
| near to 4 in | | | | | | | | |
| port at site | | 2 in | | T | 7 | 84 | 0 | |
| over walk | | | | B | 4 | 48 | 3 | |
| way | | | | | | | | |
| | | 4 in | | T | 5 | 60 | 3 | |
| | | 1 in | | B | 7 | 84 | 3 | |
| | | | | | | | | |
| | | 6 in | | S | 7 | 84 | 3 | |
| | | | | E | 2 | 24 | 3 | |
| | | | Completed | | | | | |

LINE NUMBER 840 DATE 7-31-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR *M. G. Gentry*
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 111-113 Bldg 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | SIZE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | | |
|--------------------|--------------|------|------------------|--------|-------------------------|-----------|---------|--|
| | | | | cpm | lcpm/100cm ² | | | |
| comes out at | Cond | 1/2 | 0 in | T | 4 | 48 | 0 | |
| 10x4" Port | | | | B | 1 | 12 | 0 | |
| over AHU #25 | | | 2 in | T | 6 | 72 | 0 | |
| goes south turn | | | | B | 4 | 48 | 3 | |
| Port to A 4x1 1/2" | | | 4 in | T | 5 | 60 | 0 | |
| Bot | | | | B | 3 | 36 | 6 | |
| | | | Completed | | | | 7-31-89 | |

LINE NUMBER 843 DATE 7-31-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR V. McPain
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 113-114 Bkg 0
 SOURCE RESPONSE AND BACKGROUND PM 101-127 Bkg 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|-------------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Comes out of duct | Lead | 1/2" | 0M T | 3 | 36 | 0 |
| over hallway | | | B | 8 | 96 | 3 |
| go to light on | | | 2M T | 7 | 84 | 0 |
| South Wall. | | | B | 7 | 84 | 0 |
| | | | 4M T | 4 | 48 | 0 |
| | | | B | 6 | 72 | 0 |
| | | | 6M T | 8 | 96 | 3 |
| | | | B | 2 | 24 | 9 |
| Completed 7-31-89 | | | | | | |

LINE NUMBER 844 DATE 7-31-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR V. McPain
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 111-113 0
 SOURCE RESPONSE AND BACKGROUND PM 101-127 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|----------------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Starts at #4 hole | Conduit | 1/2" | 0M N | 7 | 84 | 3 |
| goes West turns down | | | S | 2 | 24 | 0 |
| Then goes south to | | | 2M N | 6 | 72 | 9 |
| hole on wall | | | S | 0 | 0 | 3 |
| | | | 4M T | 4 | 48 | 0 |
| | | | B | 0 | 0 | 0 |
| | | | 6M T | 4 | 48 | 0 |
| | | | B | 1 | 12 | 0 |
| | | | 8M T | 3 | 36 | 3 |
| | | | B | 3 | 36 | 3 |
| Completed 7-31-89 | | | | | | |

LINE NUMBER 845 DATE 7-31-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Henry V. McLain
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 111-113-0
 SOURCE RESPONSE AND BACKGROUND PM 101-127-1

LINE NUMBER 846 DATE 8-1-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Henry V. McLain
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 108-108-0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable dpm/100cm ² |
|-------------------|--------------|------|------------------|--------|------------------------|-------------------------------------|
| | | | | cpm | dpm/100cm ² | |
| Comes out of site | Lead | 1/2 | 0M N | 3 | 36 | 6 |
| #1 gas | | | S | 4 | 48 | 9 |
| | | | 2m T | 4 | 48 | 3 |
| | | | B | 1 | 12 | 0 |
| | | | 4m T | 2 | 24 | 0 |
| | | | B | 2 | 24 | 0 |
| | | | 6m T | 3 | 36 | 3 |
| | | | B | 3 | 36 | 3 |

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable dpm/100cm ² |
|-----------------------|--------------|------|------------------|--------|------------------------|-------------------------------------|
| | | | | cpm | dpm/100cm ² | |
| Comes out of | Aspirator | 1 | 0M T | 5 | 70 | 0 |
| Buffer 55 gal Drum | | | B | 5 | 70 | 0 |
| on North Wall against | | | 2m E | 3 | 42 | 0 |
| down to floor | | | W | 3 | 42 | 0 |
| | | | Completed | 8-1-89 | | |

LINE NUMBER 847 DATE 8-1-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. L. V. McLean
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 108 - 108 2/10 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|---------------------------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Copper line comes out of bunker | Copper | 1" | 0M T | 2 | 28 | 0 |
| | | | B | 11 | 145 | 0 |
| 55' and then north | | | 0.5M T | N/A | | |
| Wall goes east | | | B | 7 | 98 | 0 |
| turns goes up to | | | 2M E | 3 | 42 | 3 |
| Turns South | | | W | 4 | 56 | 3 |
| | | | 4M E | 0 | 0 | 3 |
| | | | W | 1 | 14 | 3 |
| | | | 6M E | 7 | 98 | 0 |
| | | | W | 3 | 42 | 0 |
| | | | 8M F | 2 | 28 | 0 |
| | | | W | 4 | 56 | 0 |
| | | | Completed | 8-1-89 | | |

LINE NUMBER 848 DATE 8-1-89
 INSTRUMENT Ludlum SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. L. V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 108/108 0
 SOURCE RESPONSE AND BACKGROUND PM

X14

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|-----------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Comes out of | Ripe Gate | 2" | 0M E | 5 | 70 | 0 |
| Flow area up | | | W | 1 | 0 | 0 |
| to P. 110 | | | 2M E | 5 | 70 | 0 |
| | | | W | 2 | 28 | 0 |
| | | | 4M E | 1 | 14 | 0 |
| | | | W | 4 | 56 | 0 |
| | | | Completed | 8-1-89 | | |

LINE NUMBER #849 Return Hot Water (Out) DATE 8-2-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McInty

SOURCE NUMBER AND VALUE 1832-342

SOURCE RESPONSE AND BACKGROUND AM 97/115 2

SOURCE RESPONSE AND BACKGROUND PM 100/110 2

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|-------------------|--------------------|------|------------------|--------|------------------------|-----------|---|
| | | | | cpm | dpm/100cm ² | | |
| Return hot water | Insulated Pipe 8" | | 0M | W | 4 | 28 | 6 |
| Out line starts | Return Heat | | | E | 1 | 7 | 3 |
| on North side | Main line | | 2M | N | 2 | 14 | 0 |
| of AHU #27 on | | | | S | 3 | 21 | 0 |
| the floor. | Return heat | | | T | 6 | 42 | 0 |
| legs off for 4m + | legs off Main line | | 4M | B | 4 | 28 | 0 |
| legs off for 8m | Return heat | | | N | 4 | 28 | 0 |
| legs off for 8m | legs off Main line | | 6M | S | 2 | 14 | 0 |
| goes in to Return | Return heat | | | E | 5 | 35 | 0 |
| heat on AHU #27 | legs off Main line | | 8M | W | 3 | 21 | 0 |
| | Main line | | | T | 2 | 14 | 3 |
| | Return heat | | 10M | B | 3 | 21 | 0 |
| | | | | T | 5 | 35 | 3 |
| Ceiling | legs off Main line | | 12M | B | 2 | 14 | 3 |
| | goes to Preheat. | | | T | 1 | 7 | 0 |
| | Preheat line | | 14M | B | 1 | 7 | 6 |
| | | | | N | 3 | 21 | 0 |
| | Preheat line | | 16M | S | 2 | 14 | 0 |
| | | | | T | 4 | 28 | 9 |
| | Preheat line | | 18M | N | 3 | 21 | 0 |
| | | | | T | 0 | 0 | 3 |
| | Preheat line | | 20M | B | 2 | 14 | 0 |
| | | | | E | 3 | 21 | 0 |
| | Preheat line | | 22M | W | 3 | 21 | 0 |
| | | | | N | 2 | 14 | 0 |
| | Preheat line | | 24M | S | 5 | 35 | 0 |
| | | | | T | 3 | 21 | 0 |
| | Return heat Main | | 26M | B | 1 | 7 | 0 |
| | line. | | | | | | |

LINE NUMBER #849 Return Hot Water (Out) DATE 8-3-89

INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308

DETECTOR 43-4 OPERATOR McInty & McLean

SOURCE NUMBER AND VALUE 1832-342

SOURCE RESPONSE AND BACKGROUND AM 124-113 2

SOURCE RESPONSE AND BACKGROUND PM 88-107 2

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|--------------------|-----------------------|------|------------------|--------|------------------------|-----------|---|
| | | | | cpm | dpm/100cm ² | | |
| | Return Heat 8" | | 28M | T | 10 | 70 | 0 |
| | | | | B | 2 | 14 | 0 |
| goes in to AHU #26 | Return Heat | | 30M | T | 2 | 14 | 0 |
| Heat Return out | | | | B | 2 | 14 | 0 |
| | Return heat main line | | 32M | T | 2 | 14 | 3 |
| | | | | B | 0 | 0 | 0 |
| | Preheat | | 34M | T | 2 | 14 | 3 |
| | | | | B | 1 | 7 | 0 |
| | Preheat | | 36M | T | 6 | 42 | 0 |
| | | | | B | 2 | 14 | 0 |
| | Preheat | | 38M | T | 3 | 21 | 6 |
| | | | | B | 2 | 14 | 0 |
| | Preheat | | 40M | N | 9 | 63 | 3 |
| | | | | S | 1 | 7 | 0 |
| | Preheat | | 42M | T | 7 | 49 | 3 |
| | | | | B | 3 | 21 | 0 |
| | Preheat | | 44M | T | 3 | 21 | 0 |
| | | | | B | 4 | 28 | 3 |
| | Preheat | | 46M | E | 2 | 14 | 3 |
| | | | | W | 2 | 14 | 6 |
| goes in to AHU #26 | Preheat | | 48M | S | 4 | 28 | 0 |
| on Preheat side to | | | | N | 3 | 21 | 3 |
| floor: | | | | T | 1 | 7 | 3 |
| start | Main line Return | | 50M | | | | |
| over AHU #25. | | | | B | 6 | 42 | 3 |
| | Main line | | 52M | E | 1 | 7 | 3 |
| | | | | W | 1 | 7 | 0 |
| | Main line | | 54M | T | 5 | 35 | 0 |
| | Preheat | | | B | 0 | 0 | 0 |

LINE NUMBER *Line 849 Meter Center* DATE *8-3-89*
 INSTRUMENT *Ludlum 2220* SERIAL NUMBER *58308*
 DETECTOR *43-4* OPERATOR *McLain/Gentry*
 SOURCE NUMBER AND VALUE *1832/342*
 SOURCE RESPONSE AND BACKGROUND AM
 SOURCE RESPONSE AND BACKGROUND PM *83-89*
2-88/105

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct cpm | Direct dpm/100cm ² | Smearable dpm/100cm ² |
|--------------------------|--------------|-------------------------|------------------|------------|-------------------------------|----------------------------------|
| | Pre heat | 56M | T | 3 | 21 | 0 |
| | | | B | 6 | 42 | 6 |
| <i>goes into AHU#25</i> | Pre heat | 58M | N | 2 | 14 | 6 |
| <i>Closest End. N.S.</i> | | | S | 2 | 14 | 0 |
| | Pre heat | 60M | T | 3 | 21 | 0 |
| | | | B | 3 | 21 | 3 |
| | Pre heat | 62M | T | 6 | 42 | 3 |
| | | | B | 4 | 28 | 3 |
| | Pre heat | 64M | E | 4 | 28 | 0 |
| | | | W | 5 | 35 | 3 |
| <i>Main Line</i> | Heat Return | 66M | T | 2 | 14 | 0 |
| | | | B | 2 | 14 | 0 |
| | Heat Return | 68M | T | 8 | 56 | 0 |
| | | | B | 0 | 0 | 0 |
| <i>ends at AHU#25</i> | Heat Return | 70M | E | 3 | 21 | 0 |
| <i>Returns heat side</i> | | | W | 0 | 0 | 0 |
| | | <i>END</i> | | | | |
| | | <i>Completed 8-3-89</i> | | | | |

LINE NUMBER *#850 Supply hot Water DW* DATE *8-3-89*
 INSTRUMENT *Ludlum 2220* SERIAL NUMBER *58308*
 DETECTOR *43-4* OPERATOR *McLain/Gentry*
 SOURCE NUMBER AND VALUE *1832 342*
 SOURCE RESPONSE AND BACKGROUND AM *124-113 2*
 SOURCE RESPONSE AND BACKGROUND PM *88-107 2*

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct cpm | Direct dpm/100cm ² | Smearable dpm/100cm ² |
|-------------------------|------------------|-----------|------------------|------------|-------------------------------|----------------------------------|
| <i>Supply hot Water</i> | <i>Insulated</i> | <i>8"</i> | <i>W</i> | <i>5</i> | <i>35</i> | <i>3</i> |
| <i>Line starts at</i> | | | <i>E</i> | <i>5</i> | <i>35</i> | <i>0</i> |
| <i>Flow on North</i> | | | <i>N</i> | <i>2</i> | <i>14</i> | <i>0</i> |
| <i>side of AHU#27</i> | | | <i>S</i> | <i>2</i> | <i>14</i> | <i>0</i> |
| | | | <i>N</i> | <i>6</i> | <i>42</i> | <i>0</i> |
| | | | <i>S</i> | <i>4</i> | <i>28</i> | <i>0</i> |
| | | | <i>N</i> | <i>4</i> | <i>28</i> | <i>0</i> |
| | | | <i>S</i> | <i>2</i> | <i>14</i> | <i>0</i> |
| | | | <i>T</i> | <i>6</i> | <i>42</i> | <i>0</i> |
| | | | <i>B</i> | <i>2</i> | <i>14</i> | <i>6</i> |
| | | | <i>T</i> | <i>0</i> | <i>0</i> | <i>0</i> |
| | | | <i>N</i> | <i>2</i> | <i>14</i> | <i>3</i> |
| | | | <i>E</i> | <i>2</i> | <i>14</i> | <i>0</i> |
| | | | <i>W</i> | <i>1</i> | <i>7</i> | <i>0</i> |
| | | | <i>T</i> | <i>1</i> | <i>7</i> | <i>0</i> |
| | | | <i>B</i> | <i>2</i> | <i>14</i> | <i>3</i> |
| | | | <i>E</i> | <i>3</i> | <i>21</i> | <i>0</i> |
| | | | <i>W</i> | <i>7</i> | <i>49</i> | <i>3</i> |
| | | | <i>T</i> | <i>2</i> | <i>28</i> | <i>3</i> |
| | | | <i>B</i> | <i>3</i> | <i>14</i> | <i>3</i> |
| | | | <i>N</i> | <i>4</i> | <i>21</i> | <i>3</i> |
| | | | <i>S</i> | <i>2</i> | <i>14</i> | <i>0</i> |
| | | | <i>E</i> | <i>3</i> | <i>21</i> | <i>9</i> |
| | | | <i>W</i> | <i>2</i> | <i>14</i> | <i>3</i> |
| | | | <i>T</i> | <i>3</i> | <i>21</i> | <i>0</i> |
| | | | <i>B</i> | <i>1</i> | <i>7</i> | <i>3</i> |
| | | | <i>T</i> | <i>0</i> | <i>0</i> | <i>0</i> |
| | | | <i>B</i> | <i>1</i> | <i>7</i> | <i>0</i> |

LINE NUMBER 851 Chilled Water Supply IN DATE 8-4-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hunter V. McLean
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 95-121 1
 SOURCE RESPONSE AND BACKGROUND PM 101-115 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|------------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Start at AHU #27 | Insulated | 8" | 0M E | 2 | 14 | 0 |
| on North side | pipe | | W | 3 | 21 | 0 |
| on floor | | | N | 0 | 0 | 0 |
| | | | S | 3 | 21 | 0 |
| | | | T | 4 | 24 | 3 |
| | | | B | 6 | 42 | 3 |
| | | | E | 2 | 14 | 0 |
| | | | W | 2 | 14 | 0 |
| | | | T | 3 | 21 | 3 |
| | | | B | 4 | 28 | 0 |
| | | | T | 5 | 35 | 0 |
| | | | B | 2 | 14 | 0 |
| | | | E | 5 | 35 | 0 |
| | | | W | 4 | 28 | 0 |
| | | | T | 7 | 49 | 6 |
| | | | B | 1 | 7 | 0 |
| | | | N | 5 | 35 | 0 |
| | | | S | 0 | 0 | 0 |
| | | | T | 13 | 91 | 0 |
| | | | B | 5 | 35 | 0 |
| | | | T | 9 | 63 | 0 |
| | | | B | 4 | 28 | 6 |
| | | | T | 6 | 42 | 0 |
| | | | B | 3 | 21 | 3 |
| | | | T | 3 | 21 | 0 |
| | | | B | 4 | 28 | 0 |
| | | | T | 6 | 42 | 0 |
| | | | B | 4 | 28 | 6 |

LINE NUMBER #851 Chilled Water Supply IN DATE 8-4-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hunter V. McLean
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 95-121 1
 SOURCE RESPONSE AND BACKGROUND PM 101-115 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable |
|-----------------|--------------|------|------------------|--------|------------------------|-----------|
| | | | | cpm | dpm/100cm ² | |
| Start at | Insulated | 8" | 28M E | 5 | 35 | 0 |
| AHU #25 on | Pipe | | W | 3 | 21 | 0 |
| the South | | | T | 6 | 42 | 3 |
| | | | B | 3 | 21 | 0 |
| | | | E | 3 | 21 | 0 |
| | | | W | 7 | 49 | 0 |
| | | | S | 4 | 28 | 0 |
| | | | N | 1 | 7 | 0 |
| | | | Completed | 8-4-89 | | |

LINE NUMBER #852 Chill. P. Water Ins. OUTDATE 9-4-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. J. V. Mc
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 95-121 1
 SOURCE RESPONSE AND BACKGROUND PM 101-115 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|---------------------|--------------|------|------------------|--------|-------------------------|-----------|---|
| | | | | cpm | ldpm/100cm ² | | |
| Start on North side | Insulated | 8" | 0 M | E | 4 | 28 | 3 |
| at AHU #27 on | Pipe | | | W | 3 | 21 | 0 |
| of door & ends | | | 2 M | N | 0 | 0 | 0 |
| at AHU #25 on | | | | S | 1 | 7 | 0 |
| S.W. corner on | | | 4 M | T | 2 | 14 | 0 |
| of door | | | | B | 1 | 7 | 0 |
| | | | 6 M | T | 2 | 14 | 0 |
| | | | | B | 2 | 14 | 0 |
| | | | 8 M | N | 3 | 21 | 0 |
| | | | | S | 2 | 14 | 3 |
| | | | 10 M | N | 6 | 42 | 0 |
| | | | | S | 4 | 28 | 0 |
| | | | 12 M | T | 4 | 28 | 3 |
| | | | | B | 2 | 14 | 0 |
| | | | 14 M | E | 2 | 14 | 0 |
| | | | | W | 1 | 7 | 0 |
| | | | 16 M | T | 7 | 49 | 0 |
| | | | | B | 3 | 21 | 3 |
| | | | 18 M | N | 6 | 42 | 0 |
| | | | | S | 5 | 35 | 0 |
| | | | 20 M | N | 4 | 28 | 0 |
| | | | | S | 2 | 14 | 0 |
| | | | 22 M | T | 6 | 42 | 0 |
| | | | | B | 4 | 28 | 0 |
| | | | 24 M | T | 4 | 28 | 0 |
| | | | | B | 3 | 21 | 0 |
| | | | 26 M | T | 5 | 35 | 0 |
| | | | | B | 4 | 28 | 3 |

LINE NUMBER #852 Chill. P. Water Ins. OUTDATE 9-4-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. J. V. Mc
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 95-121 1
 SOURCE RESPONSE AND BACKGROUND PM 101-115 1

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|-----------------|--------------|------|------------------|--------|-------------------------|-----------|---|
| | | | | cpm | ldpm/100cm ² | | |
| Ends at AHU #25 | Insulated | 8" | 28 M | T | 3 | 21 | 0 |
| on S.W. end of | Pipe | | | B | 3 | 21 | 6 |
| of door | | | 30 M | E | 0 | 0 | 3 |
| | | | | W | 3 | 21 | 0 |
| | | | 32 M | T | 3 | 21 | 0 |
| | | | | B | 3 | 21 | 0 |
| | | | 34 M | T | 11 | 77 | 0 |
| | | | | B | 1 | 7 | 0 |
| | | | 36 M | W | 5 | 35 | 3 |
| | | | | S | 4 | 28 | 0 |
| | | | Completed | | | | |

LINE NUMBER 853 Supply Hot Water Line DATE 8-7-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hamley + V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 89, 104 1
 SOURCE RESPONSE AND BACKGROUND PM

LINE NUMBER 854 DATE 8-7-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Hamley + V. McLean
 SOURCE NUMBER AND VALUE 1832-342
 SOURCE RESPONSE AND BACKGROUND AM 89, 104 1
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable dpm/100cm ² |
|------------------|--------------|------|------------------|--------|------------------------|-------------------------------------|
| | | | | cpm | dpm/100cm ² | |
| Living Room | Steam Pipe | 1/2" | DM E | 4 | 28 | 0 |
| 6m from East | Steam | | W | 3 | 21 | 3 |
| Wall up from | | | | | | |
| Short to another | | | 2m T | 4 | 28 | 0 |
| from east wall | | | R | 5 | 35 | 3 |
| INSULATED | | | 4m W | 7 | 49 | 0 |
| | | | S | 4 | 28 | 3 |
| | | | 6m T | 11 | 77 | 0 |
| | | | B | 5 | 35 | 9 |
| Complete 8-7-89 | | | | | | |

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable dpm/100cm ² |
|---------------------|--------------|--------|------------------|--------|------------------------|-------------------------------------|
| | | | | cpm | dpm/100cm ² | |
| from floor to water | Steam Pipe | 2 1/2" | DM N | 3 | 21 | 0 |
| from east wall | | | S | 6 | 42 | 3 |
| up on ducts | | | | | | |
| and water from | | | 2m E | 1 | 7 | 3 |
| east wall | | | W | 4 | 28 | 0 |
| INSULATED | | | 4m T | 6 | 42 | 3 |
| | | | R | 6 | 42 | 0 |
| | | | 6m T | 5 | 35 | 6 |
| | | | B | 4 | 28 | 0 |
| Complete 8-7-89 | | | | | | |

LINE NUMBER 855 DATE 8-1-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shetty / V. McLean
 SOURCE NUMBER AND VALUE 1832 - 342
 SOURCE RESPONSE AND BACKGROUND AM 108/109 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|--|--------------|--------|------------------|--------|------------------------|-----------|------------------------|
| | | | | cpm | dpm/100cm ² | | dpm/100cm ² |
| 6 meters from east wall | garage | 2 1/2" | 0M | E | 3 | 52 | 3 |
| | | | | W | 5 | 70 | 6 |
| from floor to ceiling above south wall | | | 2M | E | 1 | 14 | 0 |
| | | | | W | 4 | 56 | 0 |
| | | | 4M | E | 4 | 56 | 0 |
| | | | | W | 8 | 112 | 0 |
| Complete 8-7-89 | | | | | | | |

LINE NUMBER 856 DATE 8-1-89
 INSTRUMENT Ludlum 2220 SERIAL NUMBER 58308
 DETECTOR 43-4 OPERATOR M. Shetty / V. McLean
 SOURCE NUMBER AND VALUE 1832 342
 SOURCE RESPONSE AND BACKGROUND AM 108/109 0
 SOURCE RESPONSE AND BACKGROUND PM

| START OF SURVEY | TYPE OF LINE | DIA. | READING LOCATION | Direct | | Smearable | |
|-------------------------------------|--------------|------|------------------|--------|------------------------|-----------|------------------------|
| | | | | cpm | dpm/100cm ² | | dpm/100cm ² |
| 4 meters from east wall | garage | 2" | 0M | E | 7 | 98 | 3 |
| | | | | W | 4 | 56 | 0 |
| to 6 meters from east wall on floor | | | 2M | E | 2 | 28 | 0 |
| | | | | W | 4 | 56 | 3 |
| Complete 8-7-89 | | | | | | | |