CHEVRON CHEMICAL COMPANY

BUILDING "C", CLEVELAND OHIO

RADIOLOGICAL ASSESSMENT

REPORT

CWM-NUCLEAR

PROJECT 46875

(APRIL - JUNE 1992)

For:

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1.0 INTRODUCTION

Chevron Chemical Company (Chevron) contracted with Chemical Waste Management - ENRAC Nuclear Waste Division (CWM-Nuclear) to conduct a radiological assessment of a Chevron owned building located in Cleveland, Ohio. The building, commonly referred to as "Building C", is located on the premises of Englehard Chemical's facility located on Harvard Avenue, on the west bank of the Cuyahoga River. Originally, this facility was referred to as the Harshaw Complex.

This report contains the results of the radiological assessment performed by CWM-Nuclear.

2.0 HISTORY AND DESCRIPTION OF BUILDING "C"

Chevron's Building "C" was one of the primary buildings on the original Harshaw Complex used for the manufacture of uranium hexafluoride (UF_6) during the Manhattan Engineering activities conducted by the Atomic Energy Commission (AEC) in the 1940's and 1950's. The AEC maintained control of the building and its operations until it was released to Harshaw in 1960. As a result of the UF_6 production controlled by the AEC, Building "C", formerly referred to as "Plant C", was contaminated with radioactive natural uranium and its predominant decay daughter thorium.

Building "C" is located within the fenced area of approximately 1.6 acres of land on Englehard Chemical's facility at 1000 Harvard Avenue, Cleveland, Ohio. The facility is often referred to as the Harvard-Denison Plant. Building "C" was built and added to at various times over the period 1945 to 1949. The building is constructed of brick and steel walls, a concrete ground floor, and pre-cast concrete slab elevated floors and roof. It consists of one, two and three-story sections. The total approximate floor areas are: first floor 45,100 ft^2; mezzanine 3,700 ft^2; second floor 14,590 ft^2; third floor 3,200 ft^2.

Building "C" was decontaminated by Harshaw and released from AEC control in 1960. The US Department of Energy (DOE) sponsored a radiological characterization and assessment of the building which began in May 1976. The characterization and assessment was performed by Argonne National Laboratory (ANL). As a result of the initial findings in and around Building "C", the DOE, in conjunction with FUSRAP (Formerly Utilized Sites Remedial Action Program), extended the characterization effort to the entire Harshaw Complex in October 1978. The results of the ANL characterizations are contained in Reference 3.1.

In an effort to address the situation and exercise its responsibility as the building's current owner, Chevron contracted with CWM-Nuclear in March 1992 to conduct a thorough radiological assessment of the building. This report relays the results of CWM-Nuclear's assessment.

Currently, Chevron is leasing Building "C" to Englehard who is using it as a storage facility. No production or plant operations are currently taking place in the building.

3.0 REFERENCES

3.1 Argonne National Laboratory Report of the Radiological Survey of the Harshaw Chemical Company, Cleveland, Ohio; dated April 1984.

3.2 Chemical Waste Management - ENRAC Nuclear Waste Division; "Operations Plan for the Chevron Building Site Assessment", PL-ENWD-0392-018.

3.3 Chemical Waste Management - ENRAC Nuclear Waste Division; "Site Safety and Health Plan for Chevron Building Site Assessment", PL-ENWD-0492-019.

4.0 BUILDING "C" RADIOLOGICAL ASSESSMENT RESULTS

This section contains the results of CWM-Nuclear's radiological assessment of Chevron's Building "C", which was conducted in accordance with References 3.2 and 3.3. The assessment was broken down into seven (7) major aspects. The major aspects of the assessment were:

1) Thorough review of Argonne National Laboratory's Building "C" radiological survey results (Reference 3.1).

2) Visual inspection of Building "C" and its contents.

3) Radiation exposure survey throughout Building "C".

4) Radiation contamination surveys (both removable and fixed contamination) of the building's floors, walls, ceilings, and roof. Thorough surveys of the entire floor and roof surfaces were conducted, while only approximately 15% of the building's walls and ceilings were surveyed.

5) Intrusive radiological investigation of areas vulnerable to the collection and transport of radioactive contamination. Including the collection and analysis of several samples (concrete, soil, residues, etc.) for both radionuclide content and concentration.

6) Test decontamination of building structurals found to be contaminated above USNRC unrestricted release limits.

7) Collection and analysis of two samples, randomly collected from throughout the building, to determine the potential for mixed waste (i.e, both radioactive and RCRA hazardous waste).

The results of each of the seven (7) assessment aspects are described below.

4.1 Review of Argonne National Laboratory Report

A thorough review of the Argonne radiological survey report (Reference 3.1) revealed the following facts.

- The radiological surveys of Building "C" were conducted in 1976, during ongoing production operations in and around the building. According to the ANL report, the building also contained a large amount of stored material. As a result of the operations and the stored materials, the building surveys were difficult to perform and were incomplete.

- Much of the original floor had been covered with new cement by the time the ANL surveys were conducted. The report correctly concludes that this added concrete layer was (and still is) shielding some of the radioactive contamination existing on (and in) the original concrete surface.

- The radioactive contamination discovered by ANL was primarily fixed to existing surfaces. However, there were isolated areas of loose/removable contamination discovered. ANL correctly concluded that the levels of contamination in Building "C" were above guidelines for unrestricted release.

- The source of all radioactive contamination detected by ANL came exclusively from natural (normal) uranium.

- ANL concluded that the contamination internal and external to Building "C" did not constitute a radiation dose hazard. As a result, access to the building was not restricted.

4.2 Visual Inspection of Building "C"

A thorough visual inspection of Building "C" conducted by CWM-Nuclear in April 1992 revealed the following facts.

- Building "C" still contained a large amount of stored material, primarily on the first level. The stored material belongs to Englehard, who is leasing the building from Chevron, and using it as a storage facility.

- Only approximately 25% of the buildings electrical lighting system is operational. The entire electrical distribution system was found to be in extremely poor condition, with rusted, corroded switches, outlets, distribution panels, and junction boxes throughout. Some of the eroded electrical connections were still energized.

- The integrity of the building is in poor condition. Almost every external wall has been penetrated to the surrounding environment, either through broken windows or actual holes on the brick and cement. The concrete floors are cracked throughout the building. The roof leaks in several places. As a result, standing water and moisture commonly exists throughout the building. A large amount of pigeon droppings also exists throughout the building.

- A large amount of chemical residue, both solid and liquid, exists on the first and second floors throughout the building. It is apparent that most of this residue is from spillage of stored chemicals belonging to Englehard. A listing of the substances stored in the building, obtained directly from the storage container labels, is presented in Appendix A. There are also several unmarked/unlabeled drums/ containers, with both solid and liquid substances, stored in the building. Several of the containers were found leaking, opened, and in poor physical condition.

- Numerous areas vulnerable to the retention and transport of radioactive contamination were discovered. They consist of floor cracks, floor joints, drain basins, brick seams, and overlaid areas. Several of the vulnerable areas were selected for intrusive investigation per Reference 3.2. The results of the investigations are presented in section 4.5 of this report.

- It is evident that at least one layer of concrete, approximately 1/2 to 1 inch thick, has been laid over the original floors throughout the building. The resurfaced concrete floors were discussed by ANL in their 1984 Report (Reference 3.1), and appear to have the potential to shield radiation from contamination deposited on the original surface.

4.3 Radiation Exposure Survey

Both general area and on-contact radiation surveys were conducted throughout Building "C". General area radiation dose rates were non-detectable. On-contact radiation dose rates ranged from non-detectable to 32 mR/hr. The 32 mR/hr dose rate existed only in direct contact with the one isolated area containing the highest detected contamination level (first level, floor, grid O-ii), which was 1,319,500 dpm/100cm^2 (203,000 dpm/probe).

It is clear that no external radiation exposure hazard exists in Building "C". This is consistent with Argonne's assessment contained in Reference 3.1.

4.4 Radioactive Contamination Surveys

Both fixed and loose contamination surveys were conducted throughout Building "C". Only beta-gamma surveys were conducted for fixed contamination since it is indicative of associated fixed alpha contamination and has the same release limits for natural uranium source material. However, the beta-gamma emissions are easier to detect and the instruments used for detection are more efficient. Both beta-gamma and alpha emissions were analyzed for removable (loose) contamination surveys since the presence of one is not necessarily indicative of the other. Also, in the case of many other source materials besides natural uranium, the alpha release limits are more stringent than beta-gamma limits.

The detailed contamination survey documentation generated during the building assessment is contained in Appendix B. Note that the levels of fixed contamination are recorded in dpm/probe rather than dpm/100cm^2. In order to convert from dpm/probe to dpm/100cm^2, multiply the dpm/probe value by 6.5. This accounts for the probe's geometric properties. Fixed contamination levels ranged from non-detectable to as high as 1,319,500 dpm/100cm^2 (203,000 dpm/probe). Removable contamination levels ranged from non-detectable to 20,267 dpm/100cm^2 beta-gamma, and 1,441 dpm/100cm^2 alpha. The USNRC Reg Guide 1.86 release limits for natural uranium are listed below.

Fixed Contamination Limits:

o Alpha & Beta-Gamma:

5,000 dpm/100cm^2 averaged over 1 square meter

15,000 dpm/100cm^2 maximum

Removable Contamination Limits:

o Alpha & Beta-Gamma:

1,000 dpm/100cm^2 maximum

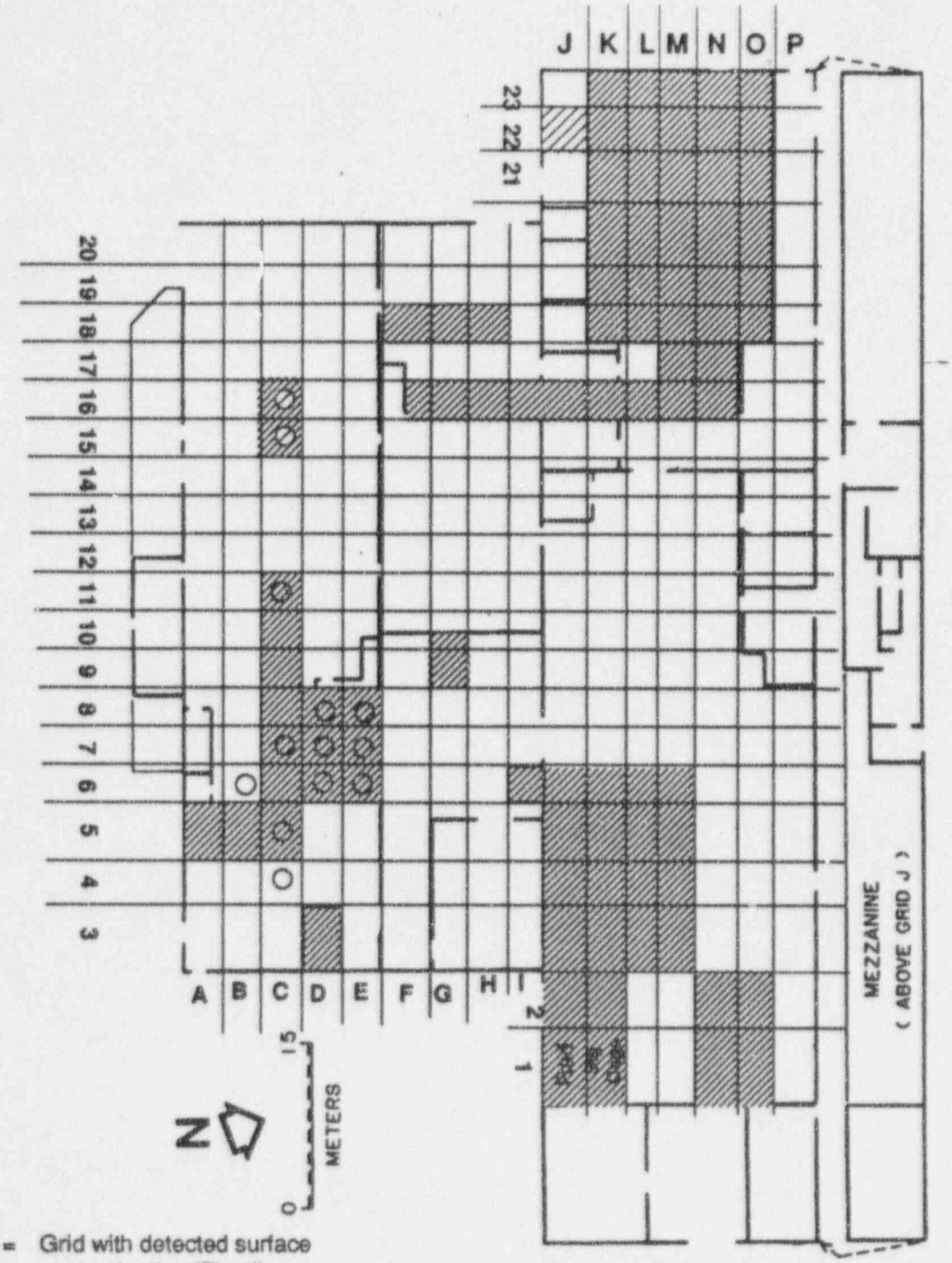
4.4.1 Building "C" Floors and Roof:

Figures 4.4-1 through 4.4-4 represent sketches of the building's three floor levels and the roof. The shaded grids indicate locations where CWM-Nuclear detected fixed contamination levels above the release limits of USNRC Regulatory Guide 1.86. Areas possessing removable contamination levels above Reg Guide 1.86 limits are indicated by a circle encompassing the approximate location.

4.4.2 Building "C" Walls and Ceilings:

Only 15% of the building's wall and ceiling surfaces were surveyed by CWM-Nuclear since these areas were not identified as contaminated in the Argonne National Laboratory Report (Reference 3.1). The surveys were conducted on randomly selected one meter square grids at wall heights and ceiling locations throughout the building.

FIGURE 4.4-1

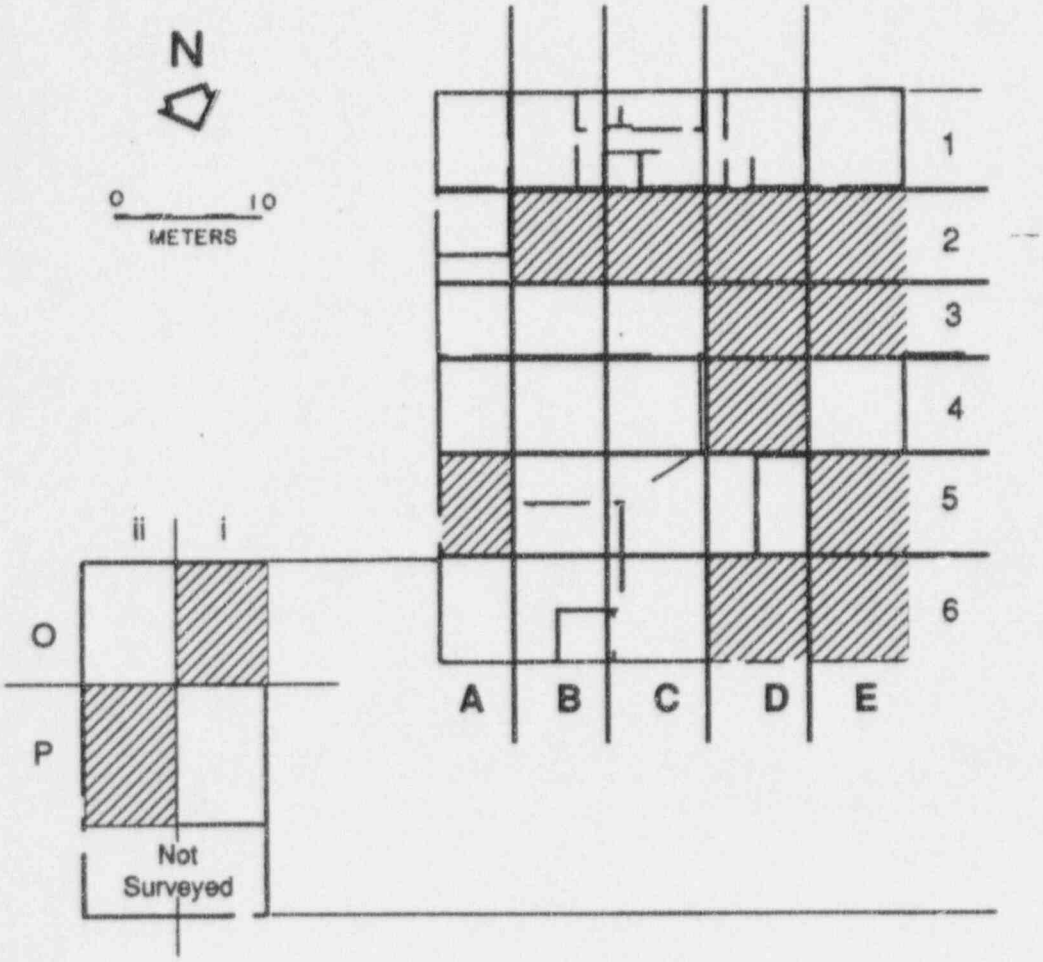


▨ = Grid with detected surface contamination (Fixed)

○ = Grid with detected surface contamination (Removable)

Plant "C" First Floor

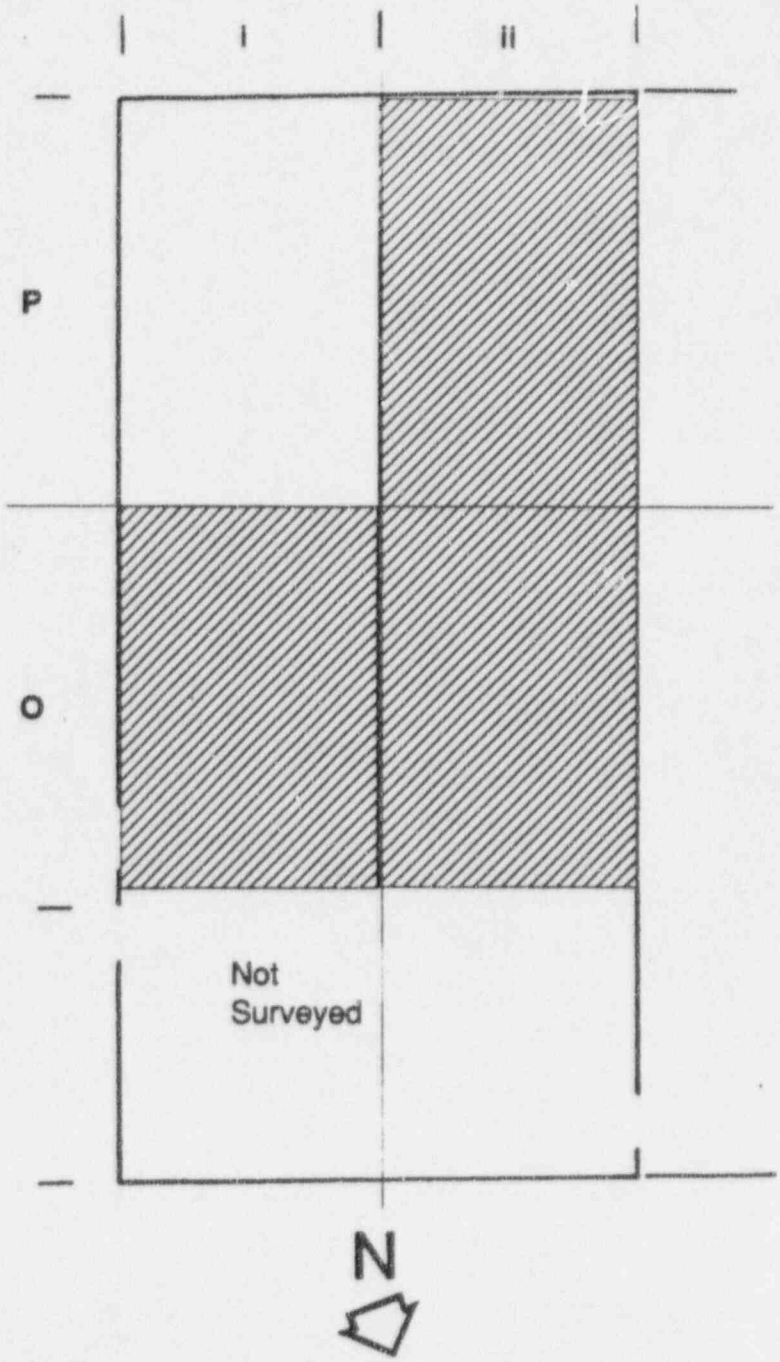
FIGURE 4.4-2



Plant "C" Second Floor

▨ = Grid with detected surface contamination (Fixed)

FIGURE 4.4-3

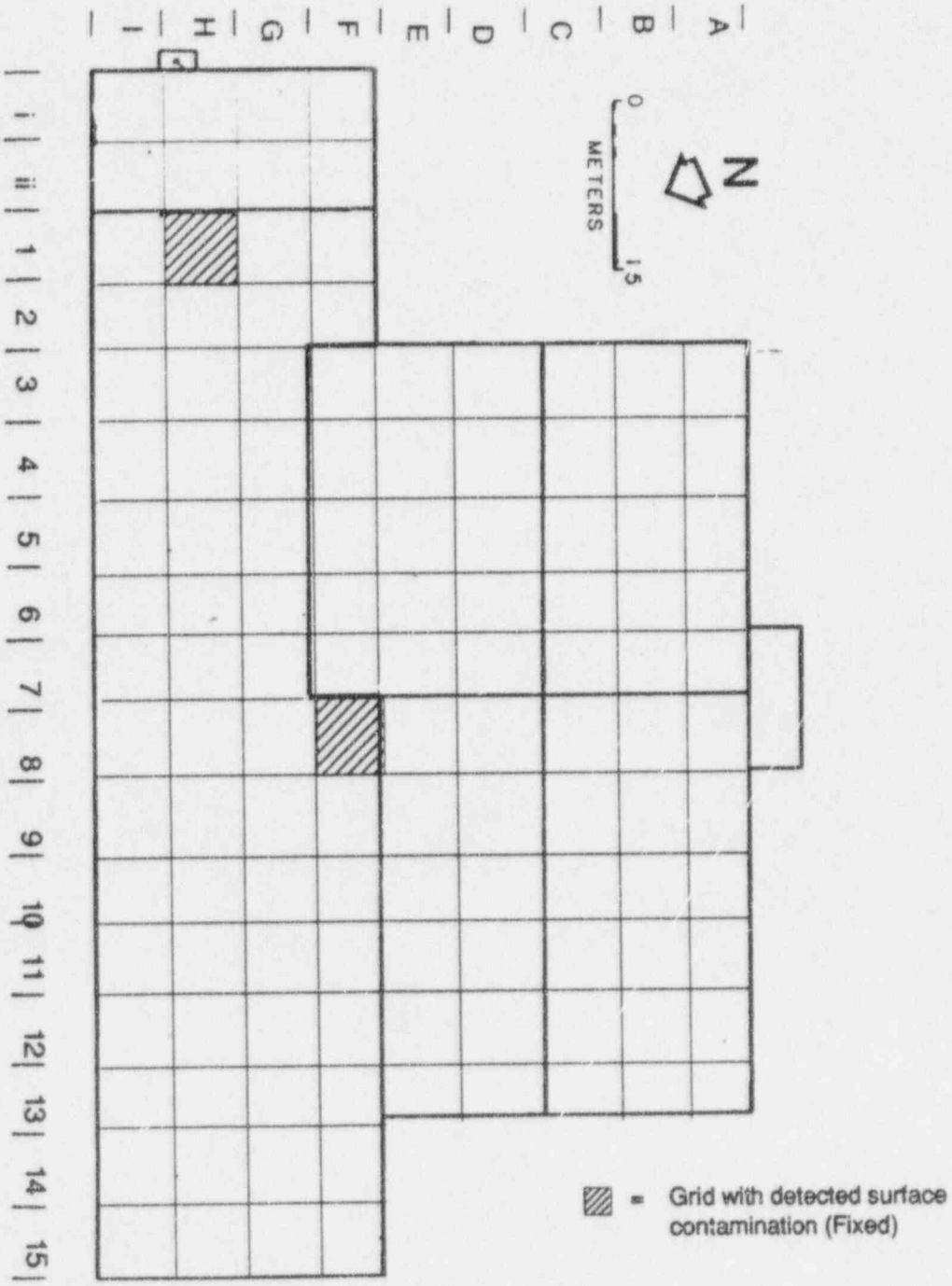


▨ = Grid with detected surface contamination (Fixed)

0 5
Meters

Plant "C" Third Floor

FIGURE 4.4-4



Plant "C" Roof

CWM-Nuclear detected several areas of elevated contamination levels on the building's walls, with many locations above the release limits of USNRC Reg Guide 1.86. The highest fixed contamination level was 1,319,500 dpm/100cm^2. The highest removable contamination levels detected were 1,664 dpm/100cm^2 beta-gamma, and 176 dpm/100cm^2 alpha. Twenty-two (22) of the eighty-nine (89) square meter grids, or 24.7%, surveyed were discovered to be contaminated above USNRC Reg Guide 1.86 unrestricted release limits. This indicates that the walls of Building "C" were exposed to natural uranium and are still contaminated in several locations.

The building's ceiling surfaces surveyed by CWM-Nuclear did not detect any fixed contamination. Some elevated levels of removable contamination were discovered on the ceiling, but all were well below the release limits of USNRC Reg Guide 1.86.

4.5 Vulnerable Area Investigations

A total of seven (7) distinct areas were selected for intrusive investigation during the visual inspection of Building "C". The areas were selected based on their high probability of absorbing and/or transporting radioactive contamination. The areas were chosen such that a wide variety of vulnerable area types were represented. Selected locations contained floor cracks, a floor seam, a drain basin and associated drain line, an eroded/etched concrete surface, brick decking, and the layered roof material.

Each investigation consisted of intrusive sampling and contamination surveys in an attempt to qualify the extent of radioactive contamination and its apparent migration into and through the vulnerable area. After determining the surface contamination levels, each area was penetrated in one (1) inch increments, until contamination levels fell below USNRC Reg Guide 1.86 release limits, or the subgrade soil/material was reached. In every case, two samples of the material removed for the investigation were collected and analyzed for radionuclide content and concentration.

The individual Vulnerable Area Report Forms, originating from Reference 3.2, are contained in Appendix C. The results of the radionuclide sample analysis on the materials removed during the investigations are also

contained in Appendix C. In the past, the USNRC has used various concentration release limits for uranium/thorium. Typical release limits witnessed by CWM-Nuclear have ranged from 10 pCi/gm to 35 pCi/gm. The results from the investigations are presented below.

Area I-1: Etched/Eroded Concrete Surface:

The vulnerable area designated as "I-1" was an area of concrete subjected to etching and/or erosion, leaving the concrete's aggregate as the exposed surface. This area was selected because of the aggregate's porosity, subjecting the area to the potential absorption of radioactive contamination. Figure 4.5-1 is a photograph of area I-1 before the intrusive investigation began.

Area I-1's initial fixed beta-gamma contamination level was 4,550 dpm/100cm^2. It's removable contamination was 73 dpm/100cm^2. After removing one inch of the aggregates surface, the fixed contamination level dropped to less than detectable. This indicates that the area did not absorb contamination deep into the aggregate. The concrete was probably intact with a smooth surface during uranium operations in Building "C". No migration through the aggregate was apparent in this area.

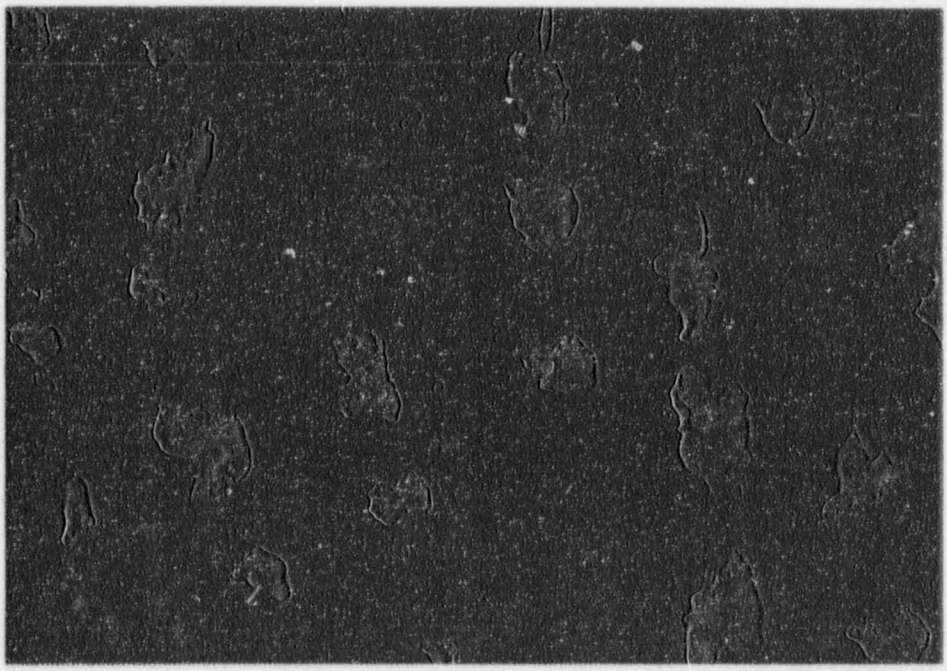
Two (2) samples of the material removed from the concrete aggregate were collected and analyzed for radionuclide content. Both samples indicated the presence of both natural uranium and thorium. One of the samples contained a concentration of thorium equal to 64.7 pCi/gm. The other possessed a concentration of 25.6 pCi/gm. No other radionuclide was detected.

Area I-2: Floor Joint:

The vulnerable area designated as "I-2" was a floor joint. This area was selected because it was highly contaminated near and on the surface, and because of the joint's natural tendency to collect contamination along with dirt, dust, sludge, etc. Figure 4.5-2 is a photograph of area I-2 before the intrusive investigation began.

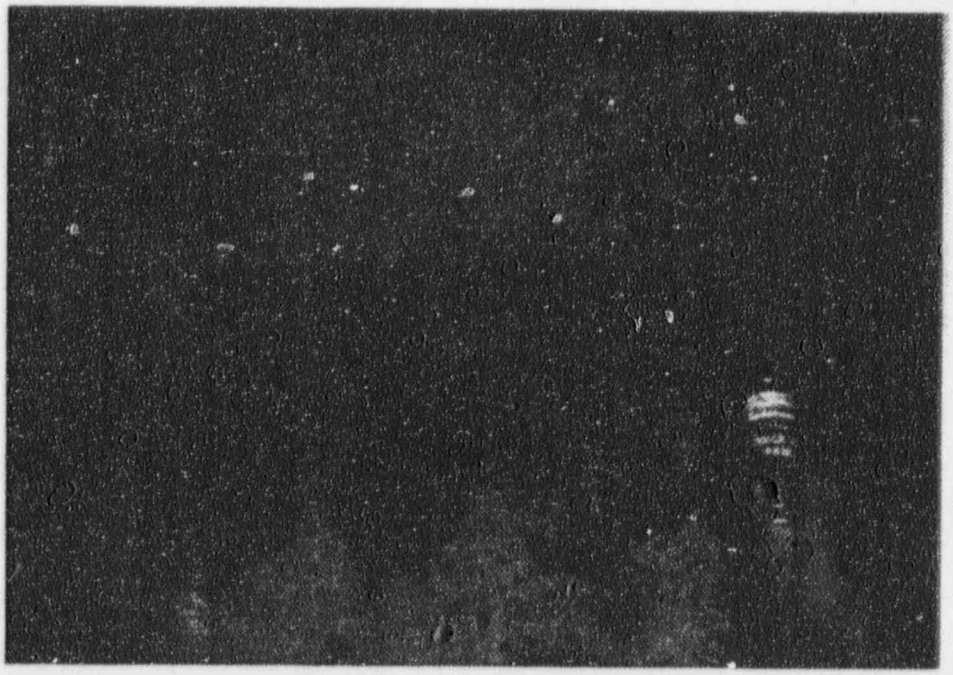
Area I-2's initial fixed beta-gamma contamination level was 247,000 dpm/100cm^2. Its removable contamination was 273 dpm/100cm^2. After removing one inch of the surfaces immediately adjacent to the joint, the fixed contamination level dropped slightly to 227,500 dpm/100cm^2. Removable contamination, generated during

Figure 4.5-1



Investigative Area 1

Figure 4.5-2



Investigative Area 2

the intrusion, increased to 1397 dpm/100cm^2. This suggests that the area absorbed contamination from the surface via the joint pathway. As a result, an additional inch of the joint's surrounding surfaces was removed. At the two inch depth, the fixed contamination levels dropped to 975 dpm/100cm^2, well below the release limit. This indicates that although contamination was imbedded in and around the joint in excess of one inch below the surface, it did not migrate deeper than two inches. This also suggests that it probably did not migrate into the subgrade material.

During the penetration of the joint, metal angle iron, apparently used as a means of establishing the concrete joint, was discovered. The metal angle iron also possessed high levels of fixed contamination (greater than 195,000 dpm/100cm^2).

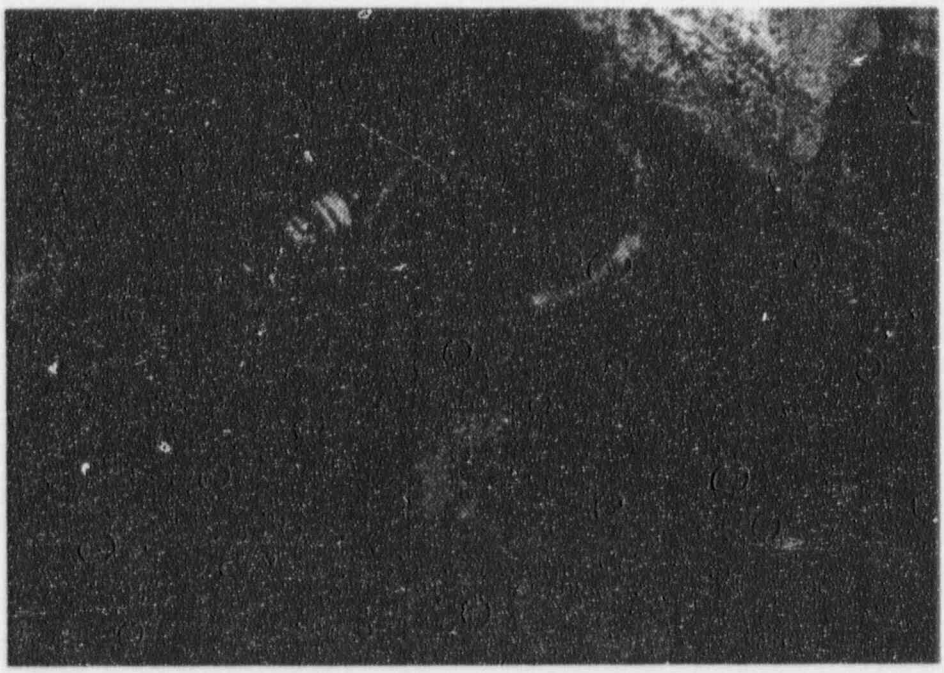
Two (2) samples of the material removed from and around the joint were collected and analyzed for radionuclide content. Both samples indicated the presence of both natural uranium and thorium. One of the samples contained a concentration of thorium equal to 296.6 pCi/gm, the other contained a concentration of 230.5 pCi/gm. No other radionuclide was detected.

Area I-3: Drain Basin and Associated Drain Line:

The vulnerable area designated as "I-3" was a drain basin and an associated piece of drain line. This area was selected because of its natural tendency to collect contamination along with water, dirt, dust, sludge, etc. Figure 4.5-3 is a photograph of area I-3 before the intrusive investigation began.

Area I-3's initial fixed beta-gamma contamination level was less than detectable. It's removable contamination was only 63 dpm/100cm^2, well below the release limit of USNRC Reg Guide 1.86. After removing the drain basin cover, one inch of the surfaces immediately adjacent to the drain and associated pipe joint were removed. The fixed contamination level increased to 3250 dpm/100cm^2, still below the release limit. No removable contamination was discovered. This indicates that the area immediately adjacent to the drain basin and drain line, within one inch of the basin's surface, did absorb some contamination, but not in excess of releasable limits. However, as a result of this initial intrusion, a 90 degree bend in the drain line, existing within approximately six inches of the basin surface, was discovered. The investigation continued directly to the

Figure 4.5-3



Investigative Area 3

vicinity of the drain line elbow.

Fixed contamination levels in the vicinity of the drain line elbow were 3900 dpm/100cm^2, still below the release limit. This indicates that the elbow accumulated more contamination than the drain basin and the vertical piping run above it. As a result, attention was focused on the collection of dirt samples immediately adjacent to the drain line elbow to determine if contamination had migrated from, or around, the pipe itself.

Two (2) samples of the dirt removed from the area surrounding the drain line elbow were collected and analyzed for radionuclide content. Both samples indicated the presence of both natural uranium and thorium. One of the samples contained a concentration of thorium equal to 283.9 pCi/gm, the other contained a concentration of 46.5 pCi/gm. No other radionuclide was detected.

Area I-4: Floor Crack:

The vulnerable area designated as "I-4" was a floor crack. This area was selected because of its fixed surface contamination level and its natural tendency to collect contamination along with water, dirt, dust, sludge, etc. Figure 4.5-4 is a photograph of area I-4 before the intrusive investigation began.

Area I-4's initial fixed beta-gamma contamination level was 344,500 dpm/100cm^2. It's removable contamination was 63 dpm/100cm^2. After removing one inch of the surrounding surfaces and penetrating the cracked floor area, the fixed contamination level decreased to 3250 dpm/100cm^2, below the release limit. No significant removable contamination was discovered. Although the area immediately adjacent to the crack did absorb contamination, levels dropped below release limits within one inch of the surface. Apparently, no significant migration through the crack took place.

Two (2) samples of the concrete, dirt, and dust remove from the area surrounding the floor crack were collecte and analyzed for radionuclide content. Both sample indicated the presence of both natural uranium an thorium. One of the samples contained a concentration o thorium equal to 1,355 pCi/gm, the other contained concentration of 1,777 pCi/gm. No other radionuclide wa detected.

Figure 4.5-4

Investigative Area 4

Area I-5: Concrete Seam Between Entrance Ramp and Building Floor:

The vulnerable area designated as "I-5" was a seam between an entrance ramp and the building's concrete floor. This area was selected because of its elevated fixed surface contamination level, its location with respect to a high traffic area, and its natural tendency to collect contamination along with water, dirt, dust, sludge, etc. Figure 4.5-5 is a photograph of area I-5 before the intrusive investigation began.

Area I-5's initial fixed beta-gamma contamination level was 22,750 dpm/100cm^2. Its removable contamination was 21 dpm/100cm^2. After removing one inch of the surrounding surfaces and penetrating the seam, both the fixed and removable contamination levels decreased to non-detectable. This indicates that although the area immediately adjacent to the seam was contaminated above release limits, it is apparent that no significant migration took place through the seam.

Two (2) samples of the concrete, dirt and dust removed from the area in and around the seam were collected and analyzed for radionuclide content. Both samples indicated the presence of both natural uranium and thorium. One sample contained a concentration of thorium equal to 117 pCi/gm, the other contained a concentration of 64.7 pCi/gm. No other radionuclide was detected.

Area I-6: Layered Roofing Material:

The vulnerable area designated as "I-6" was an area of the building's roof. This area was selected because of the probability of it containing contamination from roof level ventilation exhaust outlets, and the layers of roofing material (tar and stones) applied over the building's history. Figure 4.5-6 is a photograph of area I-6 before the intrusive investigation began.

Area I-6's initial fixed and removable beta-gamma contamination were not detectable. After removing one inch of the roofs surface material, the fixed contamination remained non-detectable, but the removable contamination increased to 42 dpm/100cm^2, still well below the limit. Intrusive investigation continued since it was apparent that the original surface was not yet uncovered. At approximately a two inch depth, the original roof surface was reached and found to possess

Figure 4.5-5

Investigative Area 5

Figure 4.5-6

Investigative Area 6

6,500 dpm/100cm^2 of fixed contamination, while removable contamination dropped to non-detectable. Apparently, contamination is fixed on the original roof surface at levels just above the release limit for an average over a square meter area (5,000 dpm/100cm^2).

One (1) sample of the roofing material removed during the investigation was collected and analyzed for radionuclide content. The sample indicated the presence of both natural uranium and thorium, with a thorium concentration equal to 285.7 pCi/gm. No other radionuclide was detected.

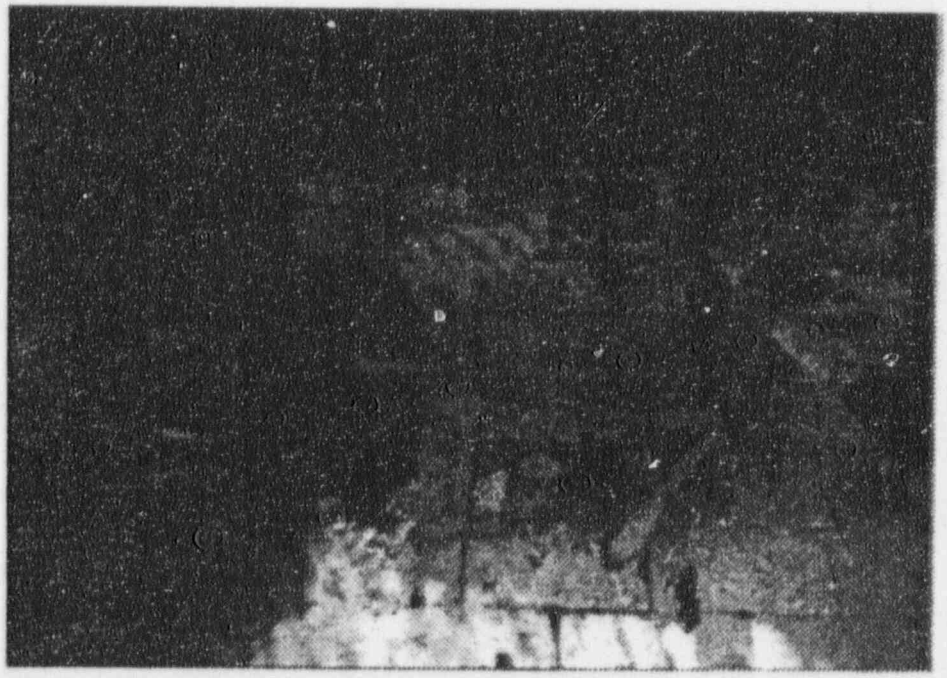
Area I-7: Brick Decking:

The vulnerable area designated as "I-7" was an area of brick decking on the first floor. This area was selected because of its location with respect to a high traffic area and the natural tendency for the brick seams to collect contamination along with water, dirt, dust, sludge, etc. Figure 4.5-7 is a photograph of area I-7 before the intrusive investigation began.

Area I-7's initial fixed and removable beta-gamma contamination levels were not detectable. After removing one of the bricks, contamination levels were measured at a depth of one, two, and three inches. No detectable fixed contamination was discovered, and only one removable contamination reading was discovered at the two inch depth. Its level was only 617 dpm/100cm^2, well below the release limit. It is apparent that no significant contamination has migrated through the brick seams.

Two (2) samples of the brick and mortar removed during the investigation were collected and analyzed for radionuclide content. Both samples indicated the presence of both natural uranium and thorium. One of the samples contained a concentration of thorium equal to 24.83 pCi/gm. The other contained a concentration of 15.97 pCi/gm. No other radionuclide was detected.

Figure 4.5-7



Investigative Area 7

4.6 Test Decontamination Efforts

Four (4) separate locations, representing four different types of structural materials, were selected for test decontamination. The locations consisted of a 6 inch X 6 inch area of the first level concrete floor, a 6 inch X 13 inch area of the painted cement block wall, a 6 inch X 6 inch area of a steel I-beam, and a 6 inch X 6 inch area of an item stored in the radioactive material storage cage. Three (3) of the locations possessed fixed contamination levels above the USNRC Reg Guide 1.86 unrestricted release limit, the forth area possessed only elevated contamination levels which were below release limits.

Each area was subjected to a series of decontamination techniques, starting with the simplest technique and proceeding through more involved methods in accordance with Reference 3.2. The decontamination techniques tested in Building "C" were:

- Tape application/removal
- Cleaning/degreasing solution
- Wire brushing
- Needle gun (single & multiple pass)

Chemical decontamination techniques were not investigated due to the extremely large amount of area requiring decontamination, and the extremely rough, irregular surfaces involved. After a thorough visual inspection and a detailed radiological survey, it was obvious that chemical decontamination of Building "C" would be extremely costly and ineffective.

The results of the test decontamination efforts are reported on individual report forms contained in Appendix D. The following basic observations were made:

1) The tape application and cleaning/degreasing solution techniques were only effective at reducing removable contamination levels on both steel and concrete surfaces. As expected, these simple techniques were not effective at reducing fixed contamination levels.

2) The wire brush technique was effective at reducing fixed contamination levels from deteriorated steel surfaces, however, it was not effective on concrete surfaces.

3) The needle gun technique was by far the most effective at reducing fixed contamination levels on both concrete and steel surfaces. It is judged that general area scabbling would be just as effective as needle gunning concrete surfaces.

4.7 Random Sample Analysis for Hazardous Constituents

Two (2) samples of solid material, collected from the concrete floor in separate locations in Building "C", were analyzed at an independent, off site laboratory for hazardous constituents. The samples were analyzed for RCRA characteristic hazardous waste properties, including TCLP (toxicity), ignitability, corrosivity, and reactivity. Complete results of the two sample analysis are contained in Appendix E. A review of the results reveals the following facts:

- Both samples were negative for characteristic properties of corrosivity, reactivity and ignitability.
- Both samples were below TCLP limits for Metals, Organics, Pesticides/Herbicides and Fluorocarbons.
- The pH of the two samples varied greatly: 5.46 compared to 11.69. This may indicate that the two areas selected for analysis were subjected to vastly different chemicals and/or production operations. Although the pH values differ greatly, neither one is outside of the 2.5 to 12.5 range to be considered corrosive.

From the two samples collected during the radiological assessment, no evidence of a hazardous waste, banned from normal landfill disposal, was detected.

5.0 ASSESSMENT CONCLUSIONS

Based on the results of the radiological assessment described in section 4.0, CWM-Nuclear has developed several basic conclusions related to Building "C"'s radiological situation.

Overall Conclusions

- No external (i.e., whole body) radiation dos hazard exists from the contamination contained i or around Building "C".

- The only radioactive contaminant discovered i Building "C" was natural uranium and it's dec daughter thorium. The source of contamination : most likely due to natural uranium processing conducted in the building during the 1940's and 1950's.

- Several locations on the surface of the first floor possess removable contamination above USNRC Reg Guide 1.86 unrestricted release limits. Most of the detected removable contamination found to be above USNRC release limits was due to beta-gamma emissions. Only one location with alpha contamination above the unrestricted release limits for natural uranium was detected.

- A fixed radioactive contamination problem exists inside the building.

  - Approximately 50% of the floor surfaces are contaminated above USNRC Reg Guide 1.86 release limits. Much of this contamination is detectable through approximately one inch of concrete overlay installed subsequent to the natural uranium processing operations.

  - Many of the building's wall surfaces are contaminated above USNRC Reg Guide 1.86 release limits.

- The randomly selected square meter grids on the building's ceiling surfaces surveyed during the assessment were not contaminated above release limits.

- The original roof surface has been covered by several layers of material (tar and stone) since the deposition of natural uranium contamination.

o Areas adjacent to drain lines and ground floor penetrations were discovered to possess uranium/thorium concentrations above historic USNRC established concentrations for unrestricted release.

o Building "C" currently contains a large and varied amount of chemical residue throughout the building.

APPENDIX A

LIST OF SUBSTANCES STORED IN BUILDING "C"

APPENDIX A

LIST OF SUBSTANCES STORED IN BUILDING "C"

The following is a partial list of substances which were stored in Building "C" upon CWM-Nuclear's arrival on April 20, 1992. The substances were stored in a variety of containers (steel drums, poly drums, paper bags, etc.), many of which were leaking and were the apparent source of surrounding chemical residues.

Potassium Dichromate
Nickel Carbonate
Sodium Bifluoride
Aminophenol
Zinc Nitrate
Boron Trifluoride
Nickel Catalyst
Sodium Hydrosulfide
Calcium Sulfate
Muriatic Acid (HCl)
Zinc Fluoroborate
Hydrated Dolomitic Lime
Merc PTO Benzimidazole
Copper Sulfate
Barium Fluoride
Nickel Chloride Solution Waste (Non-Reg)
Cyanogran (Poison)

APPENDIX B

CONTAMINATION SURVEY DOCUMENTATION FOR BUILDING "C"

FIRST LEVEL FLOOR SURFACES

CONTAMIN/ RADIATION SURVEY RE

10

DATE 4-21-91 | TIME START 1300 | TIME COMP. 1820 | PAGE 1 of 4

ACTIVITY/ LOCATION: Cheuron, Cleveland, OH

SURVEYOR: P. Nevin / B. Bayes; S. Wood / D. Porter / R. Dunlap

PHONE: N/A

MAP I.D.: Plant C First Floor

DAILY / WEEKLY / MONTHLY — CONTAMINATION BAND

DAILY / WEEKLY / MONTHLY — RADIATION SL.

COMMENTS: One smear per grid taken in area with highest probe read

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; — dpm/100 cm² BETA-GAMMA

CACA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; — dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS)

☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR		N/A	
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 # 74076	BETA-GAMMA EXP. # 2527; 2424 # 74076 / LUS 1 # 2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW: D. L. Wilt DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Cheuron plant C ☐ ROUTINE

SWIPE/ PROBE NO.	ALPHA EQUIV. Th230 dpm/ PROBE	ALPHA EQUIV. Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV. Tl-99 dpm/ PROBE	BETA-GAMMA EQUIV. Tl-99 dpm/ 100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	12	<MDA	310	N/A	3-A
2			<MDA			
3			<MDA			
4			<MDA			
5			<MDA			
6		5	<MDA	NO		3-B
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		17	<MDA	35		3-C
12			<MDA			
13			<MDA			
14			<MDA			
15			<MDA			
16		624	14,000 + 5322			3D
17			<MDA			
18	N/A		<MDA		N/A	3D
19			<MDA			
20			<MDA			
21		5	2500 + 35			3E
22			400			
23			<MDA			
24			<MDA			
25			<MDA			
26		32	<MDA	60		4-A
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31		61	<MDA	1724		4-C
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36		15	200	276		4-D
37			200			
38			<MDA			
39			<MDA			
40			<MDA			

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

CO[illegible]ATION/RADIATION SURVEY REPORT
CON[illegible]ATION SHEET

TO: 46275

COMMENTS: SEE COVER SHEET

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

PAGE 2 OF 4

SURVEYOR: B Bayes/P Devin

Survey Number: N/A

DATE: 4-21-92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
41	N/A	12	300	112	N/A	4-E
42			<MDA			
43			<MDA			
44			<MDA			
45			<MDA			
46		15	<MDA	69		4-B
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51		41	10400	672		5-A
52			1200			
53			4900			
54			6000			
55			10100			
56		41	<MDA	245		5-B
57			1500			
58			6900			
59			1400			
60			1100			
61		51	25000	1733		5-C
62			32000			
63			16200			
64			<MDA			
65			11000			
66	✓	54	3200	1121	✓	6-B

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	6-B
68			<MDA			
69			<MDA			
70			<MDA			
71		54	48000	957		6-C
72			55400			
73			34300			
74			13000			
75			10400			
76		159	4000	3233		6-D
77			21000			
78			15000			
79			2000			
80			4000			
81		235	<MDA	1043		6-E
82			<MDA			
83			13000			
84			6000			
85			2000			
86		45	<MDA	235		7-B
87			<MDA			
88			<MDA			
89			<MDA			
90			1800			
91		61	9500	1433		7-C
92	✓		5000		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

C[illegible]INATION/RADIATION SURVEY REPORT
CO[illegible]UATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

PAGE 3 OF 4

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Bayes / P. Nevin

Survey Number: N/A

DATE: 4-21-92

Radcon Review: Old Vault

Date: 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV ___ dpm/PROBE	ALPHA EQUIV ___ dpm/100 cm²	BETA-GAMMA EQUIV. ___ dpm/PROBE	BETA-GAMMA EQUIV. ___ dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
93	N/A		17000 +		N/A	7-C
94			14500 +			
95			6000 +			
96		841	51000 +	15632		7-D
97			27000 +			
98			100000 +			
99			8000 +			
100			<MDA			
101		61	<MDA	1052		7-E
102			200			
103			<MDA			
104			1500			
105			5000 +			
106		32	<MDA	491		8-B
107			<MDA			
108			<MDA			
109			<MDA			
110			<MDA			
111		94	30000 +	328		8-C
112			29000 +			
113			11100 +			
114			19000 +			
115			33000 +			
116		235	2000	1655		8-D
117			19000 +			
118			17000 +			

SWIPE/PROBE NO.	ALPHA EQUIV 6.27 dpm/PROBE	ALPHA EQUIV 6.27 dpm/100 cm²	BETA-GAMMA EQUIV 8.99 dpm/PROBE	BETA-GAMMA EQUIV 8.99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
119	N/A		32000 +		N/A	8-D
120			10500 +			
121		212	6000 +	3243		8-E
122			<MDA			
123			4000 +			
124			300 +			
125			4000 +			
126		12	<MDA	78		9-A
127			<MDA			
128			<MDA			
129			<MDA			
130			<MDA			
131		51	<MDA	5KA		9-B
132			<MDA			
133			<MDA			
134			<MDA			
135			<MDA			
136		51	23000 +	457		9-C
137			300 +			
138			<MDA			
139			5100 +			
140			8300 +			
141			1000			10A
142		29	<MDA	193		
143			<MDA			
144			<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

ANATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor Survey

PAGE 4 OF 4

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Briggs/P. Nelin

Survey Number: N/A

DATE: 4-21-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV 16230 dpm/PROBE	ALPHA EQUIV 16230 dpm/100 cm²	BETA-GAMMA EQUIV. 8.94 dpm/PROBE	BETA-GAMMA EQUIV. 8.94 dpm/100 cm	mrem/hr. BETA-GAMMA / NEUTRON / micro R/hr.	ITEM OR LOCATION
145	N/A		<MDA		N/A	10-A
146		23	<MDA	422		10 B
147			<MDA			
148			<MDA			
149			<MDA			
150			<MDA			
151		1441	52306 + ~~[illegible]~~			10.C
152			1700	20267		
153			<MDA			
154			<MDA			
155			<MDA			
156		2	<MDA	67		19.B
157			<MDA			
158			<MDA			
159			<MDA			
160	✓		<MDA		✓	
					N/A	

SWIPE/PROBE NO	ALPHA EQUIV ___ dpm/PROBE	ALPHA EQUIV ___ dpm/100 cm²	BETA-GAMMA EQUIV ___ dpm/PROBE	BETA-GAMMA EQUIV ___ dpm/100 cm	mrem/hr BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
					N/A	

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMINATION SURVEY AND RADIATION

ID 46875

DATE 4-24-92 | TIME START 1430 | TIME COMPL 1600 | PAGE 1

ACTIVITY/LOCATION: Chevron, Cleveland, OH.

SURVEYOR: P. Nevin/D. Porter

PHONE: N/A

MAP I.D.: Plant C First Floor - Floor

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND DAILY / WEEKLY / MONTHLY ☐ RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA 2929 M 74076	BETA-GAMMA 2929 M 74076 / ESP1 M 2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tc99 dpm/PROBE	BETA-GAMMA EQUIV. Tc99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	15	<MDA	ND	N/A	12-A
2			<MDA			
3			<MDA			
4			<MDA			
5			<MDA			
6		979	7200 + 10829			15-C
7			200			
8			2200			
9			50			
10			<MDA			
11		1232	7200 + 11371			16-C
12			900			
13			<MDA			
14			<MDA			
15			<MDA			
16					N	
17					A	
18						
19						
20						
21						
22						
23						
24						
25						
26						
27					N	
28					A	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

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ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMI SURVEY A / RADIATION

TO 46875

DATE 4-23-92 | TIME START 0800 | TIME COMPL 1600 | PAGE 1 OF 9

ACTIVITY/LOCATION Chevron, Cleveland OH.

SURVEYOR D. Bayes / P. Newin

PHONE N/A

AREA/ID Plant C First Floor-Support Area

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND DAILY / WEEKLY / MONTHLY ☐ RADIATION SURVEY

COMMENTS One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS	CRCA AREA CONTROL LEVELS	
N/A dpm/100 cm² ALPHA	N/A dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
↓ dpm/100 cm² BETA-GAMMA	↓ dpm/100 cm² BETA-GAMMA	☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA *	dpm	cpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA	BETA-GAMMA
	2929 # 74076	2929 # 74076 / ESM # 2413 / ESM # 2332
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON	BETA-GAMMA
	N/A	N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	5	3300	250	N/A	14-L
2			440			
3			2600			
4			4900			
5			2100			
6		5	12800	267		15-L
7			<MDA			
8			340			
9			2040			
10			6530			
11		ND	13100	ND		16-L
12			<MDA			
13			7500			
14			210			
15			21,050			
16		17	55,000	121		17-L
17			1600			
18	N/A		<MDA		N/A	17-L
19			<MDA			
20			5600			
21		9	4900	95		18-L
22			1800			
23			2000			
24			12100			
25			11000			
26		ND	15600	9		19-L
27			21800			
28			10900			
29			2400			
30			9400			
31		2	7800	104		20-L
32			3200			
33			1300			
34			930			
35			700			
36		5	3200	ND		21-L
37			5800			
38			1600			
39			11500			
40			<MDA			

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTIONOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

\MINATION/RADIATION SURVEY REPORT
.NUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

PAGE 2 OF 7

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Fraser / P. Newin

Survey Number: N/A

DATE: 4-23-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
41	N/A	71	84600	474	N/A	22-L
42			49000			
43			35000			
44			91000			
45			49000			
46		91	57000	3076		23-L
47			79000			
48			61000			
49			69,900			
50			54000			
51		40	1600	NO		17-K
52			3700			
53			12300			
54			5500			
55			30,500			
56		12	3000	60		18-K
57			3200			
58			1700			
59			900			
60			9500			
61		12	10,600	45		19-K
62			10700			
63			3900			
64			890			
65		12.5	590	8.5		
66		5	9300	121		20-K

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	20K
68			460			
69			<MDA			
70			<MDA			
71		5	<MDA	9		21-K
72			<MDA			
73			<MDA			
74			<MDA			
75			<MDA			
76		15	69700	276		22-K
77			27,000			
78			57,000			
79			31,000			
80			54,500			
81		101	29,600	466		23-K
82			18,500			
83			29,000			
84			14,500			
85			27,300			
86		92	29000	1507		23-J
87			51,000			
88			50,600			
89			53000			
90			17,700			
91		35	28,000	207		22-J
92			4200			

NO - Not Detectable

RADIOLOGICAL CONTROL

.MINATION/RADIATION SURVEY REPORT
CO...INUATION SHEET

TO: 46875

COMMENTS: SEE COVER SHEET

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

PAGE 3 OF 7

SURVEYOR: B Briggs / P. Devin

Survey Number: N/A

DATE: 4-23-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th 230 dpm/PROBE	ALPHA EQUIV Th 230 dpm/100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/PROBE	BETA-GAMMA EQUIV Tc 99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
93	N/A		3200 +		N/A	22-J
94			2200			
95			1900			
96		ND	<MDA	60		21-J
97			<MDA			
98			500			
99			<MDA			
100			<MDA			
101		2	<MDA	96		20-J
102			<MDA			
103			<MDA			
104			<MDA			
105			<MDA			
106		12	<MDA	90		18-N
107			50			
108			110			
109			14500 +			
110			30000 +			
111		5	72,500 +	94		18-C
112			5100 +			
113			1700			
114			1100			
115		12	2100	125		
116			26700 +			19-N
117			29200 +			
118			23600 +			
119	N/A		6200 +		N/A	19-N
120			6600 +			
121		2	1300	75		19-O
122			900			
123			1200			
124			1550			
125			2200			
126		9	10000 +	102		20-O
127			33700 +			
128			4300 +			
129			65300 +			
130			17200 +			
131		ND	<MDA	95		20-N
132			3800 +			
133			600			
134			2100			
135			1300			
136		12	7400 +	138		23-N
137			7200 +			
138			23500 +			
139			6700 +			
140			<MDA			
141		13	300	243		23-O
142			1400			
143			8000 +			
144			3900 +			

ND - Not Detectable

RADIOLOGICAL CONTROL

FS-RP-036, APPENDIX A
Page 2 Rev. 2/8/90

AMINATION/RADIATION SURVEY REPORT
INUATION SHEET

TO: 46875

COMMENTS: SEE COVER SHEET

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

PAGE 4 OF 7

SURVEYOR: B Bayes / P. Nevin

Survey Number: N/A

DATE: 4-23-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th230 dpm/ PROBE	ALPHA EQUIV Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc99 dpm/ PROBE	BETA-GAMMA EQUIV Tc99 dpm/ 100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
145	N/A		3700 +		N/A	23-O
146		13	8700 +	NO		22-O
147			12200 +			
148			6900 +			
149			2500 +			
150			280			
151		18	<MDA	95		22-N
152			<MDA			
153			2600 +			
154			9600 +			
155			1700			
156		2	13500 +	86		21-N
157			<MDA			
158			<MDA			
159			<MDA			
160			<MDA			
161		18	<MDA	60		21-O
162			<MDA			
163			2200			
164			1200			
165			<MDA			
166		29	30,100 +	164		14-M
167			12,600 +			
168			71,000 +			
169			31,500 +			
170			36,900 +			

SWIPE/ PROBE NO	ALPHA EQUIV Th230 dpm/ PROBE	ALPHA EQUIV Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc99 dpm/ PROBE	BETA-GAMMA EQUIV Tc99 dpm/ 100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
171	N/A	146	29,000 +	1121	N/A	15-M
172			69,000 +			
173			54,500 +			
174			51,000 +			
175			4,600 +			
176		22	85,400 +	181		16-M
177			59,000 +			
178			124,000 +			
179			41,000 +			
180			73,200 +			
181		28	64,700 +	NO		17-M
182			56,600 +			
183			20,000 +			
184			41,100 +			
185			56,100 +			
186		42	101,000 +	302		18-M
187			72,000 +			
188			74,000 +			
189			29,000 +			
190			6,100 +			
191		32	59,000 +	285		19-M
192			125,000 +			
193			73,000 +			
194			65,400 +			
195			67,100 +			
196		15	51,000 +	224		20-M

NO - Not Detectable

RADIOLOGICAL CONTROL

FS-RP-036, APPENDIX A
Page 2 Rev. 2/8/90

MINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875 | ACTIVITY/LOCATION: Chevron | MAP ID: Plant C First Floor | PAGE 5 OF 7

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Bryges / P. Nevin | Survey Number: N/A | DATE: 4-23-92

Radcon Review: D. L. A Vilt | Date: 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
197	N/A		54,800 ±		N/A	20-M
198			45,200 ±			
199			109,000 ±			
200			141,000 ±			
201		18	90,400 ±	259		21-M
202			78,400 ±			
203			50,600 ±			
204			84,000 ±			
205			81,000 ±			
206		28	77,500 ±	155		22-M
207			63,800 ±			
208			77,200 ±			
209			100,000 ±			
210			63,500 ±			
211		71	19,000 ±	724		23-M
212			34,100 ±			
213			22,000 ±			
214			44,400 ±			
215			46,600 ±			
216		35	12,700 ±	95		2-O
217			2,000			
218			<MDA			
219			13,500 ±			
220			24,700 ±			
221		38	10,500 ±	543		2-N
222			<MDA			

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
223	N/A		<MDA		N/A	2-N
224			<MDA			
225			<MDA			
226		2	<MDA	ND		14-P
227			<MDA			
228			<MDA			
229			<MDA			
230			<MDA			
231		27	17,500 ±	121		5-K
232			<MDA			
233			<MDA			
234			<MDA			
235			<MDA			
236		32	3400 ±	224		5-L
237			1700			
238			1200			
239			10,300 ±			
240			2300			
241		30	5200 ±	405		4-L
242			5300 ±			
243			<400			
244			<MDA			
245			<MDA			
246		2	<MDA	77		3-L
247			2500 ±			
248			<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

ó /AMINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875 | ACTIVITY/LOCATION: Chevron | MAP ID: Plant C_ First Floor | PAGE 6 OF 7

COMMENTS: SEE COVER SHEET

SURVEYOR: B Dayes/P Nevin | Survey Number: N/A | DATE: 4-23-92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
249	N/A		<MDA		N/A	3-L
250			2500 +			
251		5	<MDA	52		2-L
252			<MDA			
253			<MDA			
254			<MDA			
255			<MDA			
256		18	<MDA	95		4-K
257			4500 +			
258			<MDA			
259			<MDA			
260			<MDA			
261		18	13200 +	103		3-K
262			11,000 +			
263			<MDA			
264			1900			
265			<MDA			
266		29	<MDA	250		2-K
267			4500 +			
268			300			
269			<MDA			
270			<MDA			
271		5	<MDA	95		4-J
272			3400 +			
273			160			
274			2700 +			

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
275	N/A		3300 +		N/A	4-J
276		2	900	ND		3-J
277			<MDA			
278			3900 +			
279			1300			
280			<MDA			
281		29	1200	216		13-M
282			2200			
283			2000			
284			3200 +			
285			2700 +			
286		12	200	121		5-M
287			2400 +			
288			<MDA			
289			17,900 +			
290			41,200 +			
291		12	<MDA	129		4-M
292			<MDA			
293			<MDA			
294			2900 +			
295			<MDA			
296		9	<MDA	104		3-M
297			2100			
298			<MDA			
299			200			
300			<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

ID: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor

COMMENTS: SEE COVER SHEET

SURVEYOR: B Bryges/P Newin

Survey Number: N/A

DATE: 4-23-92

Radcon Review [signature] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
301	N/A	5	<MDA	96	N/A	2-M
302			<MDA			
303			300			
304			<MDA			
305			<MDA			
306		2	<MDA	310		1-K
307			<MDA			
308			10,100 +			
309			14,300 +			
310			<MDA			
311		ND	3200 +	72		1-J
312			<MDA			
313			14,600 +			
314			7600 +			
315			<MDA			
316		ND	40,700 +	43		2-J
317			400			
318			22,300 +			
319			<MDA			
320			<MDA			
321		ND	800	17		1-L
322			<MDA			
323			<MDA			
324			<MDA			
325			<MDA			
326		ND	<MDA	ND		9-O

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
327	N/A		<MDA		N/A	9-O
328			<MDA			
329			<MDA			
330			<MDA			
331		2	<MDA	43		10-O
332			<MDA			
333			<MDA			
334			<MDA			
335			<MDA			
336		9	<MDA	69		11-O
337			<MDA			
338			<MDA			
339			<MDA			
340			<MDA			
341		2	1200	129		10-N
342			900			
343			<MDA			
344	✓		<MDA		✓	
345			<MDA			
346						
347						
348				N		
349				A		
350						
351						
352						

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMIN/ RADIATION SURVEY RE | TO | DATE 4/22/92 | TIME START 0800 | TIME COMP. 1640 | PAGE 1 of 9

ACTIVITY/ LOCATION: Chevron Cleveland, OH

SURVEYOR: B. Bayes / P. Nevin

PHONE: N/A

MAP I.D.: Warehouse - First Floor Plant C

DAILY / WEEKLY / MONTHLY: CONTAMINATION AND RADIATION SU.

COMMENTS: First Floor suspect area survey. One smear per grid taken in area with highest probe reading

PERMISSIBLE LEVELS	CBCA AREA CONTROL LEVELS	
N/A dpm/100 cm² ALPHA	N/A dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
— dpm/100 cm² BETA-GAMMA	— dpm/100 cm² BETA-GAMMA	☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE NO.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	SEE DATA SHEETS cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	BAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA	BETA-GAMMA
	2929 # 74076	2929 # 74076 / ESP 1 # 2378 / ESP 1 # 2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON	BETA-GAMMA
	N/A	N/A

RADCON REVIEW: D. L. Ault DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/ PROBE NO.	ALPHA EQUIV Th 232 dpm/ PROBE	ALPHA EQUIV Th 232 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	2	<MDA	ND	N/A	3F
2			<MDA			
3			<MDA			
4			<MDA			
5			<MDA			
6		5	<MDA	103		4F
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		23	<MDA	155		9F
12			<MDA			
13			<MDA			
14			<MDA			
15			<MDA			
16		3	<MDA	ND		10F
17			<MDA			
18	N/A		<MDA		N/A	10F
19			<MDA			
20			<MDA			
21		12	<MDA	138		10G
22			Broot			
23			<MDA			
24			<MDA			
25			<MDA			
26		5	<MDA	164		9G
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31		5	110C	43		10H
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36		ND	<MDA	103		10I
37			<MDA			
38			<MDA			
39			<MDA			
40			<MDA			

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

C. :INATION/RADIATION SURVEY REPORT
CON:INUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: First Floor Plant C

PAGE 2 OF 8

COMMENTS: SEE COVER SHEET

SURVEYOR: BBrooks/PNewin

Survey Number: N/A

DATE: 4-22-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
41	N/A	ND	<MDA	ND	N/A	9 I
42			<MDA			
43			770			
44			2350+			
45		5	<MDA	155		
46			<MDA			9 H
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51		2	1020	172		8 H
52			<MDA			
53			<MDA			
54			<MDA			
55			<MDA			
56		143	320	586		8 I
57			400			
58			<MDA			
59			<MDA			
60			<MDA			
61		ND	<MDA	60		7 I
62			2910			
63			2430+			
64			1560			
65			6770+			
66	✓	12	<MDA	164	✓	7 H

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	7 H
68			<MDA			
69			<MDA			
70			<MDA			
71		ND	<MDA	69		11 F
72			<MDA			
73			<MDA			
74			5500			
75			<MDA			
76		28	<MDA	103		12 F
77			<MDA			
78			<MDA			
79			<MDA			
80			<MDA			
81		28	1350	112		13 F
82			<MDA			
83			<MDA			
84			<MDA			
85			<MDA			
86		15	<MDA	224		14 F
87			<MDA			
88			<MDA			
89			<MDA			
90			<MDA			
91		9	2400+	121	✓	11-G
92	✓		<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

AMINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chemsen

MAP ID: Plant C First Floor

PAGE 3 OF 8

COMMENTS: SEE COVER SHEET

SURVEYOR: B Burgess/P Nevin

Survey Number: N/A

DATE: 4-22-92

Radcon Review: D. Ault

Date: 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV TL230 dpm/PROBE	ALPHA EQUIV TL230 dpm/100 cm²	BETA-GAMMA EQUIV TL99 dpm/PROBE	BETA-GAMMA EQUIV TL99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
93	N/A		<MDA		N/A	11-G
94			<MDA			
95			<MDA			
96		48	<MDA	431		12-G
97			<MDA			
98			<MDA			
99			<MDA			
100			<MDA			
101		22	<MDA	379		13-G
102			<MDA			
103			<MDA			
104			<MDA			
105			<MDA			
106		28	<MDA	362		14-G
107			<MDA			
108			<MDA			
109			<MDA			
110			<MDA			
111		ND	1800	ND		11-H
112			<MDA			
113			<MDA			
114			<MDA			
115			<MDA			
116		5	<MDA	72		12-H
117			<MDA			
118	✓		<MDA		✓	

SWIPE/PROBE NO	ALPHA EQUIV TL230 dpm/PROBE	ALPHA EQUIV TL230 dpm/100 cm²	BETA-GAMMA EQUIV TL99 dpm/PROBE	BETA-GAMMA EQUIV TL99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
119	N/A		<MDA		N/A	12-H
120			<MDA			
121		9	<MDA	86		13-H
122			<MDA			
123			<MDA			
124			<MDA			
125			<MDA			
126		5	<MDA	17		14-H
127			<MDA			
128			<MDA			
129			<MDA			
130			<MDA			
131		5	<MDA	190		11-I
132			<MDA			
133			<MDA			
134			<MDA			
135			<MDA			
136		310	<MDA	810		12-I
137			5000			
138			1900			
139			700			
140			<MDA			
141		15	<MDA	52		13-I
142			<MDA			
143			<MDA			
144	✓		<MDA		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

ATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

JOB: 46875	ACTIVITY/LOCATION: Chevron	MAP ID: Plant C First Floor	PAGE 4 OF 8
COMMENTS: SEE COVER SHEET	SURVEYOR: B Bayes/P Nevin	Survey Number: N/A	DATE: 4/22/92
Radcon Review: D. Lakatt	Date: 4-28-92	NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.	

SWIPE/PROBE NO.	ALPHA EQUIV Th232 dpm/PROBE	ALPHA EQUIV Th232 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm²	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
145	N/A		<MDA		N/A	13-I
146		5	<MDA	60		14-I
147			<MDA			
148			<MDA			
149			<MDA			
150			<MDA			
151		241	3000 +	3172		15-F
152			26000 +			
153			38000 +			
154			14000 +			
155			19000 +			
156		5	17000 +	324		15-G
157			35000 +			
158			15500 +			
159			10500 +			
160			4200 +			
161		54	1300	647		15-H
162			400			
163			<MDA			
164			<MDA			
165			7000 +			
166		22	47000 +	129		15-I
167			22000 +			
168			26000 +			
169			13000 +			
170	✓		9000 +		✓	

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm²	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
171	N/A	54	400	552	N/A	16-F
172			<MDA			
173			<MDA			
174			700			
175			<MDA			
176		28	4000 +	267		16-G
177			15000 +			
178			4000 +			
179			12000 +			
180			<MDA			
181		48	27500 +	345		16-H
182			15000 +			
183			2000			
184			4500 +			
185			<MDA			
186		48	40500 +	379		16-I
187			49000 +			
188			1400			
189			2400 +			
190			400			
191		110	3700 +	371		17-F
192			2200			
193			<MDA			
194			<MDA			
195			<MDA			
196	✓	12	1000	172	✓	17-G

ND - Not Detectable

RADIOLOGICAL CONTROL

ℓ ...AMINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAPED: Plant C First Floor

COMMENTS: SEE COVER SHEET

SURVEYOR: B Bayes / P Nevin

Survey Number: N/A

DATE: 4/22/92

Radcon Review: [illegible] Date: 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th232 dpm/PROBE	ALPHA EQUIV Th232 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON mrem R/hr	ITEM OR LOCATION
197	N/A		2000		N/A	17-G
198			1200			
199			300			
200			300			
201		28	700	78		17-H
202			<MDA			
203			700			
204			<MDA			
205			3200 +			
206		12	<MDA	190		17-I
207			<MDA			
208			300			
209			300			
210			<MDA			
211		5	<MDA	26		14-J
212			<MDA			
213			<MDA			
214			<MDA			
215			<MDA			
216		49	<MDA	129		14-K
217			<MDA			
218			<MDA			
219			<MDA			
220			<MDA			
221		12	<MDA	164		15-J
222			<MDA			

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON mrem R/hr	ITEM OR LOCATION
223	N/A		<MDA		N/A	15-J
224			<MDA			
225			<MDA			
226		45	<MDA	181		15-K
227			<MDA			
228			<MDA			
229			1320			
230			<MDA			
231		9	<MDA	69		16-J
232			4320 +			
233			5100 +			
234			<MDA			
235			<MDA			
236		41	3600 +	191		16-K
237			3600 +			
238			16000 +			
239			[illegible] +			
240			3000 +			
241		9	<MDA	UC		5-H
242			940			
243			620			
244			<MDA			
245			<MDA			
246		29	<MDA	293		5-I
247			<MDA			
248			<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875

COMMENTS: SEE COVER SHEET

ACTIVITY/LOCATION: Chevron

MAP I.D.: Plant C First Floor

PAGE 6 OF 8

SURVEYOR: B. Bruyas/P. Newh

Survey Number: N/A

DATE: 4/22/92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

Radcon Review [signature] Date 4-28-92

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA	mrem/hr NEUTRON	mrem/hr	ITEM OR LOCATION
249	N/A		<MDA		N/A			5-I
250			<MDA					
251		28	<MDA	319				5-J
252			1550					
253			2480 +					
254			1520					
255			320					
256		136	760	681				6-J
257			5000 +					
258			2500 +					
259			4700 +					
260			7000 +					
261		297	<MDA	3457				6-K
262			<MDA					
263			2400 +					
264			6100 +					
265			3170 +					
266		25	14400 +	310				6-L
267			8500 +					
268			5300 +					
269			33500 +					
270			9600 +					
271		45	2600	155				6-M
272			3300 +					
273			4600 +					
274			4300 +					

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA	mrem/hr NEUTRON	mrem/hr	ITEM OR LOCATION
275	N/A		2000		N/A			6-M
276		9	<MDA	78				7-J
277			<MDA					
278			<MDA					
279			<MDA					
280			<MDA					
281		36	980	104				7-K
282			4100 +					
283			1100					
284			1540 +					
285			750					
286		12	720	138				7-L
287			1530					
288			1320					
289			1500					
290			4100 +					
291		15	270	216				7-M
292			1670					
293			260					
294			4940 +					
295			ND					
296		9	<MDA	17				8-J
297			<MDA					
298			<MDA					
299			<MDA					
300			<MDA					

ND - Not Detectable

RADIOLOGICAL CONTROL

AMINATION/RADIATION SURVEY REPORT
INUATION SHEET

ID: 46875 | ACTIVITY/LOCATION: Chevron | MAP ID: Plant C First Floor | PAGE 7 OF 8

COMMENTS: SEE COVER SHEET | SURVEYOR: B Bayers/P Nevin | Survey Number: N/A | DATE: 4/22/92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th230 dpm/ PROBE	ALPHA EQUIV Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc99 dpm/ PROBE	BETA-GAMMA EQUIV Tc99 dpm/ 100 cm²	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
301	N/A	12	<MDA	279	N/A	8-K
302			100			
303			<MDA			
304			<MDA			
305			<MDA			
306		29	1300	95		8-L
307			900			
308			1700			
309			1000			
310			500			
311		12	1540	198		8-M
312			<MDA			
313			<MDA			
314			900			
315			1010			
316		15	<MDA	172		9-J
317			<MDA			
318			<MDA			
319			<MDA			
320			<MDA			
321		41	<MDA	224		9-K
322			<MDA			
323			<MDA			
324			<MDA			
325			<MDA			
326		12	2700+	207		9-L

SWIPE/ PROBE NO	ALPHA EQUIV Th230 dpm/ PROBE	ALPHA EQUIV Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc99 dpm/ PROBE	BETA-GAMMA EQUIV Tc99 dpm/ 100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
327	N/A		<MDA		N/A	9-L
328			2700+			
329			<MDA			
330			<MDA			
331		32	800	207		10-J
332			200			
333			<MDA			
334			2900+			
335			<MDA			
336		22	<MDA	447		10-K
337			<MDA			
338			1000			
339			1000			
340			<MDA			
341		9	1400	ND		10-L
342			300			
343			100			
344			<MDA			
345			750			
346		28	<MDA	491		11-J
347			<MDA			
348			<MDA			
349			<MDA			
350			<MDA			
351		32	1500	810		11-K
352			<MDA			

ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
C. ,NUATION SHEET

ID: 46875	ACTIVITY/LOCATION: Chevron	MAP ID: Plant C First Floor	PAGE 8 OF 8
COMMENTS: SEE COVER SHEET	SURVEYOR: B. Byers / P Newin	Survey Number: N/A	DATE: 4/22/92

Radcon Review [signature] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
353	N/A		160		N/A	11-K
354			1100			
355			<MDA			
356		12	<MDA	ND		11-L
357			<MDA			
358			<MDA			
359			1200			
360			<MDA			
361		9	<MDA	354		12-J
362			<MDA			
363			1200			
364			<MDA			
365			<MDA			
366		23	<MDA	129		12-K
367			<MDA			
368			<MDA			
369			<MDA			
370			<MDA			
371		2	1870	52		12-L
372			240			
373			<MDA			
374			<MDA			
375			1020			
376		5	<MDA	52		13-J
377			930			
378			790			

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
379	N/A		<MDA		N/A	13-J
380			<MDA			
381		9	<MDA	43		13-L
382			<MDA			
383			<MDA			
384			<MDA			
385			<MDA			
386		2	<MDA	43		18-F
387			<MDA			
388			<MDA			
389			<MDA			
390			<MDA			
391		2	<MDA	52		19-F
392			<MDA			
393			<MDA			
394			<MDA			
395			<MDA			
396						
397						
398				N		
399				A		
400						
401						
402						
403						
404						

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMINATION/RADIATION SURVEY

TO 46875

DATE 4-24-92 | TIME START 1350 | TIME COMPL 1530 | PAGE 1 OF 1

ACTIVITY/LOCATION: Chevron, Cleveland, OH.

SURVEYOR: P. Newin / D. Porter

PHONE: N/A

MAP I.D.: Plant C - First Floor Non-Support Floor

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND DAILY / WEEKLY / MONTHLY ☐ RADIATION EY

COMMENTS: One smear per grid taken in area with highest probe reading

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

CBCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS)

☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE		cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA *	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.: ALPHA 2929 # 74076; BETA-GAMMA 2929 # 74076 / ESP 1 # 2413

RADIATION SURVEY INSTRUMENT TYPE/TAG NO.: NEUTRON N/A; BETA-GAMMA N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV 1230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV 1699 dpm/PROBE	BETA-GAMMA dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	18	<MDA	310	N/A	O-i
2			6200+			
3			20,100+			
4			13,900+			
5			<MDA			
6		22	<MDA	241		N-i
7			<MDA			
8			<MDA			
9			<MDA			
10	V		<MDA		V	
11						
12						
13						
14					N/A	
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28					N/A	
29						
30						
31						
32						
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35						
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39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES

ND - Not Detectable

RADIOLOGICAL CONTROL

SECOND LEVEL FLOOR SURFACES

CONTAMINAT RADIATION SURVEY REP

TO 46875

DATE 4/21/92 | TIME START 0930 | TIME COMPL 1430 | PAGE 1 2

ACTIVITY/LOCATION: Chevron, Cleveland, OH

SURVEYOR: B. Bayes / P. Uevlin / S. Wood; D. Pastor / R. Dunlap

PHONE: N/A

MAP ID: Plant C - Second Floor - suspect grids

L WK MONTHLY ☐ ☐ ☐ CONTAMINATION AND DAILY WEEKLY MONTHLY ☐ ☐ ☐ RADIATION SURV

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; K dpm/100 cm² BETA-GAMMA

CBCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; K dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 # 74076	BETA-GAMMA AM-2C # 1442; 2929 # 74076 / ESP1 # 2381
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A	BETA-GAMMA N/A

RAD/CON REVIEW [signature] DATE 4-21-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tl99 dpm/PROBE	BETA-GAMMA EQUIV. Tl99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	61	13400 +	655	N/A	2-B
2			6100 +			
3			12300 +			
4			16000 +			
5			9400 +			
6		41	8600 +	483		2-C
7			10500 +			
8			12000 +			
9			22300 +			
10			12400 +			
11		28	21000 +	72		2-D
12			21400 +			
13			32000 +			
14			2100 +			
15			7600 +			
16		2	13400 +	95		2-E
17			13600 +			
18	N/A		16400 +		N/A	2-E
19			23000 +			
20			23400 +			
21		62	30000 +	922		3-D
22			26000 +			
23			7200 +			
24			14300 +			
25			5400 +			
26		12	10400 +	78		3-E
27			20000 +			
28			13000 +			
29			10000 +			
30			14400 +			
31		9	1000	121		5-E
32			2500 +			
33			600			
34			4600 +			
35			2600 +			
36		5	10000 +	NC		6-D
37			4200 +			
38			4400 +			
39			10900 +			
40			7100 +			

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ND - Not Detectable

RADIOLOGICAL CONTROL

ANATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

JOB: 46875	ACTIVITY/LOCATION: Chevron	MAPED: Plant C-Second Floor-Subpart	PAGE 2 OF 2
COMMENTS: SEE COVER SHEET	SURVEYOR: B. Bagel / P Uvin	Survey Number: N/A	DATE: 4/21/92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl45 dpm/PROBE	BETA-GAMMA EQUIV Tl45 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
41	N/A	2	13100 ↓	ND	N/A	6-E
42			21000 ↓			
43			11400 ↓			
44			27500 ↓			
45			5200 ↓			
46		ND	<MDA	52		8-B Roof
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51		ND	<MDA	86		8-D Roof
52			<MDA			
53			<MDA			
54			<MDA			
55			<MDA			
56		ND	<MDA	ND		8-E Roof
57			<MDA			
58			<MDA			
59			<MDA			
60			<MDA			
61		ND	<MDA	ND		8-F Roof
62			<MDA			
63			1500			
64			<MDA			
65			<MDA			
66	✓	ND	<MDA	95	✓	10-C Roof

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	10-C Roof
68			<MDA			
69			<MDA			
70			<MDA			
71		NC	<MDA	NC		11-D Roof
72			<MDA			
73			<MDA			
74			<MDA			
75			<MDA			
76		NC	<MDA	132		11-E Roof
77			<MDA			
78			<MDA			
79			<MDA			
80	✓		<MDA		✓	
					N/A	

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMIN / RADIATION SURVEY RE:

ID 46875

DATE 4-23-92 | TIME START 1320 | TIME COMP. 1630 | PAGE 1

ACTIVITY/LOCATION: Cheuron, Cleveland OH

SURVEYOR: B Dayes | PHONE: N/A

MAP ID: Plant C - Second Floor non-suspect

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND ☐ DAILY / WEEKLY / MONTHLY ☐ RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

CECA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA *	dpm	dpm	PAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.: ALPHA 2929 # 74076; BETA-GAMMA 2929 # 74076 / ESF 1 # 2372

RADIATION SURVEY INSTRUMENT TYPE/TAG NO.: NEUTRON N/A; BETA-GAMMA N/A

RADCON REVIEW: [illegible] DATE: 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Cheuron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tc99 dpm/PROBE	BETA-GAMMA EQUIV. Tc99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ other R/hr. ☐	ITEM OR LOCATION
1	N/A	23	4100 +	302	N/A	4-D
2			7500 +			
3			<MDA			
4			<MDA			
5			<MDA			
6		40	<MDA	20		4.C
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		5	70	129		5-A
12			<MDA			
13			3400 +			
14			1200			
15			<MDA			
16		5	600	9		6-A
17	✓		<MDA		✓	
18	N/A		<MDA		N/A	6-A
19	✓		<MDA		✓	
20			<MDA			
21						
22						
23						
24						
25						
26						
27						
28						
29					N/A	
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAM/ RADIATION SURVEY R.

ID 46875

DATE 4-24-92 | TIME START 1330 | TIME COMPL 1410 | PAGE 1

ACTIVITY/ LOCATION: Chevron Cleveland, OH

SURVEYOR: P. Newin/D. Porter

PHONE: N/A

MAP ID: Plant C - Second Floor Non-support Floor

DAILY / WEEKLY / MONTHLY — CONTAMINATION AND — DAILY / WEEKLY / MONTHLY — RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS)
☑ NU ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA +	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929# 74076	BETA-GAMMA 2929# 74076/ESP1# 2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW: [signature] DATE 4-28-92

REASON FOR SURVEY
☐ PROCEDURE—NO. _____
☑ SPECIAL Assessment of Chevron Plant C.
☐ ROUTINE _____

SWIPE/ PROBE NO.	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA dpm/ 100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	9	40,000 +	ND	N/A	P-ii
2			24,000 +			
3			1000			
4			2000			
5			<MDA			
6		ND	4,000 +	ND		D-i
7			40,000 +			
8			31,000 +			
9			200			
10			700			
11		17	<MDA	ND		O-ii
12			<MDA			
13			<MDA			
14			<MDA			
15	V		<MDA		V	
16					N	
17					A	

SWIPE/ PROBE NO.	ALPHA EQUIV ___ dpm/ PROBE	ALPHA dpm/ 100 cm²	BETA-GAMMA EQUIV ___ dpm/ PROBE	BETA-GAMMA dpm/ 100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
18						
19						
20						
21						
22						
23						
24						
25						
26						
27					N	
28					A	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

THIRD LEVEL FLOOR SURFACES

CONTAMIN/ RADIATION SURVEY R

ID 46875

DATE 4-24-92 | TIME START 1330 | TIME COMPL 1500 | PAGE 1 of 1

ACTIVITY/ LOCATION Chevron Cleveland, OH

SURVEYOR P. Nevin | R. Dunkep | PROBE N/A

MAP ID Plant C - Third Floor - Dunsmore Floor

☐ WEEKLY ☐ MONTHLY ☐ CONTAMINATION AND ☐ DAILY ☐ WEEKLY ☐ MONTHLY RADIATION SURVEY

COMMENTS One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

CECA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; V dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE		cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 #74076
	BETA-GAMMA 2929/74076/ESP-1 #2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A
	BETA-GAMMA N/A

RADCON REVIEW [illegible] DATE 4-28-92

REASON FOR SURVEY ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/ PROBE NO	ALPHA EQUIV Th230 dpm/ PROBE	ALPHA dpm/ 100 cm²	BETA-GAMMA EQUIV Tl99 dpm/ PROBE	BETA-GAMMA dpm/ 100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	9	49000	104	N/A	P-ii
2			74000			
3			24000			
4			LMDA			
5			LMDA			
6		202	205000	1349		O-ii
7			174000			
8			195000			
9			102000			
10			55000			
11		9	42000	86		O-i
12			40000			
13			24000			
14	V		200		V	
15			700			
16					N A	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28					N A	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

SWIPE/ PROBE NO	ALPHA EQUIV ____ dpm/ PROBE	ALPHA dpm/ 100 cm²	BETA-GAMMA EQUIV ____ dpm/ PROBE	BETA-GAMMA dpm/ 100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

WALL SURFACES

CONTAMIN / RADIATION SURVEY RE

ID 46875

DATE 4-24-92 | TIME START 0730 | TIME COMPL 1400 | PAGE 1 of 6

ACTIVITY/LOCATION: Chevron, Cleveland, OH

SURVEYOR: B. Bayes / P. Nevin; D. Porter / R. Dunkup

PHONE: N/A

MAP I.D.: Plant C - First Floor walls

SURVEY: WEEKLY / MONTHLY — CONTAMINATION AND — DAILY / WEEKLY / MONTHLY — RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS	CDCA AREA CONTROL LEVELS	
N/A dpm/100 cm² ALPHA	N/A dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
↓ dpm/100 cm² BETA-GAMMA	↓ dpm/100 cm² BETA-GAMMA	☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA	BETA-GAMMA
	2929 M 74076	2929 M 74076 / ESP-*2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON	BETA-GAMMA
	N/A	N/A

RADCON REVIEW: [signature] DATE: 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV. Tc99 dpm/PROBE	BETA-GAMMA dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	15	1200	104	N/A	9I-4
2			40,400 *			
3			55,200 *			
4			37,300 *			
5			91,900 *			
6		19	<MDA	95		6H-12
7			<MDA			
8			<MDA			
9			<MDA			
10			640			
11		5	<MDA	ND		10G-1
12			1400			
13			1300			
14			330			
15			<MDA			
16		15	<MDA	95		10F-10
17			<MDA			

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
18	N/A		<MDA		N/A	10F-10
19			<MDA			
20			<MDA			
21		2	<MDA	129		8F-2
22			<MDA			
23			620			
24			1050			
25			<MDA			
26		ND	<MDA	17		5F-3
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31		2	<MDA	ND		5F-12
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36		ND	<MDA	ND		3F-1
37			<MDA			
38			<MDA			
39			<MDA			
40			<MDA			

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ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
NUATION SHEET

ID: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor walls

PAGE 2 OF 6

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Bayes | P Newin

Survey Number: N/A

DATE: 4-24-92

Radcon Review: [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th 230 dpm/PROBE	ALPHA EQUIV Th 230 dpm/100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/PROBE	BETA-GAMMA EQUIV Tc 99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
41	N/A	2	<MDA	ND	N/A	12 I-12
42			<MDA			
43			<MDA			
44			<MDA			
45			<MDA			
46		12	<MDA	26		14 I-3
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51		5	1140	132		13 F-2
52			3900 ±			
53			640			
54			<MDA			
55			<MDA			
56		54	3630 ±	190		11 F-14
57			<MDA			
58			<MDA			
59			<MDA			
60			<MDA			
61		159	2200 ±	1095		11 F-2
62			3100 ±			
63			3600 ±			
64			9300 ±			
65			12600 ±			
66	✓	2	<MDA	ND	✓	15 F-12

SWIPE/PROBE NO	ALPHA EQUIV Th 230 dpm/PROBE	ALPHA EQUIV Th 230 dpm/100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/PROBE	BETA-GAMMA EQUIV Tc 99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	15 F-12
68			<MDA			
69			<MDA			
70			<MDA			
71		5	<MDA	60		11 I-3
72			<MDA			
73			<MDA			
74			<MDA			
75			<MDA			
76		2	<MDA	ND		16 J-10
77			<MDA			
78			<MDA			
79			<MDA			
80			<MDA			
81		2	<MDA	60		15 K-2
82			<MDA			
83			<MDA			
84			<MDA			
85			<MDA			
86		ND	<MDA	35		14 J-2
87			<MDA			
88			<MDA			
89			<MDA			
90			<MDA			
91		5	<MDA	35		14 K-10
92	✓		<MDA		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

ANATION/RADIATION SURVEY REPORT
C. UATION SHEET

TO: 46875

COMMENTS: SEE COVER SHEET

Radcon Review [signature] Date 4-28-92

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor walk

PAGE 3 OF 6

SURVEYED: B. Bayes/P. Nevin

Survey Number: N/A

DATE: 4-24-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Cs 99 dpm/ PROBE	BETA-GAMMA EQUIV Cs 99 dpm/ 100 cm	mrem/hr. BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
93	N/A		<MDA		N/A	14K-10
94			<MDA			
95			<MDA			
96		ND	<MDA	69		17I-14
97			<MDA			
98			<MDA			
99			<MDA			
100			<MDA			
101		9	470	86		15G-3
102			410			
103			<MDA			
104			<MDA			
105			<MDA			
106		2	300	86		17F-3
107			1900			
108			<MDA			
109			<MDA			
110			1100			
111		ND	<MDA	ND		19G-10
112			<MDA			
113			<MDA			
114			<MDA			
115			<MDA			
116		ND	<MDA	26		23J-14
117	✓		<MDA			
118	✓		<MDA		✓	

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm	BETA-GAMMA EQUIV Cs 99 dpm/ PROBE	BETA-GAMMA EQUIV Cs 99 dpm/ 100 cm	mrem/hr BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
119	N/A		<MDA		N/A	~~N/A~~ 23J-14
120			<MDA			
121		ND	<MDA	ND		22J-1
122			<MDA			
123			<MDA			
124			<MDA			
125			<MDA			
126		22	12,300 ←	ND		23M-3
127			43,100 ←			
128			32,000 ←			
129			31,700 ←			
130			35,000 ←			
131		15	<MDA	138		21N-12
132			<MDA			
133			<MDA			
134			<MDA			
135			<MDA			
136		ND	300	86		18N-16
137			<MDA			
138			<MDA			
139			<MDA			
140			<MDA			
141		ND	<MDA	ND		19O-3
142			<MDA			
143	✓		<MDA			
144	✓		<MDA		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

FS-RP-036, APPENDIX A
Page 2 Rev. 2/8/90

LMINATION/RADIATION SURVEY REPORT
NUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor Walls

PAGE 4 OF 6

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Bayes / P. Nevin

Survey Number: N/A

DATE: 4-24-92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
145	N/A		<MDA		N/A	15-O-3
146		5	730	69		12K-2
147			<MDA			
148			<MDA			
149			<MDA			
150			<MDA			
151		130	19700 ± 388			14M-4
152			51,600 k			
153			111,400 k			
154			92,500 k			
155			16600 k			
156		5	<MDA	104		15-O-12
157			<MDA			
158			<MDA			
159			<MDA			
160			<MDA			
161		5	<MDA	112		16K-3
162			<MDA			
163			<MDA			
164			<MDA			
165			<MDA			
166		9	<MDA	95		14L-14
167			<MDA			
168			<MDA			
169			<MDA			
170			<MDA			

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
171	N/A	ND	<MDA	9	N/A	14K-12
172			<MDA			
173			<MDA			
174			<MDA			
175			<MDA			
176		5	<MDA	52		13I-1
177			<MDA			
178			<MDA			
179			<MDA			
180			<MDA			
181		12	<MDA	43		13L-14
182			<MDA			
183			<MDA			
184			<MDA			
185			<MDA			
186		9	<MDA	43		13N-2
187			<MDA			
188			<MDA			
189			<MDA			
190			<MDA			
191		12	<MDA	259		11N-4
192			<MDA			
193			<MDA			
194			<MDA			
195			<MDA			
196		104	<MDA	1664		12N-14

ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
INUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor Walls

PAGE 5 OF 6

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Bruyere/P. Nevin

Survey Number: N/A

DATE: 4-24-92

Radcon Review: D. [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
197	N/A		<MDA		N/A	12N-14
198			<MDA			
199			<MDA			
200			<MDA			
201		91	2900 ←	466		11I-1
202			7700 ←			
203			1500			
204			3300 ←			
205			1200			
206		9	<MDA	73		9I-3
207			<MDA			
208			<MDA			
209			<MDA			
210			<MDA			
211		9	<MDA	ND		7I-14
212			<MDA			
213			<MDA			
214			<MDA			
215			<MDA			
216		9	<MDA	60		5J-2
217			<MDA			
218			<MDA			
219			<MDA			
220			<MDA			
221		ND	<MDA	52		6K-12
222	✓		<MDA		✓	

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
223	N/A		<MDA		N/A	6K-12
224			<MDA			
225			<MDA			
226		32	<MDA	457		4J-3
227			<MDA			
228			<MDA			
229			<MDA			
230			<MDA			
231		12	3600 ←	95		3J-1
232			2000			
233			4600 ←			
234			<MDA			
235			<MDA			
236		71	1700	216		11J-3
237			1400			
238			<MDA			
239			<MDA			
240			<MDA			
241		9	320	276		4L-8
242			<MDA			
243			<MDA			
244			<MDA			
245			<MDA			
246		ND	<MDA	66		1N-2
247			<MDA			
248	✓		<MDA		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TOI 46875	ACTIVITY/LOCATION Chevron	MAPED Plant C First Floor walls	PAGE 6 OF 6
COMMENTS SEE COVER SHEET	SURVEYOR B.Bayes/P.Nash	Survey Number N/A	DATE 4-24-92
Radcon Review [signature]	Date 4-28-92	NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.	

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON mRem R/hr.	ITEM OR LOCATION
249	N/A		<MDA		N/A	1N-2
250			<MDA			
251		5	<MDA	ND		35-12
252			<MDA			
253			<MDA			
254			<MDA			
255			<MDA			
256						
257						
258						
259						
260						
261						
262						
263						
264					N	
265					A	
266						
267						
268						
269						
270						
271						
272						
273						
274						

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON mRem R/hr	ITEM OR LOCATION
275						
276						
277						
278						
279						
280						
281						
282						
283						
284						
285						
286					N	
287					A	
288						
289						
290						
291						
292						
293						
294						
295						
296						
297						
298						
299						
300						

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAM SURVEY & RADIATION

ID 46875

DATE 4-24-92 | TIME START 1520 | TIME COMP 1700 | PAGE 2

ACTIVITY/LOCATION: Chevron, Cleveland, OH.

SURVEYOR: P. Newin / D. Porter

PROBE: N/A

MAP ID: Plant C-First Floor Walls

DAILY / WEEKLY / MONTHLY — CONTAMINATION AND — DAILY / WEEKLY / MONTHLY — RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; K dpm/100 cm² BETA-GAMMA

CBCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; K dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA 2929 M 74076	BETA-GAMMA 2929 M 74076 / ESP 1 # 2417
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW: D. Davis DATE: 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tl99 dpm/PROBE	BETA-GAMMA EQUIV. Tl99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	176	100,000 K 1336		N/A	15E-1
2			142,000 K			
3			121,000 K			
4			203,000 K			
5			131,000 K			
6		32	27,100 K 336			18E-3
7			23,100 K			
8			42,000 K			
9			19,100 K			
10			21,000 K			
11		2	<MDA 69			19A-3
12			<MDA			
13			<MDA			
14			<MDA			
15			<MDA			
16		5	<MDA ND			17A-1
17	✓		<MDA		✓	

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tl99 dpm/PROBE	BETA-GAMMA EQUIV. Tl99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
18	N/A		<MDA		N/A	
19			<MDA			
20			<MDA			
21		ND	300	26		13A-4
22			600			
23			<MDA			
24			<MDA			
25			<MDA			
26		5	<MDA	207		9A-1
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31		32	<MDA	129		4A-3
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36		2	<MDA	ND		4B-1
37			<MDA			
38			<MDA			
39			<MDA			
40	✓		<MDA		✓	

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

ID: 46875	ACTIVITY/LOCATION: Chevron	MAP ID: Plant C First Floor walls	PAGE 2 OF 2
COMMENTS: SEE COVER SHEET	SURVEYOR: P. Nevin / D. Porter	Survey Number: N/A	DATE: 4-24-92

Radcon Review [signature] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
41	N/A	9	<MDA	112	N/A	7E-3
42			<MDA			
43			<MDA			
44			<MDA			
45			<MDA			
46		23	1420	4460		9D-2
47			3250			
48			390			
49			2940			
50			40			
51		22	<MDA	172		12E-4
52			<MDA			
53			<MDA			
54			<MDA			
55			<MDA			
56						
57						
58						
59						
60					N/A	
61						
62						
63						
64						
65						
66						

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79					N/A	
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAM SURVEY / RADIATION

ID 46875

DATE 4-25-92 | TIME START 0830 | TIME COMP 1000 | PAGE 1 | # 1

ACTIVITY/LOCATION: Chevron, Cleveland, OH.

SUPERVISOR: B. Bayes / R. Dunlap

PHONE: N/A

MAP I.D.: Plant C - First Floor walls

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND ☐ DAILY / WEEKLY / MONTHLY ☐ RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

CBCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS)

☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 M 74076
	BETA-GAMMA 2929 M 74076 / ESP-1 M 2477
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A
	BETA-GAMMA N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	84	2000	612	N/A	5E-12
2			5200			
3			2000			
4			5700			
5			1200			
6		2	<MDA	ND		20-B
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		104	330	724		5-A
12			2300			
13			1500			
14			2200			
15			1000			
16		12	900	336		9-E
17	✓		<MDA		✓	
18	N/A		[illegible]		N/A	9-E
19			[illegible]			
20			<MDA			
21		9	<MDA	224		9E-14
22			<MDA			
23			<MDA			
24			<MDA			
25	✓		<MDA		✓	
26						
27						
28						
29						
30						
31						
32					N	
33					A	
34						
35						
36						
37						
38						
39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTAMIN / RADIATION SURVEY RE

ID 46875

DATE 4.23.92 | START 1410 | COMP 1800 | PAGE 1 / 2

ACTIVITY/LOCATION: Chevron Cleveland, OH.

SURVEYOR: B Bayes / P Newin

PROBE: N/A

AREA: Plant C Second Floor Walls

DAILY / WEEKLY / MONTHLY: CONTAMINATION AND RADIATION SU

COMMENTS: One smear per grid taken in area with highest probe reading

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; ↓ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; ↓ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE-ID			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 #74076	BETA-GAMMA 2929 #74076 / ESP 1 #2388 / ESP 1 #2413
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO	ALPHA EQUIV Th 230 dpm/PROBE	ALPHA EQUIV Th 230 dpm/100 cm²	BETA-GAMMA EQUIV Tl 99 dpm/PROBE	BETA-GAMMA EQUIV Tl 99 dpm/100 cm²	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
1	N/A	ND	<MDA	ND	N/A	6-A-3
2			<MDA			
3			<MDA			
4			<MDA			
5			<MDA			
6		9	<MDA	ND		5A-3
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		ND	<MDA	ND		5B-3
12			<MDA			
13			<MDA			
14			<MDA			
15			<MDA			
16		2	<MDA	52		6B-3
17	✓		<MDA		✓	
18	N/A		<MDA		N/A	6B-3
19			<MDA			
20			<MDA			
21			ND <MDA	26		6C-1
22			<MDA			
23			<MDA			
24			<MDA			
25			<MDA			
26			ND <MDA	78		5C-3
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31			ND <MDA	69		5B-1
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36			ND <MDA	ND		5A-3
37			<MDA			
38			<MDA			
39			<MDA		✓	
40	✓		<MDA			

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
Continuation Sheet

TO: 46875	ACTIVITY/LOCATION: Chevron	MAP ID: Plant C-Second Floor walls	PAGE 2 OF 3
COMMENTS: SEE COVER SHEET	SURVEYOR: B. Bayes / P. Nevin	Survey Number: N/A	DATE: 4-23-92
Radcon Review: [signature]	Date 4-28-92	NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.	

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
41	N/A	2	<MDA	ND	N/A	Wall 4A-2
42			<MDA			
43			<MDA			
44			<MDA			
45			<MDA			
46		ND	<MDA	43		4C-3
47			<MDA			
48			<MDA			
49			<MDA			
50		ND TSN	<MDA	69 TSN		
51		ND	<MDA	69		4D-2
52			<MDA			
53			<MDA			
54			<MDA			
55			<MDA			
56		9	2400 ± 17			4E-1
57			<MDA			
58			670			
59			2140			
60			MDA			
61		45	2500 ± 431			3E-2
62			340			
63			<MDA			
64			1520			
65			<MDA			
66	✓	2	<MDA	155	✓	3A-1

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	3A-1
68			<MDA			
69			<MDA			
70			<MDA			
71		32	<MDA	354		2B-3
72			<MDA			
73			<MDA			
74			<MDA			
75			<MDA			
76		136	1024 ± 535			2C-1
77			770 ±			
78			499 ±			
79			20,100 ±			
80			20,900 ±			
81		22	<MDA	302		2D-2
82			<MDA			
83			<MDA			
84			<MDA			
85			<MDA			
86		199	24700 ± 1369			2E-3
87			6450 ±			
88			1900 ±			
89			2450 ±			
90			900 ±			
91		5	3980 ± 60			5E-2
92	✓		3700 ±		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

CO. NATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

TO: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C · Second Floor walls

PAGE 3 OF 3

COMMENTS: SEE COVER SHEET

SURVEYOR: B Bayes / P. Nevin

Survey Number: N/A

DATE: 4.23.92

Radcon Review: [illegible] Date 8-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Sr99 dpm/PROBE	BETA-GAMMA EQUIV Sr99 dpm/100 cm	mrem/hr. / BETA-GAMMA / NEUTRON / micro R/hr.	ITEM OR LOCATION
93	N/A		10200		N/A	5E-2
94			<MDA			
95			<MDA			
96		ND	<MDA	164		6E-2
97			<MDA			
98			<MDA			
99			<MDA			
100			<MDA			
101		ND	<MDA	129		6E-3
102			<MDA			
103			<MDA			
104			<MDA			
105			<MDA			
106		NC	<MDA	17		5D-3
107			<MDA			
108			<MDA			
109			<MDA			
110			<MDA			
					N/A	

SWIPE/PROBE NO	ALPHA EQUIV ____ dpm/PROBE	ALPHA EQUIV ____ dpm/100 cm²	BETA-GAMMA EQUIV ____ dpm/PROBE	BETA-GAMMA EQUIV ____ dpm/100 cm	mrem/hr / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
					N/A	

ND - Not Detectable

RADIOLOGICAL CONTROL

CEILING SURFACES

CONTAMINA RADIATION SURVEY REPL

ID 46875

DATE 4-25-92 | TIME START 0940 | TIME COMPL 1030 | PAGE 1 of 2

ACTIVITY/LOCATION Chevron Cleveland, OH

SURVEYOR B. Bayes, R. Dunlap

PHONE N/A

MAP ID Plant C First Floor ceilings

DAILY WEEKLY MONTHLY ☐ CONTAMINATION AND DAILY WEEKLY MONTHLY ☐ RADIATION SURVEY

COMMENTS One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

CPCA AREA CONTROL LEVELS: N/A dpm/100 cm² ALPHA; ✓ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS)
☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO: ALPHA 2929 M 74076; BETA-GAMMA 2929 M 74076 / E9 / M2477

RADIATION SURVEY INSTRUMENT TYPE/TAG NO: NEUTRON N/A; BETA-GAMMA N/A

RADCON REVIEW [signature] DATE 4-28-92

REASON FOR SURVEY ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV. Th230 dpm/PROBE	ALPHA EQUIV. Th230 dpm/100 cm²	BETA-GAMMA EQUIV. Tc99 dpm/PROBE	BETA-GAMMA EQUIV. Tc99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	ND	<MDA	104	N/A	19A
2			<MDA			
3			<MDA			
4			<MDA			
5			<MDA			
6		2	<MDA	52		16-A
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		ND	<MDA	ND		14-C
12			<MDA			
13			<MDA			
14			<MDA			
15			<MDA			
16		ND	<MDA	60		12-B
17			<MDA			
18	N/A		<MDA		N/A	12-B
19			<MDA			
20			<MDA			
21		2	<MDA	43		11-B
22			<MDA			
23			<MDA			
24			<MDA			
25			<MDA			
26		ND	<MDA	26		9-B
27			<MDA			
28			<MDA			
29			<MDA			
30			<MDA			
31		3	<MDA	52		9-C
32			<MDA			
33			<MDA			
34			<MDA			
35			<MDA			
36		9	<MDA	193		7-C
37			<MDA			
38			<MDA			
39			<MDA			
40			<MDA			

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

MINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

ID: 46875	ACTIVITY-LOCATION: Chevron	MAP ID: Plant C First Floor ceiling	PAGE 2 OF 2
COMMENTS: SEE COVER SHEET	SURVEYOR: B. Bayes / R. Dunlap	Survey Number: N/A	DATE: 4-25-92

Radcon Review [illegible] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
41	N/A	2	<MDA	293	N/A	5-B
42			<MDA			
43			<MDA			
44			<MDA			
45			<MDA			
46		2	<MDA	78		3-C
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51						
52						
53						
54						
55						
56						
57						
58					N/A	
59						
60						
61						
62						
63						
64						
65						
66						

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78					N/A	
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						

ND - Not Detectable

RADIOLOGICAL CONTROL

FS-RP-006, APPENDIX A
Page 2 Rev. 2/8/90

CONTAMI/ SURVEY RL | RADIATION | ID 46875 | DATE 4.24.92 | TIME START 1250 | TIME COMP 1710 | PAGE 1 / 3

ACTIVITY/ LOCATION: Chevron, Cleveland, OH | SURVEYOR: B. Bayes | PROBE: N/A

MAP ID: Plant C First Floor Ceilings

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND DAILY / WEEKLY / MONTHLY ☐ RADIATION SURVEY

COMMENTS: One smear per grid taken in area with highest probe reading.

PERMISSIBLE LEVELS: N/A dpm/100 cm² ALPHA; / dpm/100 cm² BETA-GAMMA

CECA AREA CONTROL LEVEL?: N/A dpm/100 cm² ALPHA; / dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE DATA SHEETS

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO.	ALPHA 2929 # 74076	BETA-GAMMA 2929 # 74076 / ESP1 # 2377
RADIATION SURVEY INSTRUMENT TYPE/TAG NO.	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW: [signature] DATE: 4-28-92

REASON FOR SURVEY: ☐ PROCEDURE—NO. ☑ SPECIAL Assessment of Chevron Plant C ☐ ROUTINE

SWIPE/ PROBE NO.	ALPHA EQUIV. Th230 dpm/ PROBE	ALPHA EQUIV. Th230 dpm/ 100 cm²	BETA-GAMMA EQUIV. Tl99 dpm/ PROBE	BETA-GAMMA EQUIV. Tl99 dpm/ 100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	2	<MDA	155	N/A	1-K
2						
3						
4						
5						
6		ND		43		4-M
7						
8						
9						
10						
11		2		112		5-L
12						
13						
14						
15						
16		5		17		6-J
17						
18	N/A		<MDA		N/A	6-J
19						
20						
21		2		ND		9-M
22						
23						
24						
25						
26		5		121		7-J
27						
28						
29						
30						
31		ND		133		10-L
32						
33						
34						
35						
36		ND		138		12-L
37						
38						
39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

.MINATION/RADIATION SURVEY REPORT
C. INUATION SHEET

ID: 46875	ACTIVITY/LOCATION: Chevron	MAP ID: Plant C First Floor ceilings	PAGE 2 OF 3
COMMENTS: SEE COVER SHEET	SURVEYOR: B Bayes	Survey Number: N/A	DATE: 4-24-92

Radcon Review D. L. Veltt Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
41	N/A	ND	<MDA	112	N/A	12-M
42						
43						
44						
45						
46		ND		60		13-J
47						
48						
49						
50						
51		150		150		12-G
52						
53						
54						
55						
56		3		216		11-F
57						
58						
59						
60						
61		NC		129		14-H
62						
63						
64						
65						
66		2		216		9-G

SWIPE/PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA EQUIV Tc99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	9-G
68						
69						
70						
71		NC		60		4-F
72						
73						
74						
75						
76		NC		224		8-H
77						
78						
79						
80						
81		ND		36		15-K
82						
83						
84						
85						
86		NC		138		14-K
87						
88						
89						
90						
91		NC		86		14-H
92						

ND - Not Detectable

RADIOLOGICAL CONTROL

FS-RP-006, APPENDIX A
Page 2 Rev. 2/8/90

MINATION/RADIATION SURVEY REPORT
CONTINUATION SHEET

ID: 46875

ACTIVITY/LOCATION: Chevron

MAP ID: Plant C First Floor ceiling

PAGE 3 OF 3

COMMENTS: SEE COVER SHEET

SURVEYOR: B. Briggs

Survey Number: N/A

DATE: 4-24-92

Radcon Review: D. deVolt Date: 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
93	N/A		<MDA		N/A	14-M
94						
95						
96		2		96		16-M
97						
98						
99						
100						
101		ND		112		18-M
102						
103						
104						
105						
106		5		26		19-M
107						
108						
109						
110						
111		ND		112		20-M
112						
113						
114						
115						
116		ND		43		22-M
117	✓		✓		✓	
118						

SWIPE/ PROBE NO	ALPHA EQUIV Th 230 dpm/ PROBE	ALPHA EQUIV Th 230 dpm/ 100 cm²	BETA-GAMMA EQUIV Tc 99 dpm/ PROBE	BETA-GAMMA EQUIV Tc 99 dpm/ 100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
119	N/A		<MDA		N/A	22-M
120						
121		12		26		22-L
122						
123						
124						
125						
126		ND		104		22-S
127						
128						
129						
130						
131		2		17		12-M
132						
133						
134	✓					
135	✓		✓		✓	
136						
137						
138						
139					N	
140					A	
141						
142						
143						
144						

ND - Not Detectable

RADIOLOGICAL CONTROL

ROOF SURFACE

CONTAM ON/RADIATION SURVEY

ID 46875

DATE 4-22-92 | TIME START 1030 | TIME COMPL. 1155 | PAGE — of 1

ACTIVITY/LOCATION: Chevron Cleveland, OH

SURVEYOR: P Nevin | PHONE: N/A

MAP I.D.: PLANT C Roof ~~LEVEL 3~~

DAILY WEEKLY MONTHLY ☐ CONTAMINATION AND DAILY WEEKLY MONTHLY ☐ RADIATION SURVEY

COMMENTS: Suspect grid Survey
One smear per grid taken in area with highest probe reading

PERMISSIBLE LEVELS	CSCA AREA CONTROL LEVELS	
N/A dpm/100 cm² ALPHA	N/A dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
✓ dpm/100 cm² BETA-GAMMA	✓ dpm/100 cm² BETA-GAMMA	☑ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	N/A cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO	ALPHA 2929 #74076	BETA-GAMMA 2929 #74076/LSP1 #2363
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON N/A	BETA-GAMMA N/A

RADCON REVIEW: [illegible] DATE 4-28-92

REASON FOR SURVEY
- ☐ PROCEDURE—NO.
- ☑ SPECIAL Assessment of Chevron Plant C
- ☐ ROUTINE

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl 99 dpm/PROBE	BETA-GAMMA EQUIV Tl 99 dpm/100 cm	mrem/hr. ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr. ☐	ITEM OR LOCATION
1	N/A	15	6000	52	N/A	1 H
2			1100			
3			1000			
4			<MDA			
5			<MDA			
6		22	<MDA	397		2 H
7			<MDA			
8			<MDA			
9			<MDA			
10			<MDA			
11		ND	400	52		5 I
12			100			
13			<MDA			
14			<MDA			
15			<MDA			
16		ND	<MDA	ND		6 I
17	✓		<MDA		✓	
18	N/A		500		~~50~~ N/A	6 I
19			<MDA			
20			<MDA			
21		ND	<MDA	ND		10 H
22			<MDA			
23			<MDA			
24			<MDA			
25			<MDA			
26		5	<MDA	ND		11 I
27			<MDA			
28			<MDA			
29			<MDA			
30	✓		<MDA		✓	
31						
32						
33						
34						
35					N/A	
36						
37						
38						
39						
40						

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ND - Not Detectable

RADIOLOGICAL CONTROL

CONTINUATION SHEET

TO: 46875

COMMENTS: SEE COVER SHEET

ACTIVITY/LOCATION: Chevron

MAPED: Plant C-Second Floor-Surface

PAGE 2 OF 2

SURVEYOR: B. Bayes / P. Vesin

Survey Number: N/A

DATE: 4/21/92

Radcon Review: [signature] Date 4-28-92

NOTE: THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES O THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr. BETA-GAMMA NEUTRON micro R/hr.	ITEM OR LOCATION
41	N/A	1	13100 +	ND	N/A	6-E
42			21000 +			
43			11400 +			
44			27500 +			
45			5800 +			
46		ND	<MDA	52		8-B Roof
47			<MDA			
48			<MDA			
49			<MDA			
50			<MDA			
51		ND	<MDA	86		8-D Roof
52			<MDA			
53			<MDA			
54			<MDA			
55			<MDA			
56		ND	<MDA	ND		8-E Roof
57			<MDA			
58			<MDA			
59			<MDA			
60			<MDA			
61		ND	<MDA	ND		8-F Roof
62			<MDA			
63			1500 +			
64			<MDA			
65			<MDA			
66	✓	ND	<MDA	95	✓	10-C Roof

SWIPE/PROBE NO.	ALPHA EQUIV Th230 dpm/PROBE	ALPHA EQUIV Th230 dpm/100 cm²	BETA-GAMMA EQUIV Tl99 dpm/PROBE	BETA-GAMMA EQUIV Tl99 dpm/100 cm	mrem/hr BETA-GAMMA NEUTRON micro R/hr	ITEM OR LOCATION
67	N/A		<MDA		N/A	10 C Roof
68			<MDA			
69			<MDA			
70			<MDA			
71		ND	<MDA	ND		11-E Roof
72			<MDA			
73			<MDA			
74			<MDA			
75			<MDA			
76		ND	<MDA	132		11-E Roof
77			<MDA			
78			<MDA			
79			<MDA			
80	✓		<MDA		✓	

ND - Not Detectable

RADIOLOGICAL CONTROL

APPENDIX C

INDIVIDUAL VULNERABLE AREA REPORTS

AND

RESULTS OF SAMPLE ANALYSIS FOR RADIONUCLIDES

VULNERABLE AREA REPORT FORM I - 1

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: EXPOSED AGGREGATE (Crack, Joint, Seem, Drain Basin)
Floor level: 1ST
Grid Number: 9I

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 700 dpm/probe
Initial Removable Contamination level: 73 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 105 dpm/100 cm²

2 Inch: Fixed Contamination level: NR
Removable Contamination level: ↓

3 Inch: Fixed Contamination level: ↓
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA - I1 - 9I - 1
2) MCA - I1 - 9I - 2

DAVID VALENTINE
Performed By

5-4-92
Date

```
                        TE    BY    1.1[illegible]      5.471E  1          [illegible]E  0      3.4[illegible]
                  [illegible]       Y   [illegible]     2 [illegible]

****************************************************************
*****                   [illegible]-MAY-92 [illegible]                    *****
****************************************************************

[illegible]

SPECTRAL FILE NAME:  AWSTF.DAT
SAMPLE DATE:  [illegible]-92 [illegible]:00
SAMPLE IDENTIFICATION:  [illegible]SAMPLE
TYPE OF SAMPLE:  [illegible]
SAMPLE QUANTITY:   [illegible]
SAMPLE GEOMETRY:   [illegible]
[illegible]
****************************************************************

ACQUIRE DATE:  [illegible]-92 [illegible]   *  [illegible]
PRESET [illegible]:        [illegible]           *  SENSITIVITY: [illegible]
ELAPSED [illegible]:               SEC    *  [illegible]
ELAPSED LIVE TIME:       600. SEC    *  NBR ITERATIONS:   [illegible]

****************************************************************

DETECTOR: DET1                       *  LIBRARY [illegible]
CALIB DATE:  06-APR-92 [illegible]:04:29   *  ENERGY TOLERANCE:   [illegible]
[illegible]          .1823906           *  [illegible] RATIO:   [illegible]
OFFSET:         -.2539411 KEV        *  ABUNDANCE LIMIT:   80.00%
[illegible] DIFF. :   2.035E-07 KEV/C**2  *
                                     *
****************************************************************
```

```
[illegible]

[illegible]          [illegible]E+00Y   [illegible]        [illegible]              1.26E0
[illegible]          [illegible]E+00Y   [illegible]        [illegible]              [illegible]

****************************************************************************
*******************       [illegible]       **********************************
****************************************************************************

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
SAMPLE QUANTITY: [illegible]          UNITS: GRAMS
SAMPLE GEOMETRY: [illegible]
[illegible]
****************************************************************************

ACQUIRE DATE: [illegible]-MAY-92 15:19:13  * [illegible]
[illegible]                                 * [illegible]
[illegible]                                 * [illegible]
ELAPSED LIVE TIME:       200. SEC           * [illegible]

****************************************************************************

[illegible]                                 * [illegible]
[illegible]                                 * [illegible] ENERGY TOLERANCE: [illegible]
[illegible]            .1666661             * [illegible] LINE RATIO:   2.00
OFFSET:              -.2522411 KEV          * ABUNDANCE LIMIT:   80.00%
[illegible]          2.335E-07 KEV/CH**2    *
                                            *
****************************************************************************
```

VULNERABLE AREA REPORT FORM I-2

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Floor Joint (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 7L

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 38,000 dpm/probe
Initial Removable Contamination level: 273 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: 35,000 dpm/probe
Removable Contamination level: 1397 dpm

2 Inch: Fixed Contamination level: 150 dpm/probe
Removable Contamination level: 326 dpm

3 Inch: Fixed Contamination level: NR
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA-I2-7L-1
2) MCA-I2-7L-2

David Valentine
Performed By

5-4-92
Date

NOTE: I-2 CONTAINED METAL "L" PIECE WHICH WAS HIGHLY CONTAMINATED (>30,000 dpm/probe). GREATER THAN 200' OF "L" BEAM MUST BE REMOVED.

```
[illegible]  ALIFE  [illegible]  [illegible]  [illegible]
[illegible]  1.888E  [illegible]  .278E  [illegible]
[illegible]  [illegible]  .407E  [illegible]

*********************************************************************
[illegible]  -92  [illegible]
*********************************************************************

[illegible]

[illegible] FILE NAME: [illegible]
SAMPLE DATE: [illegible]-MAY-92 [illegible]
SAMPLE IDENTIFICATION: [illegible]
TYPE [illegible]
SAMPLE [illegible] 540.000 [illegible]
[illegible]
[illegible]

[illegible]
[illegible]  [illegible]
[illegible]  [illegible]
ELAPSED LIVE TIME:       300. SEC  * PER ITERATION:    10.

*********************************************************************

DETECTOR: [illegible]
CALIB DATE:  05-APR-92 17:44:29   * ENERGY TOLERANCE: [illegible]
[illegible]          .1001008     [illegible]
[illegible]          .3007714 KEV * ABUNDANCE LIMIT:   50.00%
[illegible] COEFF. :   2.028E-07 KEV/C**2 *
                                          *
*********************************************************************
```

```
[illegible]   [illegible]   [illegible]   [illegible]            [illegible]        [illegible]
                            1.0%          [illegible]            [illegible]        [illegible]

*************************************************************************************
*                              -MAY-92  [illegible]                                *
*************************************************************************************

[illegible]

[illegible]
SAMPLE DATE   : [illegible]-MAY-92 [illegible]
[illegible]
[illegible]
[illegible]           [illegible].000                        [illegible]
SAMPLE GEOMETRY     : MARINELLI
EFFICIENCY FILE NAME: [illegible]

[illegible]
[illegible]
ELAPSED [illegible]          [illegible]   * [illegible]
[illegible] LIVE TIME:       1000. SEC     * [illegible]

*************************************************************************************
                                           *
DET[illegible]                             * [illegible]
CALIB DATE: 08-APR-92 17:04:29            * ENERGY TOLERANCE:   1.500 KEV
[illegible]                                * [illegible]
OFFSET:           [illegible] KEV          * ABUNDANCE LIMIT:    80.00%
Q. COEFF. :     2.625E-07 KEV/C**2         *
                                           *
*************************************************************************************
```

VULNERABLE AREA REPORT FORM I-3

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: DRAIN (Crack, Joint, Seem, Drain Basin)
Floor level: 1ST
Grid Number: 8I

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: < MDA
Initial Removable Contamination level: 63 dpm/100cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: 500 dpm/probe
Removable Contamination level: < MDA

2 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 74 dpm/100cm²

@ ~~3 Inch:~~ IN ELBOW IF PIPE Fixed Contamination level: 600 dpm/probe
Removable Contamination level: 63 dpm/100cm²

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA - I3-8I-1
2) MCA - I3-8I-2

DAVID VALENTINE
Performed By

5-4-92
Date

```
[illegible]

[illegible]

[illegible]

[illegible]

MCA [illegible]

[illegible]
[illegible]
SAMPLE IDENTIFICATION: SAMPLE1
TYPE OF SAMPLE: SOIL
[illegible]
[illegible]

[illegible]

[illegible]

[illegible]
[illegible]
ELAPSED [illegible]
[illegible]

[illegible]

DETECTOR SET!                          * LIBRARY: [illegible]
COLLECTED: [illegible] NOV 92 17:04:00  * ENERGY TOLERANCE:  [illegible]
[illegible]  .1683[illegible]           * HALF LIFE RATIO:   9.00
[illegible]  -.3639414 KEV              * ABUNDANCE LIMIT:   80.00%
[illegible]  2.[illegible]E-07 KEV/C**2 *
                                        *
[illegible]
```

```
*****************************************************************
*                    05-NOV-92 11:32:21
*****************************************************************

MOD 1 01 F

EXTERNAL FILE (NULL) NAME:
RUN NUMBER:
SAMPLE DESCRIPTION:
TYPE OF SAMPLE: RES
SAMPLE QUANTITY:
SAMPLE DESCRIPTION:
EFFICIENCY FILE NAME:

COUNT DATE:
START TIME:
BLANK DEAD TIME:
BLANK LIVE TIME:

*****************************************************************

DETECTOR: DET1                          * NUCLIDE NOT AVAILABLE
COUNT DATE: 05 NOV 92 17:11:00          * ENERGY TOLERANCE:      ESTIMATED
KEV/CHNL:        .1111905               * HALF LIFE RATIO:       3.00
OFFSET:         -.0529411 KEV           * ABUNDANCE LIMIT:       20.00%
R. ENV. :       2.835E-07 KEV/CHNL      *
                                        *
*****************************************************************
```

VULNERABLE AREA REPORT FORM I-4

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Floor Crack (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 22J

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 53,000 dpm/probe
Initial Removable Contamination level: 63 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: 500 dpm/probe
Removable Contamination level: 21 dpm/100 cm²

2 Inch: Fixed Contamination level: NR
Removable Contamination level: ↓

3 Inch: Fixed Contamination level: ↓
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS
1) MCA-I4-22J-1
2) MCA-I4-22J-2

David Valentine
Performed By

5-4-92
Date

[illegible]

[illegible]

MCA [illegible]

[illegible]

DETECTOR: [illegible]
CALIB DATE: 06-APR-92 17:04:29 * ENERGY TOLERANCE: [illegible]
KEV/CHNL: [illegible] * HALF LIFE RATIO: [illegible]
OFFSET: [illegible] KEV * ABUNDANCE LIMIT: [illegible]%
D. [illegible] [illegible] KEV/C**2 *
*
****

```
[illegible]
                                                              2-SIGMA
[illegible]   [illegible]  HLIFE      DECAY    ROI  GAMMA                 ERROR         [illegible]
[illegible]       [illegible]  [illegible]  [illegible]   [illegible]            [illegible]      [illegible]
[illegible]       [illegible]  2.45E+05Y   1.000       1.780E -1              2.110E [illegible]   [illegible]
U-235        MP  7.04E+08Y    1.000       8.550E  1              9.513E -1       .00

[illegible]

MCA [illegible]

[illegible]

EFFICIENCY FILE NAME: [illegible]

[illegible]
[illegible]
ELAPSED REAL TIME: [illegible]
ELAPSED LIVE TIME: [illegible]

[illegible]

[illegible]                                * LIBRARY:NIM.LIB          *
CAL. D DATE:   06-APR-92 17:04:29          * ENERGY TOLERANCE:     [illegible] KEV
[illegible]        .1084908                * HALF LIFE RATIO:   [illegible]
[illegible]       -.0680414 KEV            * ABUNDANCE LIMIT:   30.00%
[illegible]        [illegible].085E-07 KEV/C**2 *

******************************************************************************
```

VULNERABLE AREA REPORT FORM I-5

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Door Seam (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 20J

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 3500 dpm/probe
Initial Removable Contamination level: 21 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch:	Fixed Contamination level:	<MDA
	Removable Contamination level:	ND
2 Inch:	Fixed Contamination level:	NR
	Removable Contamination level:	↓
3 Inch:	Fixed Contamination level:	↓
	Removable Contamination level:	↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS
1) MCA-~~IS~~ IS-20J-1
2) MCA-IS-20J-2

J Wood
Performed By

5-4-92
Date

```
[illegible]

        [illegible]

                                                                       SIGMA
      NT   ENRG      HLIFE       DECAY     [illegible] NAME                   [illegible]         ACTIV
  [illegible]      4.47E+09Y     [illegible]      [illegible]                  [illegible]          [illegible]
  [illegible]      [illegible]E+10Y    1.000      [illegible]                  [illegible]          0.55

   ****************************************************************************
   [illegible]
   ****************************************************************************

[illegible]

[illegible]
[illegible]
[illegible]
TYPE OF SAMPLE:  SOIL
SAMPLE QUANTITY:      555.0000           UNITS:  GRAMS
[illegible]
EFFICIENCY FILE NAME:  [illegible].EFF
****************************************************************************
                                                *
[illegible]                                     * [illegible]
[illegible]                               KEV   * [illegible]
[illegible]                           [illegible]  * [illegible]
[illegible]                               KEV   * [illegible]
                                                *
****************************************************************************

[illegible]                                     * LIBRARY USED: [illegible]
CALIB DATE:   02-APR-92 17:04:29                * ENERGY TOLERANCE:  1.000 KEV
KEV/CHNL:           .100200                     * HALF LIFE RATIO:   8.00
OFFSET:           -.3600414 KEV                 * ABUNDANCE LIMIT:   80.00%
Q. COEFF. :       2.632E-07 KEV/C**2            *
                                                *
****************************************************************************
```

```
[illegible]

[illegible]     [illegible]   [illegible]     [illegible]    [illegible]         [illegible]       [illegible]
[illegible]     [illegible]  [illegible]E+03Y   1.000     1.171E [illegible]         2.91[illegible]E [illegible]   2.5[illegible]
[illegible]     NB   7.04E+0[illegible]Y   1.000     5.254E [illegible]         1.720E [illegible]   2.0[illegible]

***************************************************************************
[illegible]
***************************************************************************

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
***************************************************************************
                                          *
[illegible]                                 [illegible] SEC  * [illegible]
[illegible]                                 [illegible] SEC  * [illegible]
[illegible]                                 [illegible] SEC  * [illegible]
[illegible]                                 [illegible] SEC  * [illegible]
                                          *
***************************************************************************
                                          *
DETECTOR: DET[illegible]                     * LIBRARY.NUM[illegible]
CALIB DATE:  0[illegible]-APR-82 [illegible]:29   * ENERGY TOLERANCE:  [illegible].500 KEV
[illegible]:          .1[illegible]              * HALF LIFE RATIO:   [illegible].00
[illegible]:          .0[illegible]14 KEV        * ABUNDANCE LIMIT:   [illegible].00%
G. [illegible]EFF. :     2.6[illegible]E-[illegible] [illegible]EV/[illegible]   *
                                          *
***************************************************************************
```

VULNERABLE AREA REPORT FORM I-6

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Roof MAT'L (Crack, Joint, Seem, Drain Basin)
Floor level: Roof
Grid Number: 8D

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: < MDA
Initial Removable Contamination level: ND

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 42 dpm/100cm²

2 Inch: Fixed Contamination level: 1000 dpm/probe
Removable Contamination level: ND

3 Inch: Fixed Contamination level: NA
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS
1) MCA-I6-8D-Roof
2) NA

DAVID VALENTINE
Performed By

5-4-92
Date

```
                                                              [illegible]
[illegible]                                                    [illegible]      [illegible]
[illegible]                                  [illegible]E 0    [illegible]E     [illegible]
[illegible]                                  [illegible]E 1    [illegible]E     [illegible]

****************************************************************************
[illegible]              05-MAY-90 13:10:10          [illegible]
****************************************************************************

[illegible]

[illegible]
[illegible]
[illegible]

ELAPSED REAL TIME:        100. SEC  * START CHANNEL : [illegible]
ELAPSED LIVE TIME:        300. SEC  * NBR CHANNELS:   [illegible]

****************************************************************************

[illegible]
[illegible]                                    * [illegible]
[illegible]         .3333[illegible]             * [illegible]
OFFSET:          -.2630414 KEV      * ABUNDANCE LIMIT:   80.00%
Q. COEFF. :      2.005E-07 KEV/C**2 *
                                    *
****************************************************************************
```

VULNERABLE AREA REPORT FORM I-7

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Brick Deck (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 19C

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: <MDA
Initial Removable Contamination level: ND

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: <MDA
Removable Contamination level: ND

2 Inch: Fixed Contamination level: <MDA
Removable Contamination level: 95 dpm

3 Inch: Fixed Contamination level: <MDA
Removable Contamination level: ND

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA-I7-19C-1
2) MCA-I7-19C-2

David Valentine
Performed By

5-4-92
Date

```
[illegible]
[illegible]  [illegible]  [illegible]  DAY-ADY  1.00  [illegible]  1.1038  [illegible]  7.0312  [illegible]

*************************************************************************
[illegible]            03 MAY 92 [illegible]
*************************************************************************

MDA [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
SAMPLE GEOMETRY: [illegible]
[illegible]
*************************************************************************

ACQUIRE DATE:  [illegible]
PRESET TIME (LIVE):       300. [illegible]
ELAPSED [illegible] TIME:      300. [illegible]
ELAPSED LIVE TIME:        300. [illegible]

*************************************************************************
                                          *
DETECTOR [illegible]                      *
CALIB DATE:   05-APR 92 17:04:29          * ENERGY TOLERANCE:   1.500 KEV
KEV/CHNL:            .1633906             * HALF LIFE RATIO:    8.00
OFFSET:            -.3633414 KEV          * ABUNDANCE LIMIT:    30.00%
Q. COEFF. :       2. [illegible] 07 KEV/C**2  *
                                          *
*************************************************************************
```

```
[illegible]
                       100      9.0047                                      [illegible]

        ****************************************************************
****************        05-MAY-92 16:47:30        ****************
[illegible]

SAMPLE [illegible]
SAMPLE IDENTIFICATION: SAMPLE[illegible]
[illegible]

[illegible]                          8.0  [illegible]  * SHAPE PARAMETER   [illegible]
[illegible]

DETECTOR: DI                                  LIBRARY.NEW.LIB
CALIB DATE: [illegible]-APR-90 [illegible]    * ENERGY TOLERANCE:   1.000 KEV
KEV/CHNL:          .1999316                   * HALF LIFE RATIO:    8.00
OFFSET:          -.0639414 KEV                * ABUNDANCE LIMIT:    80.00%
Q. COEFF. :      2.632E-07 KEV/C**2 *
                                    *
******************************************************************
```

APPENDIX D

TEST DECONTAMINATION REPORTS

VULNERABLE AREA REPORT FORM I - 1

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: EXPOSED AGGREGATE (Crack, Joint, Seem, Drain Basin)
Floor level: 1ST
Grid Number: 9I

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 700 dpm/probe
Initial Removable Contamination level: 73 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 105 dpm/100 cm²

2 Inch: Fixed Contamination level: NP
Removable Contamination level: ↓

3 Inch: Fixed Contamination level: ↓
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA - I1 - 9I - 1
2) MCA - I1 - 9I - 2

DAVID VALENTINE
Performed By

5-4-92
Date

```
                                                                    [illegible]
[illegible]    [illegible]    HLIFE     DECAY    [illegible]          ERROR        [illegible]
[illegible]                   [illegible]  [illegible]  [illegible]   [illegible]  [illegible]
[illegible]                   [illegible]  1.000       [illegible]    [illegible]  [illegible]

******************************************************************
*[illegible]           [illegible]-MAY-92 [illegible]        [illegible]*
*[illegible]                                                    [illegible]

[illegible]

SPECTRAL FILE NAME: [illegible]
SAMPLE DATE:  [illegible]-MAY-92 [illegible]
SAMPLE IDENTIFICATION: [illegible]
TYPE OF SAMPLE: [illegible]
SAMPLE QUANTITY: [illegible]          [illegible]
SAMPLE GEOMETRY: MARINELLI
EFFICIENCY FILE NAME: [illegible]
[illegible]

[illegible]
[illegible]
ELAPSED [illegible]          [illegible]  [illegible]
[illegible] LIVE TIME:        [illegible] SEC  [illegible]       [illegible]

******************************************************************

DETECTOR [illegible]                   * LIBRARY: [illegible].LIB
CALIB DATE:  08-APR-92 17:04:29        # ENERGY TOLERANCE:  1.500 KEV
[illegible]          [illegible]       * [illegible]       [illegible]
OFFSET:            .0220414 KEV        * ABUNDANCE LIMIT:    [illegible]%
Q. COEFF. :     2.635E-07 KEV/C**2     *
                                       *
******************************************************************
```

VULNERABLE AREA REPORT FORM I-3

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: DRAIN (Crack, Joint, Seem, Drain Basin)
Floor level: 1ST
Grid Number: 8I

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: < MDA
Initial Removable Contamination level: 63 dpm/100cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: 500 dpm/probe
Removable Contamination level: < MDA

2 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 74 dpm/100cm²

@ ~~3 Inch:~~ IN ELBOW IF PIPE Fixed Contamination level: 600 dpm/probe
Removable Contamination level: 63 dpm/100cm²

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA - I3-8I-1
2) MCA - I3-8I-2

DAVID VALENTINE
Performed By

5-4-92
Date

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	NP	7.0[illegible]E+03Y	1.000	1.[illegible]E [illegible]	2.443E -1	1.70

[illegible]

```
**********************      05-MAY-93 [illegible]      **********************
[illegible]

MCA [illegible]

SPECTRAL FILE NAME [illegible]
START [illegible]
SAMPLE IDENTIFICATION: SAMPLE1
TYPE OF SAMPLE: SOIL
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

DETECTOR: DET1                          * LIBRARY:NEW.LIB
CALIB DATE: 05-APR-93 17:06:00          * ENERGY TOLERANCE:   [illegible]
[illegible]  .1683999                   * HALF LIFE RATIO:    8.00
OFFSET:      -.3639414 KEV              * ABUNDANCE LIMIT:    80.00%
C. COEFF. :  2.625E-07 KEV/C**2         *
                                        *
[illegible]
```

						1-SIGMA ERROR	
[illegible]	[illegible]	4.47E+03Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	7.0 E+03Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

```
*****************************************************************************
*                    03-NOV-92 14:32:21
*****************************************************************************

[illegible]

SPECIMEN TITLE [illegible] [illegible]
[illegible]
[illegible]
TYPE OF SAMPLE:  SOIL
SAMPLE QUANTITY:  [illegible]
SAMPLE LOCATION:  [illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]

*****************************************************************************
                                        *
DETECTOR: DET1                          *
[illegible]                             * ENERGY TOLERANCE:    [illegible] KEV
KEV/CHNL:        .1533906               * HALF LIFE RATIO:     3.00
OFFSET:         -.0629414 KEV           * ABUNDANCE LIMIT:     90.00%
[illegible]  :   2.635T-07 KEV/CPMS     *
                                        *
*****************************************************************************
```

VULNERABLE AREA REPORT FORM I-4

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Floor Crack (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 22 J

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 53,000 dpm/probe
Initial Removable Contamination level: 63 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: 500 dpm/probe
Removable Contamination level: 21 dpm/100 cm²

2 Inch: Fixed Contamination level: NR
Removable Contamination level:

3 Inch: Fixed Contamination level:
Removable Contamination level:

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA-I4-22J-1
2) MCA-I4-22J-2

David Valentine
Performed By

5-4-92
Date

```
[illegible]

                                                              1-SIGMA
 [illegible]  [illegible]   [illegible]   [illegible]   [illegible]   ERROR   [illegible]
 [illegible]  [illegible]   [illegible] 4.47E+07Y   1.000    1.355E 2   [illegible]   [illegible]
 [illegible]  [illegible]   [illegible]  [illegible]   1.000    1.[illegible]   [illegible]   [illegible]
 [illegible]  [illegible]   7.04E+08Y   1.000    [illegible]   4.30[illegible]   [illegible]

*****************************************************************
[illegible]*****   [illegible] 92 14:40:[illegible]   [illegible]
*****************************************************************

MCA [illegible]

[illegible]
[illegible]
SAMPLE IDENTIFICATION: [illegible]
TYPE OF SAMPLE: SOIL
SAMPLE QUANTITY: [illegible]        [illegible]
SAMPLE GEOMETRY: [illegible]
EFFICIENCY FILE NAME: [illegible]
*****************************************************************
                                          *
[illegible]                               *  [illegible]
[illegible]                               *  [illegible]
[illegible]            [illegible] SEC    *  SHAPE PARAMETER   [illegible] %
[illegible]            [illegible]        *  [illegible]
                                          *
*****************************************************************

DETECTOR: [illegible]                     *  [illegible]
CALIB DATE:  06-APR-92 17:04:29           *  ENERGY TOLERANCE:  [illegible]
KEV/CHNL:        .1688906                 *  HALF LIFE RATIO:   [illegible]
OFFSET:         -.0339414 KEV             *  ABUNDANCE LIMIT:   [illegible]%
Q. COEFF.:      2.638E-07 KEV/C**2        *
                                          *
*****************************************************************
```

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	NP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	NP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
U-[illegible]	NP	7.04E+08Y	1.000	8.560E 1	9.523E -1	.00

[illegible]

MCA [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
DETECTOR FILE NAME: [illegible]
[illegible]

[illegible]
[illegible]
ELAPSED REAL TIME: [illegible]
ELAPSED LIVE TIME: [illegible]

[illegible]

[illegible]
CALIB DATE: 06-APR-92 17:04:29
[illegible] .1030306
[illegible] -.0639414 KEV
[illegible] 2.035E-07 KEV/CH#2

LIBRARY:NEW.LIB
ENERGY TOLERANCE: [illegible] KEV
HALF LIFE VALID: 0.00
ABUNDANCE LIMIT: 80.00%

****

VULNERABLE AREA REPORT FORM I-5

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Door Seam (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 20J

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: 3500 dpm/probe
Initial Removable Contamination level: 21 dpm/100 cm²

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: <MDA
Removable Contamination level: ND

2 Inch: Fixed Contamination level: NR
Removable Contamination level:

3 Inch: Fixed Contamination level:
Removable Contamination level:

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS
1) MCA-~~IS~~ IS-20J-1
2) MCA-IS-20J-2

J Wood
Performed By

5-4-92
Date

```
[illegible]

                                                                   2-SIGMA
[illegible]  [illegible]     HLIFE        DECAY     PCI/GRAMS                  [illegible]     [illegible]
[illegible]       NP   4.47E+00Y      1.000      [illegible]                [illegible]     [illegible]
[illegible]       NP   7.[illegible]E+08Y      1.000      [illegible]                [illegible]     [illegible]

**********************************************************************
*************           05-APR-92 [illegible]
**********************************************************************

[illegible]

[illegible] FILE NAME:  [illegible]
[illegible]
SAMPLE IDENTIFICATION:  [illegible]
TYPE OF SAMPLE:  SOIL
SAMPLE QUANTITY:     821.0000          UNITS:  GRAMS
SAMPLE GEOMETRY:  MAR[illegible]
EFFICIENCY FILE NAME:  [illegible].EFF
**********************************************************************
                                        *
[illegible]                                    * [illegible]
[illegible]                                    * [illegible]
[illegible]                                    * [illegible]
[illegible]                                    * [illegible]
                                        *
**********************************************************************

DETECTOR: [illegible]                     * LIBRARY.NEW.LIB
CALIB DATE:  05-APR-92 17:04:29     * ENERGY TOLERANCE:  1.500 KEV
KEV/CHNL:          .1600[illegible]               * HALF LIFE RATIO:   8.00
OFFSET:          -.3609414 KEV       * ABUNDANCE LIMIT:    80.00%
Q. COEFF. :     2.338E-07 KEV/C**2 *
                                        *
**********************************************************************
```

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4.47E-09Y	1.000	1.170E [illegible]	2.921E [illegible]	2.50
[illegible]	NF	7.04E+06Y	1.000	5.354E [illegible]	1.728E [illegible]	2.06

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DETECTOR: DET1 * LIBRARY: [illegible]
CALIB DATE: 05-APR-92 17:04:29 * ENERGY TOLERANCE: 1.500 KEV
[illegible] .1389006 * PEAK SIZE RATIO: 2.00
[illegible] .0829614 KEV * ABUNDANCE LIMIT: 00.00%
G. [illegible]. : 2.655E-07 KEV/CHNL *
*
[illegible]

VULNERABLE AREA REPORT FORM I-6

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: ROOF MAT'L (Crack, Joint, Seem, Drain Basin)
Floor level: ROOF
Grid Number: BD

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: < MDA
Initial Removable Contamination level: ND

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: < MDA
Removable Contamination level: 42 dpm/100cm²

2 Inch: Fixed Contamination level: 1000 dpm/probe
Removable Contamination level: ND

3 Inch: Fixed Contamination level: NA
Removable Contamination level: ↓

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS
1) MCA-I6-BD-ROOF
2) NA

DAVID VALENTINE
Performed By

5-4-92
Date

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SIGMA [illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	1.3572E 2	1.3572E 0	1.82
[illegible]	[illegible]	[illegible]	[illegible]	1.3538E 1	[illegible]	0.27

[illegible]

[illegible] 05-MAY-92 13:10:11 [illegible]

[illegible]

[illegible]

SPECTRUM TITLE [illegible]
[illegible]
[illegible]
[illegible]
[illegible] UNITS [illegible]
[illegible]
[illegible]
[illegible]

ACQUISITION DATE: [illegible] 13:58:50 [illegible]
EFFECTIVE LIVE TIME: [illegible] SENSITIVITY: [illegible]
ELAPSED REAL TIME: 900. SEC * [illegible] MAX METER : [illegible]
ELAPSED LIVE TIME: 800. SEC * NAA ITERATIONS: [illegible]
*

[illegible]

[illegible]
[illegible] *
[illegible] 05-MAY-92 [illegible] * ENERGY TOLERANCE: [illegible] KV
[illegible] .1[illegible] * [illegible] TE [illegible]: [illegible]
[illegible] -.0[illegible]414 KEV * ABUNDANCE LIMIT: 50.0%
[illegible] [illegible] KEV/C**2 *
*

[illegible]

VULNERABLE AREA REPORT FORM I-7

To be used to document the results obtained during the operations described in section 4.2.4 of the Operations Plan.

AREA IDENTIFICATION

Area Type: Brick Deck (Crack, Joint, Seem, Drain Basin)
Floor level: 1st
Grid Number: 19C

INITIAL RADIATION AND CONTAMINATION SURVEY RESULTS

Initial Fixed Contamination level: <MDA
Initial Removable Contamination level: ND

SUBSURFACE RADIATION AND CONTAMINATION LEVELS

1 Inch: Fixed Contamination level: <MDA
Removable Contamination level: ND

2 Inch: Fixed Contamination level: <MDA
Removable Contamination level: 95 dpm

3 Inch: Fixed Contamination level: <MDA
Removable Contamination level: ND

(Attach additional sheet of paper if contamination exceeded the 3 inch subsurface layer)

INTRUSIVE SAMPLE ID LABELS

1) MCA-I7-19C-1
2) MCA-I7-19C-2

David Valentine
Performed By

5-4-92
Date

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	7.04E+03Y	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

MDA 17 [illegible] 1

[illegible]

ACQUIRE DATE: [illegible]
PRESET TIME (LIVE): [illegible]
ELAPSED REAL TIME: [illegible]
ELAPSED LIVE TIME: [illegible]

[illegible]

DETECTOR: DET: [illegible]
CALIB DATE: 05-APR 92 17:04:29 * ENERGY TOLERANCE: 1A.500 KEV
KEV/CHNL: .1603906 * HALF LIFE RATIO: 8.00
OFFSET: -.3839414 KEV * ABUNDANCE LIMIT: 30.00%
[illegible] COEFF. : 2.6296 -07 KEV/CH**2 *
*

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

****
********** 05-MAY-92 16:47:30 **********
****

[illegible]

[illegible]

SAMPLE DATE: [illegible] MAY-92 [illegible]
SAMPLE IDENTIFICATION: SAMPLE[illegible]
[illegible]
[illegible]
SAMPLE GEOMETRY: [illegible] PANEL
[illegible]
[illegible]

[illegible]
[illegible]
CLOCKED REAL TIME: [illegible] * SHAPE PARAMETE[illegible]
CLOCKED LIVE TIME: [illegible] * [illegible] FRACTIONS [illegible]
[illegible]

DETECTOR: [illegible] * LIBRARY:MIN.LIB
CALIB DATE: [illegible]-APR-92 [illegible] * ENERGY TOLERANCE: [illegible] KEV
KEV/CHAN: .1338916 * HALF LIFE RATIO: 3400
OFFSET: -.0639414 KEV * ABUNDANCE LIMIT: 30.00%
D. COEFF. : 2.635E-07 KEV/C**2 *
*
****

APPENDIX E

HAZARDOUS CONSTITUENT ANALYSIS RESULTS

Controls for Environmente olution, Inc.
P.O. BOX 535 • Sa-ta Fe, New Mexico 502 OUT OF STATE 800/545-2188 • FAX - 505-9L_-9289

Order # 92-05-003
06/02/92 14:39

Controls for Environmental
TEST RESULTS BY SAMPLE

Sample: 01A MCA-09-1F-22L Collected: 04/24/92 Category: CONCRETE_D

Test Description		Result	D.L.	Units	Analyzed	By
Corrosivity (pH)		5.46		units	05/15/92	LSB
Ignitability		>90		Degrees C	05/29/92	MC
Reactivity		*		mg/kg		
Reactivity (Cyanide)		<0.1	0.1	mg/kg	05/05/92	LSB
Reactivity (Sulfide)		<250	250	mg/kg	05/05/92	CM
TCLP Metals						
Arsenic	Limits	<0.01	0.01	mg/liter	05/04/92	DAH
Barium		1.19	0.05	mg/liter	05/04/92	NR
Cadmium		0.65	0.05	mg/liter	05/04/92	NR
Chromium		0.13	0.05	mg/liter	05/04/92	NR
Lead		0.73	0.05	mg/liter	05/04/92	NR
Mercury		<0.0004	0.0004	mg/liter	05/13/92	MF
Selenium		<0.01	0.01	mg/liter	05/08/92	DAH
Silver		<0.05	0.05	mg/liter	05/04/92	NR
TCLP Organics						
O-cresol		<0.010	0.010	mg/liter	05/27/92	DVM
M-cresol		<0.010	0.010	mg/liter	05/27/92	DVM
P-cresol		<0.010	0.010	mg/liter	05/27/92	DVM
Pentachlorophenol		<0.0040	0.0040	mg/liter	05/27/92	DVM
2,4,5-Trichlorophenol		<0.0050	0.0050	mg/liter	05/27/92	DVM
2,4,6-Trichlorophenol		<0.0030	0.0030	mg/liter	05/27/92	DVM
2,4-Dinitrotoluene		<0.0060	0.0060	mg/liter	05/27/92	DVM
Hexachlorobenzene		<0.0020	0.0020	mg/liter	05/27/92	DVM
Hexachlorobutadiene		<0.0010	0.0010	mg/liter	05/27/92	DVM
Hexachloroethane		<0.0020	0.0020	mg/liter	05/27/92	DVM
Nitrobenzene		<0.0020	0.0020	mg/liter	05/27/92	DVM
Pyridine		<0.010	0.010	mg/liter	05/27/92	DVM
Cresol		<0.010	0.010	mg/liter	05/27/92	DVM

Controls for Environmental Pollution, Inc.
P.O. BOX 5351 • Santa Fe, New Mexico 87502 OUT OF STATE 800/545-2188 • FAX - 505-982-9289

Order # 92-05-003
06/02/92 14:39

Controls for Environmental
TEST RESULTS BY SAMPLE

Test Description	Result	D.L.	Units	Analyzed	By
TCLP Pesticides-Herbicides					
Lindane	0.01	0.005	ug/liter	05/15/92	JT
Heptachlor	<0.005	0.005	ug/liter	05/15/92	JT
Endrin	<0.005	0.005	ug/liter	05/15/92	JT
Methoxychlor	<0.005	0.005	ug/liter	05/15/92	JT
Chlordane	<0.20	0.20	ug/liter	05/15/92	JT
Toxaphene	<0.50	0.50	ug/liter	05/15/92	JT
2,4-D	<0.02	0.02	ug/liter	05/20/92	JT
Silvex	<0.02	0.02	ug/liter	05/20/92	JT
Zero Head Space Extraction					
Benzene	<0.0044	0.0044	mg/liter	05/14/92	DVM
Carbon Tetrachloride	<0.0028	0.0028	mg/liter	05/14/92	DVM
Chlorobenzene	<0.0060	0.0060	mg/liter	05/14/92	DVM
Chloroform	<0.0016	0.0016	mg/liter	05/14/92	DVM
1,2-Dichloroethane	<0.0028	0.0028	mg/liter	05/14/92	DVM
1,1-Dichloroethylene	<0.0028	0.0028	mg/liter	05/14/92	DVM
Methylethyl Ketone	<0.010	0.010	mg/liter	05/14/92	DVM
1,4-Dichlorobenzene	<0.0050	0.0050	mg/liter	05/14/92	DVM
Tetrachloroethylene	<0.0069	0.0069	mg/liter	05/14/92	DVM
Trichloroethylene	<0.0019	0.0019	mg/liter	05/14/92	DVM
Vinyl Chloride	<0.0020	0.0020	mg/liter	05/14/92	DVM

Sample: 02A MCA-01-1F-19C Collected: 04/24/92 Category: CONCRETE_D

Test Description	Result	D.L.	Units	Analyzed	By
Corrosivity (pH)	11.69		units	05/15/92	LSB
Ignitability	>90		Degrees C	05/29/92	MC
Reactivity	*		mg/kg		
Reactivity (Cyanide)	<0.1	0.1	mg/kg	05/05/92	LSB
Reactivity (Sulfide)	<250	250	mg/kg	05/05/92	LSB

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Order # 92-05-003
06/02/92 14:39

Controls for Environmental
TEST RESULTS BY SAMPLE

Test Description	Result	D.L.	Units	Analyzed	By
TCLP Metals					
Arsenic	<0.01	0.01	mg/liter	05/04/92	DAH
Barium	0.21	0.05	mg/liter	05/04/92	NR
Cadmium	<0.05	0.05	mg/liter	05/04/92	NR
Chromium	0.09	0.05	mg/liter	05/04/92	NR
Lead	<0.05	0.05	mg/liter	05/04/92	NR
Mercury	<0.0004	0.0004	mg/liter	05/13/92	MF
Selenium	<0.01	0.01	mg/liter	05/08/92	DAH
Silver	<0.05	0.05	mg/liter	05/04/92	NR
TCLP Organics					
O-cresol	<0.010	0.010	mg/liter	05/27/92	DVM
M-cresol	<0.010	0.010	mg/liter	05/27/92	DVM
P-cresol	<0.010	0.010	mg/liter	05/27/92	DVM
Pentachlorophenol	<0.0040	0.0040	mg/liter	05/27/92	DVM
2,4,5-Trichlorophenol	<0.0050	0.0050	mg/liter	05/27/92	DVM
2,4,6-Trichlorophenol	<0.0030	0.0030	mg/liter	05/27/92	DVM
2,4-Dinitrotoluene	<0.0060	0.0060	mg/liter	05/27/92	DVM
Hexachlorobenzene	<0.0020	0.0020	mg/liter	05/27/92	DVM
Hexachlorobutadiene	<0.0010	0.0010	mg/liter	05/27/92	DVM
Hexachloroethane	<0.0020	0.0020	mg/liter	05/27/92	DVM
Nitrobenzene	<0.0020	0.0020	mg/liter	05/27/92	DVM
Pyridine	<0.010	0.010	mg/liter	05/27/92	DVM
Cresol	<0.010	0.010	mg/liter	05/27/92	DVM
TCLP Pesticides-Herbicides					
Lindane	<0.01	0.01	ug/liter	05/15/92	JT
Heptachlor	<0.01	0.01	ug/liter	05/15/92	JT
Endrin	<0.01	0.01	ug/liter	05/15/92	JT
Methoxychlor	<0.01	0.01	ug/liter	05/15/92	JT
Chlordane	<0.40	0.40	ug/liter	05/15/92	JT
Toxaphene	<1.0	1.0	ug/liter	05/15/92	JT
2,4-D	<0.05	0.05	ug/liter	05/20/92	JT
Silver	<0.05	0.05	ug/liter	05/20/92	JT

Limit

Controls for Environmental Pollution, Inc.
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Order # 92-05-003
06/02/92 14:39

Controls for Environmental
TEST RESULTS BY SAMPLE

Test Description	Result	D.L.	Units	Analyzed	By
Zero Head Space Extraction					
Benzene	<0.0044	0.0044	mg/liter	05/14/92	DVM
Carbon Tetrachloride	<0.0028	0.0028	mg/liter	05/14/92	DVM
Chlorobenzene	<0.0060	0.0060	mg/liter	05/14/92	DVM
Chloroform	<0.0016	0.0016	mg/liter	05/14/92	DVM
1,2-Dichloroethane	<0.0028	0.0028	mg/liter	05/14/92	DVM
1,1-Dichloroethylene	<0.0028	0.0028	mg/liter	05/14/92	DVM
Methylethyl Ketone	<0.010	0.010	mg/liter	05/14/92	DVM
1,4-Dichlorobenzene	<0.0050	0.0050	mg/liter	05/14/92	DVM
Tetrachloroethylene	<0.0069	0.0069	mg/liter	05/14/92	DVM
Trichloroethylene	<0.0019	0.0019	mg/liter	05/14/92	DVM
Vinyl Chloride	<0.0020	0.0020	mg/liter	05/14/92	DVM

Chevron's Building "C" Meeting

Cleveland, Ohio

March 7, 1994
1:00 - 4:45 p.m.

*** AGENDA ***

Attendees:

Englehard:
Andy Kopas
Max Scott

US NRC:
Ken Lambert

Chevron Chemical Co.:
Bill Potter
George Jobson (Rust)
Al Flath (Rust)

Time	Topic	Facilitator
1:00	Introductions	ALL
1:15	Meeting Purpose and Expectations	Bill
1:30	Review Building C Assessment Report outside bldg? possible disposal areas?	Al
2:00	Building C Tour	Andy/Al
3:30	Review/Discuss "Draft" Bldg C D&D Plan	Al
4:00	Questions & Answers	ALL
4:15	Review Next Steps	Bill
4:30	Meeting Wrap-Up • Review Action Items • Set Next Meeting Time & Agenda • Review Expectations • Plus/Delta	Bill
4:45	Meeting Adjourn	

FAX

DATE: Wednesday, March 2, 1994

TO: Ken Lambert, US NRC

FAX: 1 (708) 515-1259

FROM: Fax from R. William Potter

PAGES: 2

MEMO

To All: Attached please find a proposed agenda for the March 7, 1994 meeting in Cleveland, OH. Please call me with any comments and/or questions. Otherwise, look forward to seeing you all on the 7th.
Bill Potter

C113