HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
DISTRICT I - PO Box 2536
Milan NM 87021 287-8845
Steven Asher, Director

TONEY ANAYA
GOVERNOR

JOSEPH GOLDBERG
SECRETARY

TED GUAMBANA
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

June 25, 1984

Mr. John Long
Plant Manager
Mobil Oil Corporation
P. O. Drawer F
Crownpoint, NM 87313

Dear Mr. Long:

This letter reports on a routine inspection conducted May 18 through May 25, 1984, at your facilities of activity authorized by New Mexico Radioactive Materials License NM-MOB-UL-03.

The inspection was an examination of the activities authorized under the license as they relate to radiation safety; to compliance with the Health and Environment Department's rules and regulations; and adherence to activities detailed in the license application.

No deficiencies were found during the inspection.

Thank you for the courtesy and cooperation extended to us during the inspection.

Sincerely,

Theodore G Brough

Theodore G. Brough
Environmental Scientist

mb

cc: Sam Simpson, Santa Fe
Benito Garcia, Santa Fe (2)
File

MILL

DRAFT INSPECTION REPORT FORM

1. Name and address of license
MOBIL OIL COMPANY
P.O. Drawer F
CROWNPOINT NM
87313

2. Date of Inspection MAY 10 - May 25, 1984

3. Type of Inspection Routine - annual

4. License number(s), docket number(s), number and date of last amendment for each license. Category and Priority of each licensee.
NM-MOB-UL-03

5. Date of previous inspection July, 1983

6. Proprietary information None

7. Scope of inspection if other than routine Routine - annual

8. Participants (Licensee representatives and titles, State representatives, etc.)

John Long - Mobil Manager (In-Situ operations, WY)
T.G. BROUGH - EID, INSPECTOR
SAM SIMPSON - EID, LICENCE PROGRAM OFFICER

9. Management Interview (Information required for N/C cases)

N/A

10. Action and Date: Letter to Licensee June 25, 1984

AEC-591 Clear ✓

AEC-591 N/C _____

11. Recommend reinspection date June to Sept 1985

12. Theodore G Brough — Inspector
June 25, 1984 — Date of Report

_____ — Reviewer
_____ — Date of Review

13. Inspection Summary (Including violations and safety items, and status of previously reported violations and safety items, etc.)

no previous violations, no current violations.

no violations during this inspection.
Side by side measurements for radon in SE corner proposed when Mobile RDM-1 is returned from repair (possibly to be done in July, 1984)

14. Summary of Licensed Program (Kind of program, number of people, rate of use or quantities on hand, places and frequency of use, type, quantity and use as authorized, ~~etc.~~)

will be injecting H_2S (test project) (well to well) wait 2 days and recover. Produce from wells. - adding to fluid as it goes down well in sweep. Purpose to stop oxidation in situ.

(1 year pre-operational monitoring has been completed - awaiting final report)

11 people 3 shifts) Normally 1 person/shift (with H_2S will be 2 people/shift)

5 gals/min while bleed going on (diesel sprays as necessary)

no operations on weekends

15. Organization and Administration (Management organization, RSO, authorities and responsibilities, authorized users, qualifications, supervision, etc.)

Corp uses Radioactive check sources {Cs^{137} / Th^{230}

Tom Vogt (Denver)

Plant Supervisor + RSO + Env. Mgr (Harrison Peat

See attached chart (page A-1)

16. Facilities (Use facilities, storage facilities, control of access, control devices and alarms, etc.)

Section 9 - Fenced (no devices no alarms).
Section 12 - warehouse + admin
Gates closed each night, Rd. access controlled each nite. (all at Sec 9 on weekends) & 2 supervisors have keys to admin (sec 12)
Y.C. barels have been shipped to Stepas (29 barels after reprocessing 9,000 lbs - shipped out a year ~~again~~) - Y.C. storage area should be empty.

17. Equipment (Devices utilizing licensed material, monitoring instrumentation, special equipment as glove boxes, hoods, handling tools, respirators, etc.)

Emergency closet has emerg. equip.
CUDLUD Mod 177 alarm system - alpha personnel detectors. Last calib - May 10, 1979, due 1985

18. Radiological Safety Procedures (Written operating and emergency procedures, availability of procedures, license and regs, training, Form AEC-3, etc.)

written procedures on hand.
Monthly Safety meetings
annual 8-hr update (about 1-hr for rad. safety)

19. Personnel Monitoring and Exposure to External Radiation (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.)

Everybody badged except Sec.
Monthly; Eberline. - Filed
. max 45 mr/mo
Calib = Lisdlum Eber average dose = 0 (12 to 16 mr/mo) 2M Jan (1 Reading)
which equals background.

20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.) Monthly Bio assays Jordan Labs.
Monthly survey - monthly reports

Y.C. handling upwind Downwind	monthly 24-hr sample (see attached sheet, p. A-2)

Restoration facility closed bldg wl=.02 in Feb, changed procedures to ventilate then dropped to .002 wl)

21. Effluents to Unrestricted Areas (Types, source, measurements, flow rates, applicable MPC, analytical procedures, environmental samples, etc.)

Rn Downwind .12 to .41 (ao = 2 pc/l radon) (Monthly averages submitted to Licensing)	(see attached E/D memo)
U_3O_8 upwind <.002 Downwind <.002	24-hr sample monthly. attachment A-5

analytical lab in albq. does analysis (2 weeks after sampling)

nothing from section 9 disposed of as other than trash.

no sell off of scrap materials. (yet)
[Guide for decontam - decomissioning]

22. Disposals (Methods, typical quantities, etc.)

(198 barrels of misc. waste (LSA)
Soil scrapings from spills over the
years (4 truckloads) Sand & gravel
stored cored samples (2 ton)

5 yr. accum sent to Kerr McGee Tailings area week of May 13-18, 1984.

Trash from Section 9 - golosh pits
Lab trash can labeled radioactive

Solid trash in lined
Liquids to pond

1 gals each 2 weeks 2½ gal drums per blue ice

23. Miscellaneous Surveys, Evaluations and Records (External radiation levels, contamination levels, leak tests, etc.)

no leak tests necessary
18 to 22 ur/hr at perimeter on map).
Baseline shows 30 ur/hr, april 1979
oct 1979 shows 35 ur/hr
apr 1984 shows 20 ur/hr
(Quart. Reports submitted to EID licensing)

24. Special License Conditions

(4 well sampling procedure + Excavation notification
additional monitoring wells Pond conditions

25. Posting and Labelling

RPS-11 posted
Fences & Gates marked with Radioactive signs

26. Independent Measurements (Type, results, comparison to licensee results, etc.)

See attached sheet p. A ④

Cupels: ① lunch table · 12 μr/hr
② Counter near audio - 12 μr/hr
③ Bench - change in 12 μr/hr
④ Back side 12 μr/hr

1 μr/hr

See Eveready lab analysis report

Sand filters 50 to 140 μr/hr contact
Resins in barrels 7 μr/hr
30 μr/hr at outfall (in mud) from Y.C. Bldg.

Perimeter measurements

6 - 12 μr/hr 8 μr/hr

6	WASTE STOR AREA 60 x 40	6	For perimeter measure, See attached A-6
8		7	EMPTY (A FEW DRUMS in SE corner

12 10

Back: Crowspoint 8 μr/hr

See additional sheet for measurement of 5/12 to Radon at SE corner 5/15/84

27. Operations Observed

Loading of Truck with waste materials on May 15, 1984, followed load to Key-McGee where off-load occurred. May 16, 1984.

28. Emergency/Contingency Response Plans

Dated: april, 1982 (Shipping Decontam - + Incident plan)

[Ur. ore conc. LSA Material Shipping and Trans. Incident Response Guide]

Emergency response nos (telephone nos.) above on hand.

29. Operational Records

observed and thumbed through by inspector

(Inventory control records
Flow meter monitoring
Sign in log etc.
operator log book
Various data sheets) in operators office

30. Land Use

Section Enclosed/secluded area
Monitoring wells on leased property - just outside of Section 9 Revs Line
Office + warehouse
Monument (Project Sec 28 - Pond area warehouse) fenced
additional well sites not fenced
Flood control ditches in the area (Sec 28)
Sec 15, 16 new well field on stand by.

31. Incidents, Overexposures, Theft or Loss, Equipment Malfunction (Those not described elsewhere should be reported here.)

Break in liner in pond #3. Repaired immediately (ind blown effect, tear in ~~taught~~ taut plastic

water assay: 4900 mg/l Na
5500 mg/l SO4
4900 mg/l Cl
Std evolved report

32. Other Information or Continuation from Previous Paragraphs

Calibrations RASCAL Ser. 703 with Beta-Gamma
Calibrated 4/16/84 by Eberline probe
Ludlum Geiger Mod 2, 10343
Calib 5/31/83 due 5/31/84
RGM-1 Ser 105, sent May 7, 1984 to Eber.
(Last done 5/9/83)

STATE AGREEMENTS BRANCH
DIVISION III
INFORMATION NOTICE

Other

H.-1 - Implementation of
Part 19 Equivalent

The purpose of this Information Notice is to provide the SAB staff and the Agreement States with a check list of items for implementing Part 19, or the State equivalent, for agreement material licensees.

The checklist is attached.

IMPLEMENTATION OF PART 19 EQUIVALENT REGULATION

Check List

I. POSTING	Yes	No	N/A	*N/R
A. Equivalent regulations to Parts 19 & 20	✓			
B. The license and license conditions	✓			
C. Document tied to the license	✓			
D. Operating procedures	✓			
E. Any Notice of Violation, proposed Penalties or Orders		✓		
F. Notice to Employees	✓			
G. Documents, notices, or forms required to be posted are posted in a sufficient number of places to permit being seen when going to and from any licensed activity location to which the document applies.	✓			
H. Documents, etc., are legible and have not been altered.	✓			
I. Agency documents posted pursuant to I.E. and have been posted within 2 working days after receipt.			✓	
J. Licensee response, if any, posted for a minimum of 5 working days, or until corrective action was completed, whichever was later.			✓	
When posting of items I.A., I.B., I.C., I.D. is not practicable, the licensee may post a notice describing the material and where it may be seen.				

*Not Reviewed

II. INSTRUCTION TO WORKERS	Yes	No	N/A	N/R
A. Individuals working in or frequenting restricted areas have been kept informed of storage, transfer or use of radioactive materials.	✓			
B. Persons in A. have been instructed in health protection problems associated with exposure to such radioactive materials.	✓			
C. Persons in A. have been instructed in precautions and procedures to minimize exposures and the purpose and use of protective devices employed.	✓			
D. Persons in A. have been instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of the Agency's regulations and license conditions.	✓			
E. Persons in A. have been instructed of their responsibility to report promptly to the licensee any condition which could or has caused a violation of Agency regulations, license, or unnecessary exposure to radiation or radioactive material.	✓			
F. Persons in A. have been instructed in the appropriate response to warnings regarding any unusual occurrence or malfunction that may involve radiation exposure.	✓			
G. Persons in A. have been instructed in the radiation exposure reports which can be requested.	✓			
The extent of the instructions should be commensurate with the real or potential radiological health hazards.				

III. NOTIFICATIONS AND REPORTS TO INDIVIDUALS	Yes	No	N/A	N/R
A. All radiation exposure data (internal and external) has been reported to the individuals noted in II.A as specified below.	✓			
B. Reports as specified in III.A. have included the appropriate legend "This report is furnished to you under the provisions of the (Agency) regulations ____. You should preserve this report for further reference."	✓			
C. The licensee has upon request of any worker advised him annually of his radiation exposure as shown in records maintained pursuant to Agency regulations.	✓			
D. The licensee has upon request of any former worker furnished a report of his radiation exposure to him.	✓			
E. The licensee has provided his workers with reports of any exposure to these workers which are required to be submitted to the Agency.	✓			

Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified. The information reported shall include data and results obtained pursuant to Agency regulations, orders or license conditions, as shown in records maintained by the licensee pursuant to Agency regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the licensee, the name of the individual, the individual's social security number; include the individual's exposure information.

III. NOTIFICATIONS AND REPORTS TO INDIVIDUALS (Cont'd.)

	Yes	No	N/A	N/R
At the request of a worker formerly engaged in licensed activities controlled by the licensee, each licensee shall furnish to the worker a report of the worker's exposure to radiation of radioactive material. Such report shall be furnished within 30 days from the time the request is made, or within 30 days after the exposure of the individual has been determined by the licensee, whichever is later; shall cover, within the period of time specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive materials licensed by the Agency; and shall include the dates and locations of licensed activities in which the worker participated during this period.				

IV. PRESENCE OF REPRESENTATIVES OF LICENSEES AND WORKERS DURING INSPECTION				
A. Agency inspectors were allowed to consult privately with workers on appropriate matters. (1)	✓			
B. Inspector was informed of the identity of the worker's representative for Agency inspections. (2)			✓	
C. The worker's representative was allowed to accompany the inspector during the inspection of physical working conditions.			✓	
(1) Inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of the regulations and licenses to the extent the inspectors	✓			

IV. PRESENCE OF REPRESENTATIVES OF LICENSEES WORKERS DURING INSPECTION (Cont'd)

deem necessary for the conduct of an effective and thorough inspection.

During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed or caused any violation of the chapter, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material under the licensee's control. Any such notice in writing shall comply with the requirements of the following:

(2) Any worker or representative of workers who believes that a violation of the regulations in this chapter, or license conditions exist or have occurred in license activities with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Director of the Agency or to Agency inspectors. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of workers. A copy shall be provided the licensee by the Director of the Agency or the inspector no later than at the time of inspection except that, upon the request of the worker giving such

IV. PRESENCE OF REPRESENTATIVES OF LICENSEES WORKERS DURING INSPECTION (Con't)

notice, his name and the name of individuals referred to therein shall not appear in such copy or on any record published, released, or made available by the Agency, except for good cause shown.

(3) Each worker's representative shall be routinely engaged in licensed activities under control of the licensee and shall have received instructions as specified in II.

Different representatives of licensees and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one worker's representation at a time may accompany the inspectors.

With the approval of the licensee and the worker's representative an individual who is not routinely engaged in licensed activities under control of the license, for example, a consultant to the licensee or to the workers' representative, shall be afforded the opportunity to accompany inspectors during the inspection of physical working conditions.

Notwithstanding the other provisions of this section, inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee to enter that area.

SAFETY SUGGESTIONS RECEIVED DURING INSPECTIONS

During inspections, inspectors may receive safety suggestions relating to plant conditions or operations from licensee employees. Inspectors must be receptive to such suggestions and should attempt to resolve or deal with each one received. Even in those cases where the suggestion would require a licensee to do more than is required by NRC regulations, license conditions, or technical specifications, the inspector should discuss the suggestion with the employee and provide, to the best of the inspector's ability, the options that are available.

Depending upon the nature of the suggestion, some possible courses of action are as follows:

1. Encourage the employee to forward the suggestion in writing to plant management and, if appropriate, to the NRC.
2. For matters clearly under the jurisdiction of another Federal agency, or a state or local agency, encourage the employee to contact the appropriate agency, or offer to bring the information to the attention of the proper official.
3. Inform the employee that the matter will be evaluated and, if appropriate, brought to the attention of NRC management.

It is important that an employee profferring a suggestion related to safety be made aware that the NRC is interested in such suggestions and they will be pursued.

DRAFT

Preliminary Format for a Monthly Uranium Tailings Impoundment Report
(due on the 10th of each month for previous month)

1. Monthly survey of tailings embankment elevations and beach widths (attach map with surveyed elevations and distances).

2. Minimum monthly freeboard (from daily operator logs): _____ feet.

3. Minimum monthly beach width (from daily logs): _____ feet.

4. Seepage conditions: a) estimate of seepage discharge: _____ gpm.
   b) condition of seepage drains: _____.
   c) level of wetted sand above seepage collection ditch: _____ feet.
   d) change in wetted level from previous month: _____ feet.

5. Erosion on impoundment face: _____.
   Evidence of cracks or settlement: _____.

6. Changes in condition of berms on diversion and seepage ditches since previous month: _____
   _____
   _____.

7. Maximum change in phreatic surface within impoundment since previous month: ± _____ feet.

8. Recent stability evaluation or complete analysis (attach report or indicate date of last analysis): _____.

9. Stabilization measures to reduce blowing sands and erosion:
   _____
   _____
   _____
   _____.

10. Unusual events (high runoff, tailings line leaks or clogging, emergency shutdowns etc.) and corrective action taken: _____
    _____
    _____.

11. Volume of solids: _____ tons. Volume of liquid: _____ acre-ft.

12. Construction and maintenance during month: _____
    _____
    _____.

_____

Signature of environmental coordinator or tailings manager

ATTACHMENT A

The revised organizational chart is shown below.

Mobil oil (New York)

ORGANIZATION CHART

Mobil Nat. Energies (Denver)

coal, Ur, oil shale, gold, silver

General Manager
Uranium/Minerals

D. Walker

Producing Manager

T. Griffith

Engineering Manager	Producing Operations Manager	Hydrological and Environmental Affairs Manager
T. C. Vogt (new Body)	~~W. H. Rugeley~~ replace	G. A. Cresswell
Process Engineering Manager	Plant Supervisor (RSO)	Permitting Coordinator
J. W. Nance	J. L. Long	W. A. Steingraber

Harrison Peak, Plant Supv (operations)

AA spectro. (all but large Quart. Quarterly)

lab → Sec

oper 4 | maint 3

10 Radial. (Aquatic Labs (COM)

Monthly – ASSAY, ALB.

TABLE 9
PARTICULATE: COMPOSITE ANALYSES- QUARTERLY
QUARTERLY PERIOD: 18TH - FEBRUARY, MARCH, APRIL, 1994
Crownpoint Test Pilot Leach, Section 9
McKinley County, New Mexico

Determination	STANDARD	QUARTERLY	
(pCi/m^3) 1/	(pCi/m^3) 2/	Upwind of Facility	Downwind of Facility
Uranium (as U_3O_8), Total (pCi/m^3)	100.0	<0.002	<0.002
Thorium - 230	2.0	0.0 ± 0.08	0.0 ± 0.05
Radium - 226	30.0	0.0 ± 0.08	0.0 ± 0.05
Lead - 210	100.0	0.0 ± 0.04	0.0 ± 0.03

1/ Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

2/ State of New Mexico Radiation Protection Regulations, Filed April 21, 1990, Section 4-130 (page 4-3) Appendix A Table 1, Column 1.

(2)

Trip to Mobil

~~Monday~~ Tues. May 15, 198X AM Start 9:30 End 3:45 — To Mobil End Farris Mines

Wed AM May 16, 1987 Start 6:45 AM End 12:00 — To Ken McBee with Mobil cask

Thurs AM & PM May 17, 198X change Hi Vol Filters

Fri: To Mobil May 18, 198X Start 8:15 End 4:15 — To Mobil crown dump.
place RGM-1

Friday May 25: to Mobil - to pick up RGM-1 Radon monitor (for comparison with Mobil reported data - see A-(5) for result.

(3)

Mobile Wipes

	Wipe #	Mobile Bath (c/20 min)	Wipe control (c/20 min)	[illegible] CPM	CPM ± 2σ	Wipes Taken 5/18/04
Lunch table	(1)	777	215	154	—	— ± 38
counter near oven	(2)	650	231	202	—	— ± 32
Charge Rm Bench	(3)	611	566	569	1.0	2.0 ± 61
wash Sink (Dirt on Sink too)	(4)	654	127	140	39.0	78 ± 23.8

MOBIL 5/18/84

Radon measurements
at permanent station
at NE corner of Ferro line
(Downwind Station)

TIME	CPH
1400	422
1500	321
1600	306
1700	248
1800	266
1900	256
2000	250
2100	272
2200	296
2300	336
0000	307

5/19/84

#111

$Pa/\ell = \frac{CPH - 342}{216}$

0100 to 10:00
5/19/84 5/25/84

↓

20410 TOT

6 X 24 + 9 = 144 + 9 = 153 HRS

$\frac{20410}{153}$ = 385.1 CPH = **0.20 Pa/ℓ** = average as reported over 1 year period at same station by Mobil.

10:00 to 10:10 $\frac{40}{10}$ = 4.0 CPM = 240 CPH

10:10 to 10:20 $\frac{47}{10}$ = 4.7 CPM = 282 CPH

This measurement was independent of Mobil measurements at the same station: their RGM-1 was being calibrated by Eberline when measurements were taken. They expect their instrument to be returned before June 15, 1984 when we will make side-by-side measurements for 30 days and compare.

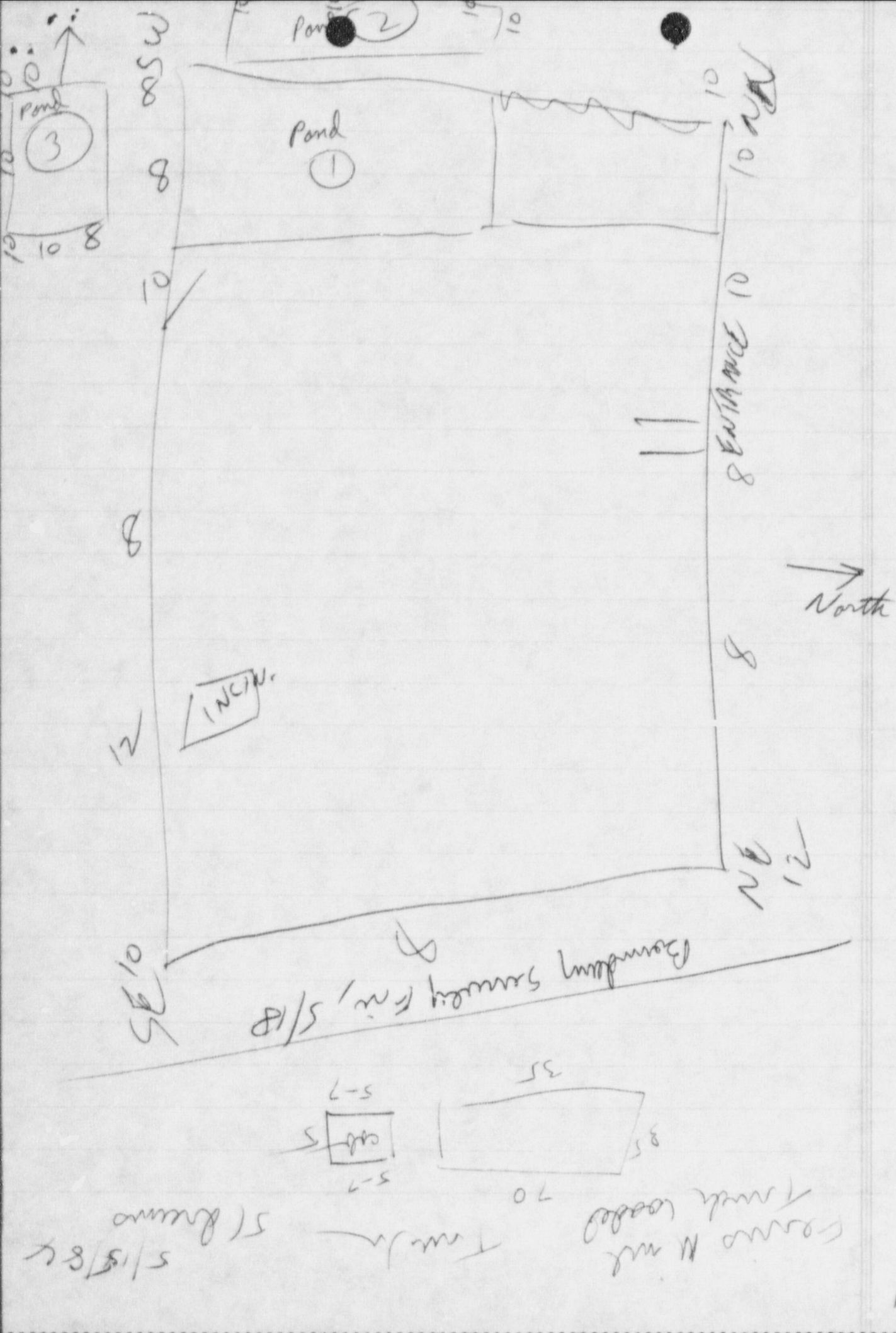
Mobil site
Sec 9
E Fence
End 10:20 AM

99:99	000001
99:99	000047
99:99	000040
99:99	000000
99:99	000015

5/27/10:20 5/28

99:99	020410
99:99	00030700
99:99	000336 33
99:99	000296 32
99:99	000272 31
99:99	000250 30
99:99	000256 19
99:99	000266 18
99:99	000248 17
99:99	000306 16
99:99	000321 15
99:99	000422
99:99	000000
99:99	

Samples # 111
pa/e = $\frac{cpm - 342}{216}$


Pond 2
Pond 3
Pond 1
8
10
12
ENTRANCE
INCIN.
North

MILL

DRAFT INSPECTION REPORT FORM

1. Name and address of license
MOBIL OIL COMPANY
P.O. Drawer
CROWNPOINT NM
87313

2. Date of Inspection MAY 18 - May 25, 1984

3. Type of Inspection Routine - annual

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6. Proprietary information None

7. Scope of inspection if other than routine Routine - annual

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SAM SIMPSON - EID, LICENCE PROGRAM OFFICER

9. Management Interview (Information required for N/C cases)

N/A

10. Action and Date: Letter to Licensee June 25, 1984

AEC-591 Clear ✓

AEC-591 N/C _____

11. Recommend reinspection date June to Sept 1985

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June 25, 1984 — Date of Report

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no violations during this inspection.
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will be Injecting H_2S (1st project) (will be well) wait 2 days and recover. It from wells. - adding to fluid as it goes down well in sweep. Purpose, to stop oxidation in Situ.

5 gals/min when bleed goes on (Hours program running)

no operations on weekends.

{1 year pre-operational monitoring has been completed - awaiting final report}

11 people 3 shifts) Normally 1 person/shift [with H_2S will be 2 people/shift]

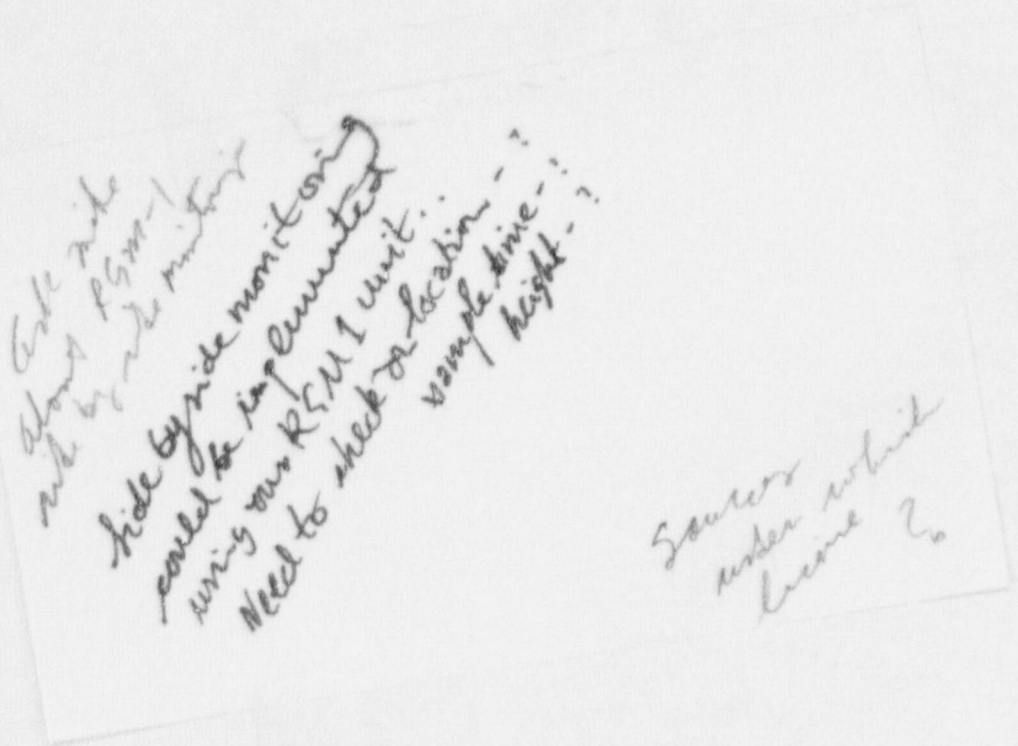
15. Organization and Administration (Management organization, RSO, authorities and responsibilities, authorized users, qualifications, supervision, etc.)

Corp uses Radioactive check Source Cs^{137} Th^{230}

Tom Vogt (Denver)

Plant Supervisor + RSO + Env. Mgr (Harrison Post

See attached chart (page A-1)


Side by side monitoring
could be implemented
using two RSM 1 unit..
Need to check a location--?
sample time--?
height--?
Sources
under which
license?

16. Facilities (Use facilities, storage facilities, control of access, control devices and alarms, etc.)

Section 9 - Fenced (no devices nor alarms)
Section 12 - Warehouse + admin
Gates closed each night, Rd. access controlled each site. (all at Sec 9 on weekends) ← 2 supervisors have access to admin (sec 12)
Y.C. barrels have been shipped to Texas (29 barrels after reprocessing - 9,000 lb - shipped out a year ~~ago~~) - Y.C. storage area should be empty.

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LUDLUM mod 177 alarm system - alpha personnel decontam. Last calib - May 10, 1979, due 1985

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Monthly Safety meetings
annual 8-hr update (about 1-hr for rad. safety)

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Everybody badged except see.
Monthly; Eberline. - Files
. max 45 mr/mo
Colelb = Lusk Elen average dose = 0 (12 to 16 mr/mo which equals background. 2M Jan (1 Feb)

20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.) Monthly Bio assays Jordan Labs.
Monthly survey - monthly reports

Y.C. handling upwind Downwind — monthly 24-hr sample (see attached sheet, p. A (2)

Restoration facility closed bldg WL = .02 in Feb, changed procedures to ventilate then dropped to .002 WL)

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U_3O_8 upwind <.002 Downwind <.002 — 24-hr sample monthly. (attachment A-5)

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nothing from section 9 disposed as other than trash.

no sell off of scrap materials. (yet)
[Guide for decontam - decommissioning]

22. Disposals (Methods, typical quantities, etc.)

(198 barrels of misc. waste (LSA)
Soil scrapings from spills over the
years (4 truckloads) Sand & gravel
stored cored samples (2 tons)

5 yr. accum sent to Kerr McGee Tailings area week of May 13-18, 1984.

Trash from section 9 - golosn pits
Lab trash can labeled radioactive
5 gals each 2 weeks 2½ gal drums for liquids
Solid trash in lemeto liquids to pond

23. Miscellaneous Surveys, Evaluations and Records (External radiation levels, contamination levels, leak tests, etc.)

no leak tests necessary
18 to 22 ur/hr at perimeter on map).
Baseline shows 30 ur/hr, april 1979
oct 1979 shows 35 ur/hr
apr 1984 shows 20 ur/hr
(Quart. Reports submitted to EID licensing)

24. Special License Conditions

(well sampling procedures + Excavation notification
additional monitoring wells Pond conditions

25. Posting and Labelling

RPS-11 posted
Fences & gates marked with Radioactive signs

26. Independent Measurements (Type, results, comparison to licensee results, etc.)

See attached sheet p. A-④

Wipes
(1) lunch table - 12 μr/hr
(2) Counter near access - 12 μr/hr — Sand Filter
(3) Bench - change i - 12 μr/hr — 8 to 60 μr/hr (contact)
(X) Desk sink 12 μr/hr — Resins in barrels 7 μr/hr

See enclosed lab analysis report

Perimeter measurements

6 - 12 mr/hr 8 μr/hr

6	WASTE STOR AREA	6	For perimeter measure, See attached A-⑥
8		7	EMPTY (A FEW DRUMS IN SE corner

12 10

30 μr/hr at outfall (in mud) from Y.C. bldg

See additional sheet for measurement of 5 mr/hr Radon at SE corner 5 mr/hr

Both Crowpoint 8 μr/hr

27. Operations Observed

Loading of Truck with waste materials on May 15, 1984 followed load to Kerr-McGee where off-load occurred. May 16, 1984.

28. Emergency/Contingency Response Plans

Dated: april, 1982 (Shipping Decontam- + Incident plan)
[Ur. oil cont. LSA Material Shipping and Trans. Incident Response Guide]
Emergency response nos (telephone nos.) above on hand.

29. Operational Records

observed and thumbed through by inspector

(Inventory control records
Flow meter monitoring
Sign in logs etc.
operator log book
Various data sheets) in operators office

30. Land Use

Section Enclosed restricted area
- Monitoring wells on leased property - just outside of Section 9 Fence line
Office + warehouse
Monument (project) See 28 - Sand area warehouse) fenced
additional well sites not fenced
Flood control ditches in the area (see 28)
See 15, 16 new well field on stand by.

31. Incidents, Overexposures, Theft or Loss, Equipment Malfunction (Those not described elsewhere should be reported here.)

Break in line in pond #3. Repaired immediately (wind blown effect, tear in ~~tought~~ tough plastic

water assay: 4800 mg/l Na
5500 mg/l SO4
4800 mg/l Cl
see enclosed report

32. Other Information or Continuation from Previous Paragraphs

Calibrations RASCAL ser. 703 with Beta-Gamma probe calibrated 4/16/84 by Eberline

Cordless Geiger Mod 2, 10343
Calib 5/31/83 due 5/31/84

RGM-1 Ser 105, sent May 7, 1984 to Eber.
(Last done 5/9/83)

STATE AGREEMENTS BRANCH
DIVISION III
INFORMATION NOTICE

Other

H.-1 - Implementation of
Part 19 Equivalent

The purpose of this Information Notice is to provide the SAB staff and the Agreement States with a check list of items for implementing Part 19, or the State equivalent, for agreement material licensees.

The checklist is attached.

IMPLEMENTATION OF PART 19 EQUIVALENT REGULATION

Check List

I. POSTING	Yes	No	N/A	*N/R
A. Equivalent regulations to Parts 19 & 20	✓			
B. The license and license conditions	✓			
C. Document tied to the license	✓			
D. Operating procedures	✓			
E. Any Notice of Violation, proposed Penalties or Orders		✓		
F. Notice to Employees	✓			
G. Documents, notices, or forms required to be posted are posted in a sufficient number of places to permit being seen when going to and from any licensed activity location to which the document applies.	✓			
H. Documents, etc., are legible and have not been altered.	✓			
I. Agency documents posted pursuant to I.E. and have been posted within 2 working days after receipt.			✓	
J. Licensee response, if any, posted for a minimum of 5 working days, or until corrective action was completed, whichever was later.			✓	
When posting of items I.A., I.B., I.C., I.D. is not practicable, the licensee may post a notice describing the material and where it may be seen.				

*Not Reviewed

II. INSTRUCTION TO WORKERS	Yes	No	N/A	N/R
A. Individuals working in or frequenting restricted areas have been kept informed of storage, transfer or use of radioactive materials.	✓			
B. Persons in A. have been instructed in health protection problems associated with exposure to such radioactive materials.	✓			
C. Persons in A. have been instructed in precautions and procedures to minimize exposures and the purpose and use of protective devices employed.	✓			
D. Persons in A. have been instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of the Agency's regulations and license conditions.	✓			
E. Persons in A. have been instructed of their responsibility to report promptly to the licensee any condition which could or has caused a violation of Agency regulations, license, or unnecessary exposure to radiation or radioactive material.	✓			
F. Persons in A. have been instructed in the appropriate response to warnings regarding any unusual occurrence or malfunction that may involve radiation exposure.	✓			
G. Persons in A. have been instructed in the radiation exposure reports which can be requested.	✓			
The extent of the instructions should be commensurate with the real or potential radiological health hazards.				

III. NOTIFICATIONS AND REPORTS TO INDIVIDUALS		Yes	No	N/A	N/R
A.	All radiation exposure data (internal and external) has been reported to the individuals noted in II.A as specified below.	✓			
B.	Reports as specified in III.A. have included the appropriate legend "This report is furnished to you under the provisions of the (Agency) regulations ____. You should preserve this report for further reference."	✓			
C.	The licensee has upon request of any worker advised him annually of his radiation exposure as shown in records maintained pursuant to Agency regulations.	✓			
D.	The licensee has upon request of any former worker furnished a report of his radiation exposure to him.	✓			
E.	The licensee has provided his workers with reports of any exposure to these workers which are required to be submitted to the Agency.	✓			

Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified. The information reported shall include data and results obtained pursuant to Agency regulations, orders or license conditions, as shown in records maintained by the licensee pursuant to Agency regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the licensee, the name of the individual, the individual's social security number; include the individual's exposure information.

III. NOTIFICATIONS AND REPORTS TO INDIVIDUALS (Cont'd.)

	Yes	No	N/A	N/R
At the request of a worker formerly engaged in licensed activities controlled by the licensee, each licensee shall furnish to the worker a report of the worker's exposure to radiation of radioactive material. Such report shall be furnished within 30 days from the time the request is made, or within 30 days after the exposure of the individual has been determined by the licensee, whichever is later; shall cover, within the period of time specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive materials licensed by the Agency; and shall include the dates and locations of licensed activities in which the worker participated during this period.				
IV. PRESENCE OF REPRESENTATIVES OF LICENSEES AND WORKERS DURING INSPECTION A. Agency inspectors were allowed to consult privately with workers on appropriate matters. (1)	✓			
B. Inspector was informed of the identity of the worker's representative for Agency inspections. (2)			✓	
C. The worker's representative was allowed to accompany the inspector during the inspection of physical working conditions.			✓	
(1) Inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of the regulations and licenses to the extent the inspectors	✓			

IV. PRESENCE OF REPRESENTATIVES OF LICENSEES WORKERS DURING INSPECTION (Cont'd)

deem necessary for the conduct of an effective and thorough inspection.

During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed or caused any violation of the chapter, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material under the licensee's control. Any such notice in writing shall comply with the requirements of the following:

(2) Any worker or representative of workers who believes that a violation of the regulations in this chapter, or license conditions exist or have occurred in license activities with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Director of the Agency or to Agency inspectors. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of workers. A copy shall be provided the licensee by the Director of the Agency or the inspector no later than at the time of inspection except that, upon the request of the worker giving such

IV. PRESENCE OF REPRESENTATIVES OF LICENSEES WORKERS DURING INSPECTION (Con't)

notice, his name and the name of individuals referred to therein shall not appear in such copy or on any record published, released, or made available by the Agency, except for good cause shown.

(3) Each worker's representative shall be routinely engaged in licensed activities under control of the licensee and shall have received instructions as specified in II.

Different representatives of licensees and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one worker's representation at a time may accompany the inspectors.

With the approval of the licensee and the worker's representative an individual who is not routinely engaged in licensed activities under control of the license, for example, a consultant to the licensee or to the workers' representative, shall be afforded the opportunity to accompany inspectors during the inspection of physical working conditions.

Notwithstanding the other provisions of this section, inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee to enter that area.

SAFETY SUGGESTIONS RECEIVED DURING INSPECTIONS

During inspections, inspectors may receive safety suggestions relating to plant conditions or operations from licensee employees. Inspectors must be receptive to such suggestions and should attempt to resolve or deal with each one received. Even in those cases where the suggestion would require a licensee to do more than is required by NRC regulations, license conditions, or technical specifications, the inspector should discuss the suggestion with the employee and provide, to the best of the inspector's ability, the options that are available.

Depending upon the nature of the suggestion, some possible courses of action are as follows:

1. Encourage the employee to forward the suggestion in writing to plant management and, if appropriate, to the NRC.
2. For matters clearly under the jurisdiction of another Federal agency, or a state or local agency, encourage the employee to contact the appropriate agency, or offer to bring the information to the attention of the proper official.
3. Inform the employee that the matter will be evaluated and, if appropriate, brought to the attention of NRC management.

It is important that an employee profferring a suggestion related to safety be made aware that the NRC is interested in such suggestions and they will be pursued.

ATTACHMENT A

The revised organizational chart is shown below.

Mobil oil (New York)

ORGANIZATION CHART

Mobil Nat. Energies (Denver)

Coal, Ur, oil shale, gold, solvent

General Manager
Uranium/Minerals

D. Walker

Producing Manager

T. Griffith

Engineering Manager

Producing Operations Manager

Hydrological and Environmental Affairs Manager

G. A. Cresswell

T. C. Vogt

new Body

Process Engineering Manager

J. W. Nance

~~W. H. Rugeley~~

replace

Plant Supervisor

RSO

J. L. Long

Permitting Coordinator

W. A. Steingraber

Harrison Peat, Plant Supt (operations)

AA Spectro. (all but large Quant. Quarterly)

Lab

Sec.

Oper 4

maint 3

10 Radial - (aqui Labs (COM) monthly - ASSAGI, ALB.

TABLE 9
PARTICULATE: COMPOSITE ANALYSES- QUARTERLY
QUARTERLY PERIOD: 18TH - FEBRUARY, MARCH, APRIL, 1994
Crownpoint Test Pilot Leach, Section 9
McKinley County, New Mexico

Determination (pCi/m^3) 1/	STANDARD (pCi/m^3) 2/	QUARTERLY Upwind of Facility	QUARTERLY Downwind of Facility
Uranium (as U_3O_8), Total (pCi/m^3)	100.0	<0.002	<0.002
Thorium - 230	2.0	0.0 ± 0.08	0.0 ± 0.05
Radium - 226	30.0	0.0 ± 0.08	0.0 ± 0.05
Lead - 210	100.0	0.0 ± 0.04	0.0 ± 0.03

1/ Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

2/ State of New Mexico Radiation Protection Regulations, Filed April 21, 1980, Section 4-130 (page 4-3) Appendix A Table 1, Column 1.

A-2

(2)

Trip to Mobil

~~Monday~~ Tues AM May 15, 1984 Start 9:30 End 3:45 — To Mobil End Farris Mines

Wed AM May 16, 1984 Start 6:45 AM End 12:00 — To Ken McBee with Mobil crew

Thurs AM & PM change Hi Vol Filters May 17, 1984

Fri: To Mobil May 18, 1984 Start 8:15 End 4:15 — To Mobil crown dump

Place RGM-1

Friday May 25: to Mobil - to pick up RGM-1 Radon Monitor (for comparison with Mobil reported data - See A-(5) for result.

(3)

Mobil Wipes

	Mobil wipe #	Isopropyl Bath (c/20 min)	wipe count (c/20 min)	Net	CPM/300 = dpm
Lunch table	(1)	777	215	154	—	— ±38
counter near oven	(2)	650	231	202	—	— ±32
Change Rm Bench	(3)	611	566	569	1.0	2.0 ± 67
wash Sink (Dirt on Sink Top)	(4)	654	127	140	39.0	78 ± 23.8

Wipes taken 5/10/84

A-(4)

Mobil Site

Sec 9

E. Fence

End 10:20 AM

99:99	000001
99:99	000047
99:99	000040
99:99	000000
99:99	000015

10 min Samples

5/24/10 10:20

5/27 5/28

99:99	020410
99:99	000307
99:99	000336
99:99	000296
99:99	000272
99:99	000250
99:99	000256
99:99	000266
99:99	000248
99:99	000306
99:99	000321
99:99	000422
99:99	000000
99:99	

Samples # 111

pCi/L = $\frac{CPM - 342}{216}$

MOBIL 5/18/84

Radon measurements at permanent station at NE corner of Fence line (Downwind Station)

TIME	CPH
1400	422
1500	321
1600	306
1700	248
1800	266
1900	256
2000	250
2100	272
2200	296
2300	336
0000	307

5/19/84

#111

$Pi/\ell = \frac{CPH - 342}{216}$

(0100 to 10:00 5/19/84 5/25/84)

↓

20410 TOT

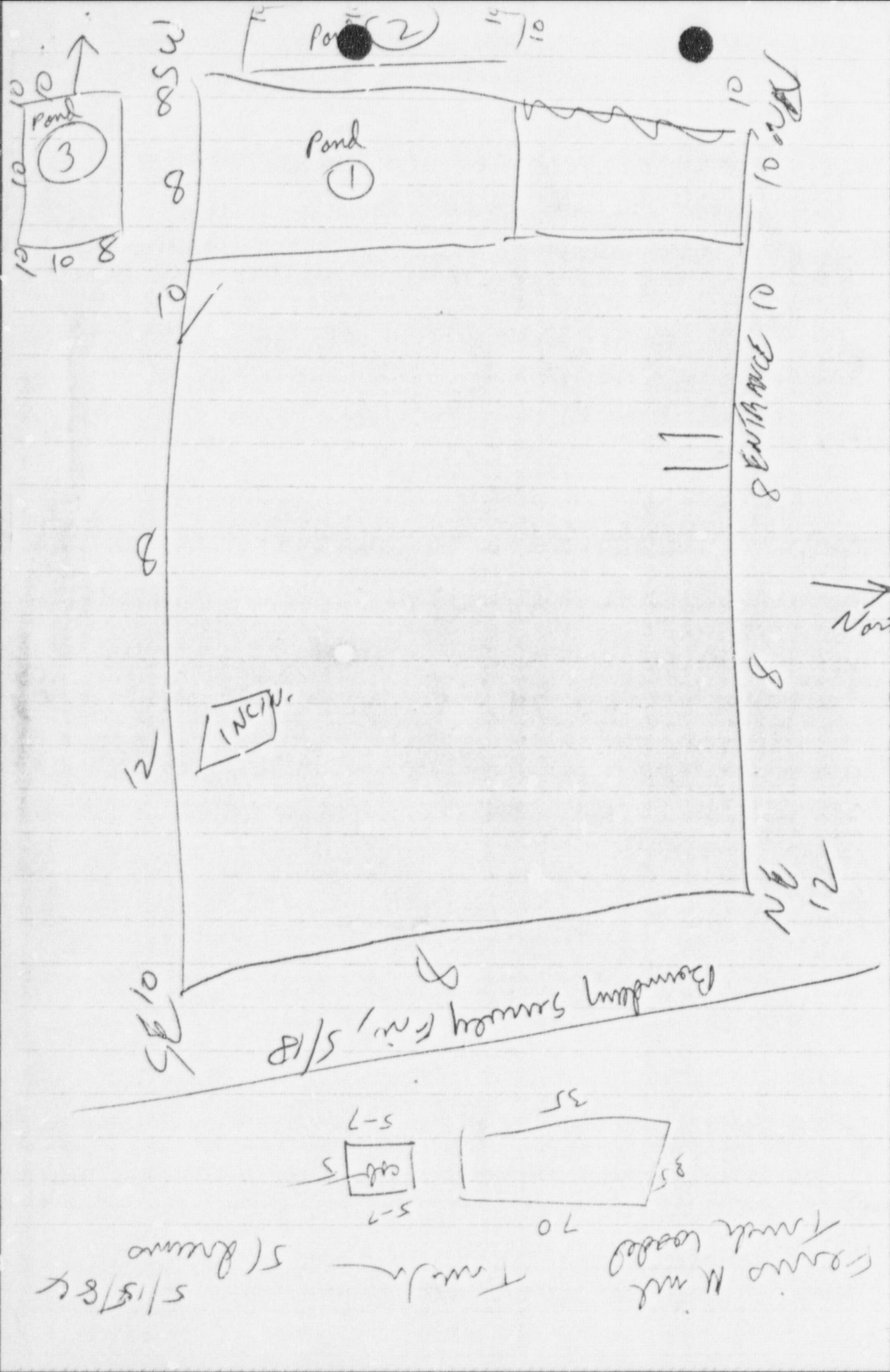
6 X 24 + 9 = 144 + 9 = 153 HRS

$\frac{20410}{153}$ = 385.1 CPH = **0.20 pi/ℓ** = average as reported over 1 year period at same station by Mobil.

10:00 to 10:10 $40/10$ = 4.0 CPM = 240 CPH

10:10 to 10:20 $47/10$ = 4.7 CPM = 282 CPH

This measurement was independent of Mobil measurements at the same station: Their RSM-1 was being calibrated by Eberline when measurements were taken. They expect their instrument to be returned before June 15, 1984 when we will make side-by-side measurements for 30 days and compare.


Pond (2)
Pond (3)
Pond (1)
INCIN.
North
8 ELVITA AVENUE
Boundary Survey Fm. S/18