

DRAFT LIAISON REPORT FORM

1. Name and address of licensee 740 1/2 1976
740 1/2 1976
740 1/2 1976
2. Date of inspection 740 1/2 1976
3. Type of inspection 740 1/2 1976
4. License number(s), docket number(s), number and date of last amendment for each license. Category and Priority of each licensee.
740 1/2 1976
740 1/2 1976
5. Date of previous inspection 740 1/2 1976
6. Proprietary information
7. Scope of inspection if other than routine
740 1/2 1976
8. Participants (Licensee representatives and titles, State representatives, etc.)
740 1/2 1976
9. Management Interview (Information required for N/C cases)
740 1/2 1976
10. Action and Date: Letter to Licensee 740 1/2 1976
740 1/2 1976
740 1/2 1976
11. Recommend reinspection date 740 1/2 1976
12. 740 1/2 1976
Inspector 740 1/2 1976
Date of Report 740 1/2 1976
740 1/2 1976
Reviewer 740 1/2 1976
Date of Review 740 1/2 1976

Attachment to Section 1010

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

A. No violations of the regulations were noted during the inspection.
 B. Some items of off-specification material were noted as being in use.
 1. One of the test pits was not properly sealed with the required material.
 2. Some test pits were not labeled properly with the required information.

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.)

Material is used in the laboratory for the purpose of testing and analysis.

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

W. L. Utner, Technical Cooperation Director
 W. S. Shelley, Director, Regulation and Control
 W. J. Robinson, user
 H. C. Eberhart, user

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

Material was stored in 5 test pits in the laboratory.
 The test pits were not properly sealed with the required material.
 The test pits were not properly labeled with the required information.
 The test pits were not properly sealed with the required material.

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

Charles E-120, calibrated 1/1/54
 H-36, Alpha 100, 1/1/54

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

19. Personnel Monitoring and Exposure to External Radiation (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.) *Given provided by Standard, Element, etc. Four individuals were provided whole body badges with a monthly exchange. 100% review of records indicated no exposure to March, 1976*

20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.)

None

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

None

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

110 lbs of U_2O_8 were shipped to K-25-60-100 in Jan. 1976. 112 lbs of U_2O_8 in 12-10-13. Range of the dump was indicated.

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

Continuous leak and radiation surveys were conducted in conjunction with other licensee records and maintained for these Bi-monthly Surveys. (60% done)

24. Special License Conditions

Were complied with except as noted in para 16.

25. Posting and Labelling, site No 3 + 4 were not labelled per T to 10CFR20.203(e)(2). No 3 contained 3973 lbs and No 4 contained 44.15 lbs of mixed uranium.

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

No radiation levels were found to be greater than two mR/hr in unrestricted areas.

2 measurements performed with R/S No 517.

27. Operations Observed

None

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

None reported.

29. Other Information or Continuation from Previous Paragraphs

ORE LAYERS ARE 6' & ~ 28.3 FT / FT. OF LENGTH
 ORE WEIGHS ~ 13012 / FT³
 THUS: ORE LAYERS WEIGHT 28.3 X 130 = 3679 LB / FT. OF LENGTH

PIT No. 1

$$6' \text{ OF } 0.24\% (U_3O_8) \text{ ORE: } 6 \times 3679 \times .0024 = \frac{U_3O_8}{52.98}$$

PIT No. 2

$$6' \text{ OF } 0.51\% \text{ ORE: } 6 \times 3679 \times .0051 = 112.58$$

PIT No. 3

$$6' \text{ OF SAND + Y.C. (.10\%): } 6 \times 3679 \times .0018 = 39.73$$

PIT No. 4

$$6' \text{ OF } 0.20\% \text{ ORE: } 6 \times 3679 \times .0020 = 44.15$$

PIT No. 5

$$\left. \begin{array}{l} 0.5' \text{ OF } 0.51\%: 0.5 \times 3679 \times .0051 = 9.38 \\ 5' \text{ OF } 0.053\%: 5 \times 3679 \times .00053 = 15.27 \\ 0.5' \text{ OF } 0.24\%: 0.5 \times 3679 \times .0024 = 4.41 \end{array} \right\} 29.06$$

252 CF TEST DRUM

$$4213 \text{ LB OF } 1.03\% \text{ ORE: } 4213 \times .0103 = 43.39$$

- YELLOW CRATE BUCKET

$$\begin{array}{l} 30,277 \text{ G. @ } 2\% \text{ H}_2\text{O} \text{ \& } 89\% \text{ U}_3\text{O}_8 \\ 30,277 \times .98 \times .89 = 26407 \div 454 = 58.16 \end{array}$$

ORE STORED IN DRUMS

.. (SEE ATT. SHEET) =

$$490.13 \times .85^{(30/U_3O_8)} = 416.61 \text{ LB}$$

$$416.61 \div 2.2 = 189.37 \text{ Kg.}$$

$$176.84 \text{ kg U}$$

$$\begin{array}{r} 110.08 \\ 490.13 \\ \hline 110.08 \\ \hline 380.05 \text{ (kg U)} \end{array}$$

Thorium Inventory

Material	Amount	Th Content	Pounds Th
✓ Thorium Nitrate	5 lbs	x 0.407	2.0
✓ Thorium Chloride	6.6 lbs	x 0.448	3.0
✓ Thorite Concentrate	10 lbs	x 0.068	0.7
Monazite Hydrate	30 lbs	x 0.018	0.5
Thorium Precipitate	15 lbs	x 0.135	2.0
Thorium Precipitate	80 lbs	x 0.135	10.8
Monazite (Camden)	11 lbs	x 0.024	.3
		Total	19.3

u2 d up

1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, 2016-2017, 2018-2019, 2020-2021, 2022-2023, 2024-2025, 2026-2027, 2028-2029, 2030-2031, 2032-2033, 2034-2035, 2036-2037, 2038-2039, 2040-2041, 2042-2043, 2044-2045, 2046-2047, 2048-2049, 2050-2051, 2052-2053, 2054-2055, 2056-2057, 2058-2059, 2060-2061, 2062-2063, 2064-2065, 2066-2067, 2068-2069, 2070-2071, 2072-2073, 2074-2075, 2076-2077, 2078-2079, 2080-2081, 2082-2083, 2084-2085, 2086-2087, 2088-2089, 2090-2091, 2092-2093, 2094-2095, 2096-2097, 2098-2099, 2100-2101, 2102-2103, 2104-2105, 2106-2107, 2108-2109, 2110-2111, 2112-2113, 2114-2115, 2116-2117, 2118-2119, 2120-2121, 2122-2123, 2124-2125, 2126-2127, 2128-2129, 2130-2131, 2132-2133, 2134-2135, 2136-2137, 2138-2139, 2140-2141, 2142-2143, 2144-2145, 2146-2147, 2148-2149, 2150-2151, 2152-2153, 2154-2155, 2156-2157, 2158-2159, 2160-2161, 2162-2163, 2164-2165, 2166-2167, 2168-2169, 2170-2171, 2172-2173, 2174-2175, 2176-2177, 2178-2179, 2180-2181, 2182-2183, 2184-2185, 2186-2187, 2188-2189, 2190-2191, 2192-2193, 2194-2195, 2196-2197, 2198-2199, 2200-2201, 2202-2203, 2204-2205, 2206-2207, 2208-2209, 2210-2211, 2212-2213, 2214-2215, 2216-2217, 2218-2219, 2220-2221, 2222-2223, 2224-2225, 2226-2227, 2228-2229, 2230-2231, 2232-2233, 2234-2235, 2236-2237, 2238-2239, 2240-2241, 2242-2243, 2244-2245, 2246-2247, 2248-2249, 2250-2251, 2252-2253, 2254-2255, 2256-2257, 2258-2259, 2260-2261, 2262-2263, 2264-2265, 2266-2267, 2268-2269, 2270-2271, 2272-2273, 2274-2275, 2276-2277, 2278-2279, 2280-2281, 2282-2283, 2284-2285, 2286-2287, 2288-2289, 2290-2291, 2292-2293, 2294-2295, 2296-2297, 2298-2299, 2300-2301, 2302-2303, 2304-2305, 2306-2307, 2308-2309, 2310-2311, 2312-2313, 2314-2315, 2316-2317, 2318-2319, 2320-2321, 2322-2323, 2324-2325, 2326-2327, 2328-2329, 2330-2331, 2332-2333, 2334-2335, 2336-2337, 2338-2339, 2340-2341, 2342-2343, 2344-2345, 2346-2347, 2348-2349, 2350-2351, 2352-2353, 2354-2355, 2356-2357, 2358-2359, 2360-2361, 2362-2363, 2364-2365, 2366-2367, 2368-2369, 2370-2371, 2372-2373, 2374-2375, 2376-2377, 2378-2379, 2380-2381, 2382-2383, 2384-2385, 2386-2387, 2388-2389, 2390-2391, 2392-2393, 2394-2395, 2396-2397, 2398-2399, 2400-2401, 2402-2403, 2404-2405, 2406-2407, 2408-2409, 2410-2411, 2412-2413, 2414-2415, 2416-2417, 2418-2419, 2420-2421, 2422-2423, 2424-2425, 2426-2427, 2428-2429, 2430-2431, 2432-2433, 2434-2435, 2436-2437, 2438-2439, 2440-2441, 2442-2443, 2444-2445, 2446-2447, 2448-2449, 2450-2451, 2452-2453, 2454-2455, 2456-2457, 2458-2459, 2460-2461, 2462-2463, 2464-2465, 2466-2467, 2468-2469, 2470-2471, 2472-2473, 2474-2475, 2476-2477, 2478-2479, 2480-2481, 2482-2483, 2484-2485, 2486-2487, 2488-2489, 2490-2491, 2492-2493, 2494-2495, 2496-2497, 2498-2499, 2500-2501, 2502-2503, 2504-2505, 2506-2507, 2508-2509, 2510-2511, 2512-2513, 2514-2515, 2516-2517, 2518-2519, 2520-2521, 2522-2523, 2524-2525, 2526-2527, 2528-2529, 2530-2531, 2532-2533, 2534-2535, 2536-2537, 2538-2539, 2540-2541, 2542-2543, 2544-2545, 2546-2547, 2548-2549, 2550-2551, 2552-2553, 2554-2555, 2556-2557, 2558-2559, 2560-2561, 2562-2563, 2564-2565, 2566-2567, 2568-2569, 2570-2571, 2572-2573, 2574-2575, 2576-2577, 2578-2579, 2580-2581, 2582-2583, 2584-2585, 2586-2587, 2588-2589, 2590-2591, 2592-2593, 2594-2595, 2596-2597, 2598-2599, 2600-2601, 2602-2603, 2604-2605, 2606-2607, 2608-2609, 2610-2611, 2612-2613, 2614-2615, 2616-2617, 2618-2619, 2620-2621, 2622-2623, 2624-2625, 2626-2627, 2628-2629, 2630-2631, 2632-2633, 2634-2635, 2636-2637, 2638-2639, 2640-2641, 2642-2643, 2644-2645, 2646-2647, 2648-2649, 2650-2651, 2652-2653, 2654-2655, 2656-2657, 2658-2659, 2660-2661, 2662-2663, 2664-2665, 2666-2667, 2668-2669, 2670-2671, 2672-2673, 2674-2675, 2676-2677, 2678-2679, 2680-2681, 2682-2683, 2684-2685, 2686-2687, 2688-2689, 2690-2691, 2692-2693, 2694-2695, 2696-2697, 2698-2699, 2700-2701, 2702-2703, 2704-2705, 2706-2707, 2708-2709, 2710-2711, 2712-2713, 2714-2715, 2716-2717, 2718

1. Name and address of licensee: 7400 N. 1st St. Phoenix, AZ 85018
2. Date of inspection: 7/10/76
3. Type of inspection: R()
4. License number(s), author number(s), number and date of last inspection for each license. Category and Priority of each licensee.
Sub 7400, 7401, 7402, 7403, 7404, 7405, 7406, 7407, 7408, 7409, 7410, 7411, 7412, 7413, 7414, 7415, 7416, 7417, 7418, 7419, 7420, 7421, 7422, 7423, 7424, 7425, 7426, 7427, 7428, 7429, 7430, 7431, 7432, 7433, 7434, 7435, 7436, 7437, 7438, 7439, 7440, 7441, 7442, 7443, 7444, 7445, 7446, 7447, 7448, 7449, 7450, 7451, 7452, 7453, 7454, 7455, 7456, 7457, 7458, 7459, 7460, 7461, 7462, 7463, 7464, 7465, 7466, 7467, 7468, 7469, 7470, 7471, 7472, 7473, 7474, 7475, 7476, 7477, 7478, 7479, 7480, 7481, 7482, 7483, 7484, 7485, 7486, 7487, 7488, 7489, 7490, 7491, 7492, 7493, 7494, 7495, 7496, 7497, 7498, 7499, 7500, 7501, 7502, 7503, 7504, 7505, 7506, 7507, 7508, 7509, 7510, 7511, 7512, 7513, 7514, 7515, 7516, 7517, 7518, 7519, 7520, 7521, 7522, 7523, 7524, 7525, 7526, 7527, 7528, 7529, 7530, 7531, 7532, 7533, 7534, 7535, 7536, 7537, 7538, 7539, 7540, 7541, 7542, 7543, 7544, 7545, 7546, 7547, 7548, 7549, 7550, 7551, 7552, 7553, 7554, 7555, 7556, 7557, 7558, 7559, 7560, 7561, 7562, 7563, 7564, 7565, 7566, 7567, 7568, 7569, 7570, 7571, 7572, 7573, 7574, 7575, 7576, 7577, 7578, 7579, 7580, 7581, 7582, 7583, 7584, 7585, 7586, 7587, 7588, 7589, 7590, 7591, 7592, 7593, 7594, 7595, 7596, 7597, 7598, 7599, 7600, 7601, 7602, 7603, 7604, 7605, 7606, 7607, 7608, 7609, 7610, 7611, 7612, 7613, 7614, 7615, 7616, 7617, 7618, 7619, 7620, 7621, 7622, 7623, 7624, 7625, 7626, 7627, 7628, 7629, 7630, 7631, 7632, 7633, 7634, 7635, 7636, 7637, 7638, 7639, 7640, 7641, 7642, 7643, 7644, 7645, 7646, 7647, 7648, 7649, 7650, 7651, 7652, 7653, 7654, 7655, 7656, 7657, 7658, 7659, 7660, 7661, 7662, 7663, 7664, 7665, 7666, 7667, 7668, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7676, 7677, 7678, 7679, 7680, 7681, 7682, 7683, 7684, 7685, 7686, 7687, 7688, 7689, 7690, 7691, 7692, 7693, 7694, 7695, 7696, 7697, 7698, 7699, 7700, 7701, 7702, 7703, 7704, 7705, 7706, 7707, 7708, 7709, 7710, 7711, 7712, 7713, 7714, 7715, 7716, 7717, 7718, 7719, 7720, 7721, 7722, 7723, 7724, 7725, 7726, 7727, 7728, 7729, 7730, 7731, 7732, 7733, 7734, 7735, 7736, 7737, 7738, 7739, 7740, 7741, 7742, 7743, 7744, 7745, 7746, 7747, 7748, 7749, 7750, 7751, 7752, 7753, 7754, 7755, 7756, 7757, 7758, 7759, 7760, 7761, 7762, 7763, 7764, 7765, 7766, 7767, 7768, 7769, 7770, 7771, 7772, 7773, 7774, 7775, 7776, 7777, 7778, 7779, 7780, 7781, 7782, 7783, 7784, 7785, 7786, 7787, 7788, 7789, 7790, 7791, 7792, 7793, 7794, 7795, 7796, 7797, 7798, 7799, 7800, 7801, 7802, 7803, 7804, 7805, 7806, 7807, 7808, 7809, 7810, 7811, 7812, 7813, 7814, 7815, 7816, 7817, 7818, 7819, 7820, 7821, 7822, 7823, 7824, 7825, 7826, 7827, 7828, 7829, 7830, 7831, 7832, 7833, 7834, 7835, 7836, 7837, 7838, 7839, 7840, 7841, 7842, 7843, 7844, 7845, 7846, 7847, 7848, 7849, 7850, 7851, 7852, 7853, 7854, 7855, 7856, 7857, 7858, 7859, 7860, 7861, 7862, 7863, 7864, 7865, 7866, 7867, 7868, 7869, 7870, 7871, 7872, 7873, 7874, 7875, 7876, 7877, 7878, 7879, 7880, 7881, 7882, 7883, 7884, 7885, 7886, 7887, 7888, 7889, 7890, 7891, 7892, 7893, 7894, 7895, 7896, 7897, 7898, 7899, 7900, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908, 7909, 7910, 7911, 7912, 7913, 7914, 7915, 7916, 7917, 7918, 7919, 7920, 7921, 7922, 7923, 7924, 7925, 7926, 7927, 7928, 7929, 7930, 7931, 7932, 7933, 7934, 7935, 7936, 7937, 7938, 7939, 7940, 7941, 7942, 7943, 7944, 7945, 7946, 7947, 7948, 7949, 7950, 7951, 7952, 7953, 7954, 7955, 7956, 7957, 7958, 7959, 7960, 7961, 7962, 7963, 7964, 7965, 7966, 7967, 7968, 7969, 7970, 7971, 7972, 7973, 7974, 7975, 7976, 7977, 7978, 7979, 7980, 7981, 7982, 7983, 7984, 7985, 7986, 7987, 7988, 7989, 7990, 7991, 7992, 7993, 7994, 7995, 7996, 7997, 7998, 7999, 8000, 8001, 8002, 8003, 8004, 8005, 8006, 8007, 8008, 8009, 8010, 8011, 8012, 8013, 8014, 8015, 8016, 8017, 8018, 8019, 8020, 8021, 8022, 8023, 8024, 8025, 8026, 8027, 8028, 8029, 8030, 8031, 8032, 8033, 8034, 8035, 8036, 8037, 8038, 8039, 8040, 8041, 8042, 8043, 8044, 8045, 8046, 8047, 8048, 8049, 8050, 8051, 8052, 8053, 8054, 8055, 8056, 8057, 8058, 8059, 8060, 8061, 8062, 8063

Attachment to Section 1010

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

H. Mc... of...
D. ...
A. ...
...

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.)

Material... 1974.

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

W. A. ... Technical...
W. B. ... Director...
W. J. ... user
H. C. ...

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

Material...
...
...
...

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

Charles...
ATC 36...

19. Personnel Monitoring and Exposure to External Radiation (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.) *Records provided by Standard, Illinois, Bell
Bureau & Associates were provided which show badges with
a reading of 0.1 mR per year. 100% compliance of records indicated
no exposure to March, 1976*
20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.)

7/1/20

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

Yours

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

110 lbs of H_2O_2 was shipped to Keweenaw
on Jan. 3. 112. May 12 13. Quantity
of the sample was 110 lbs.

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

On the 10/10/1964, a survey was conducted by the licensee for the purpose of determining the radiation levels in the vicinity of the reactor. The results of the survey are as follows:

24. Special License Conditions

Licensee complies with special conditions as noted on page 16.

25. Posting and Labelling, on the 10/10/1964, a survey was conducted by the licensee for the purpose of determining the radiation levels in the vicinity of the reactor. The results of the survey are as follows:

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

No independent measurements were found to be significant. The licensee has no independent measurements.

The licensee has no independent measurements.

27. Operations Observed

None

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

None reported.

29. Other Information or Continuation from Previous Paragraphs

ORE LAYERS ARE 6' & ~ 28.3 ft / FEET LENGTH
 ORE WEIGHS ~ 13012 / ft³
 THUS: ORE LAYERS WEIGH 28.3 x 130 = 3679 lb / ft

PIT No. 1 U₃O₈
 6' OF 0.24% (U₃O₈) ORE: $6 \times 3679 \times .0024 = 52.98$

PIT No. 2
 6' OF 0.51% ORE: $6 \times 3679 \times .0051 = 112.56$

PIT No. 3
 6' OF SAND + Y.C. (.10%): $6 \times 3679 \times .0018 = 39.73$

PIT No. 4
 6' OF 0.20% ORE: $6 \times 3679 \times .0020 = 44.15$

PIT No. 5

0.5' OF 0.51%: $0.5 \times 3679 \times .0051 = 9.28$	}	29.06
5' OF 0.053%: $5 \times 3679 \times .00053 = 15.27$		
0.5' OF 0.74%: $0.5 \times 3679 \times .0024 = 4.41$		

252 CF TEST DRUM
 4213 LB OF 1.03% ORE: $4213 \times .0103 = 43.29$

V YELLOW GILK BUCKET
 30,277 G. @ 2% H₂O & 89% U₃O₈
 $30,277 \times .98 \times .89 = 26407 \div 454 = 58.16$

ORE STORED IN DRUMS
 ... (SEE ATT. SHEET) = 110.08

$490.13 \times .85^{(20/100)} = 416.61 \text{ LB}$

$416.61 \div 2.2 = 189.37 \text{ Kg.}$

176.84 kg U

110.08
 490.13
 - 110.08

 380.05 (110.08)

Thorium Inventory

Material	Amount	Th Content	Pounds Th
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Monazite Hydrate	30 lbs	x 0.018	0.5
Thorium Precipitate	15 lbs	x 0.135	2.0
Thorium Precipitate	80 lbs	x 0.135	10.8
Monazite (Camden)	11 lbs	x 0.024	.3
		Total	19.3

1957年5月14日 星期四

1. Name and address of licensee: 740 1st St. N. Minneapolis, MN 55412
2. Date of inspection: 7/14/76
3. Type of inspection: R()
4. License number(s), district number(s), number and date of last amendment for each license. Category and Priority of each licensee.
See 740 1st St. N. Minneapolis, MN 55412
5. Date of previous inspection: 7/10/76
6. Proprietary information: None
7. Scope of inspection if other than routine: None
8. Participants (Licensee representatives and titles, State representatives, etc.): W. J. Smith, Licensee
9. Management Interview (Information required for N/C cases)
Interview with W. J. Smith, Licensee, 7/14/76
10. Action and Date: Letter to Licensee: AEC-591 Clear
AEC-591 N/C
11. Recommend reinspection date: None
12. Chad M. Smith Inspector 7/14/76 Date of Report
John Brown Reviewer 5/14/76 Date of Review

Attachment to Section 1010

- H. M. 26 of 1891. The first of the year.
H. M. 26 of 1891. The first of the year.
H. M. 26 of 1891. The first of the year.
H. M. 26 of 1891. The first of the year.

- Mathematical ... 1374.

- W. A. Utner, Technical Center Director
W. S. Shelley, Director, Research and Control
 W. J. Nicholas, User
 H. S. Eberlin, User

- National Union Standard School for the Deaf
and Blind, Washington, D.C.

- Charles E. 120, calculated only
1770 36, 1770 36, 1770 36

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

19. Personnel Monitoring and Exposure to External Radiation (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.)
*Exposure recorded by dosimeter, 11/1/76, 211
 3.0 mR. Significant exposure recorded on 11/1/76, 211
 amounting to 10 mR. 10 mR. of exposure recorded
 no exposure to March, 1976*

20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.)

None

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

None

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

*110 lbs of U₂O₈ was shipped to Keweenaw 11/1/76
 in 2 drums. 112 lbs of U₂O₈ on 12-10-76. Balance
 of the drums were returned.*

ORE LAYERS ARE 6' & ~ 28.3 lb / Ft. of length
 ORE WEIGHS ~ 130 lb / Ft.³
 THUS: ORE LAYERS WEIGH 28.3 x 130 = 3679 lb / Ft. of length

PIT No. 1 0.24%
 6' OF 0.24% (U₃O₈) ORE: $6 \times 3679 \times .0024 = 52.98$

PIT No. 2
 6' OF 0.51% ORE: $6 \times 3679 \times .0051 = 112.58$

PIT No. 3
 6' OF SAND + Y.C. (.10%): $6 \times 3679 \times .0018 = 39.73$

PIT No. 4
 6' OF 0.20% ORE: $6 \times 3679 \times .0020 = 44.15$

PIT No. 5

0.5' OF 0.51%: $0.5 \times 3679 \times .0051 = 9.38$	}	29.06
5' OF 0.053%: $5 \times 3679 \times .00053 = 15.27$		
0.5' OF 0.74%: $0.5 \times 3679 \times .0074 = 4.41$		

LEZCF TEST DRUM
 4213 LB OF 1.03% ORE: $4213 \times .0103 = 43.39$

V. VILLINO CORK BUCKET
 30,277 G. @ 2% H₂O & 89% U₃O₈
 $30,277 \times .98 \times .89 = 26407 \div 454 = 58.16$

ORE STORED IN DRUMS
 (SEE ATT. SHEET) = 110.08

$490.13 \times .85^{(20/U_{3O_8})} = 416.61 \text{ LB}$

$416.61 \div 2.2 = 189.37 \text{ Kg.}$

146.84 kg U

110.08
 490.13
 - 110.08

 380.05 (110.08)

Thorium Inventory

Material	Amount	Th Content	Pounds Th
Thorium Nitrate	5 lbs	x 0.407	2.0
Thorium Chloride	6.6 lbs	x 0.448	3.0
Thorite Concentrate	10 lbs	x 0.068	0.7
Monazite Hydrate	30 lbs	x 0.018	0.5
Thorium Precipitate	15 lbs	x 0.135	2.0
Thorium Precipitate	80 lbs	x 0.135	10.8
Monazite (Camden)	11 lbs	x 0.024	0.3
		Total	19.3