UNITED STATES
ATOMIC ENERGY COMMISSION

Post Office Box 470
St. Charles, Missouri

APR 12 1962

IN REPLY REFER TO
SFSRO

Mr. Clemons M. Roark, President
Contemporary Metals Corporation
620 North Denton Way
Los Angeles 26, California

Subject: ACCEPTANCE OF BID UNDER INVITATION NO. AT-(23-2)-46

Dear Mr. Roark:

Your bid dated April 9, 1962, to purchase and remove Government-owned property as listed in Invitation No. AT-(23-2)-46 dated March 7, 1962, in the amount of $126,500, is hereby accepted by the Atomic Energy Commission.

A Notice to Proceed with removal of the residues will be issued when you have obtained a license to receive, process, use or transfer the source material contained in the residues from the Director, Division of Licensing and Regulation, U. S. Atomic Energy Commission, Washington 25, D. C., and when you have furnished a performance bond in the amount of $50,000.

Since other Commission contractors may be working at the site during your removal operations, coordination with their work will be required.

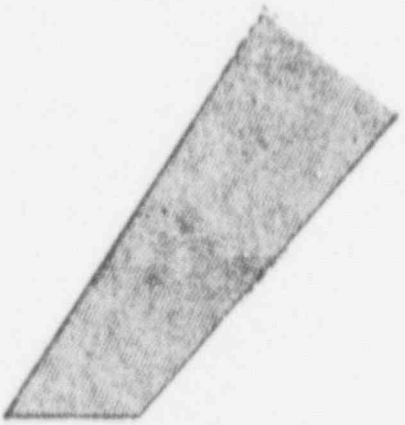
Very truly yours,

F. N. Belcher
Area Manager

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

E/r

Sale



GOVERNMENT PROPERTY

Sealed bids in triplicate subject to the terms and conditions set forth herein, for the purchase and removal of the Government-owned property listed in this Invitation, will be received until the time, date, and at the place indicated below, and then publically opened.

Time of Opening - 2:00 p.m. EST
Date of Opening - April 10, 1962
Place of Opening - Atomic Energy Commission Office
Weldon Spring, Missouri
Bid Deposit of $2,000 is required

Inspection Invited between 8:00 a.m. and 4:00 p.m.
Arrange with H. R. Osterwald or C. H. Fisher,
Telephone St. Louis WY-3-9400
Issued by St. Louis Area Office
U. S. Atomic Energy Commission
Address: Box 470, St. Charles, Missouri

Property located in open storage on a 21-acre tract at Robertson, Missouri, immediately north of St. Louis Municipal Airport and east of McDonnell Aircraft Corporation Plant on Brown Road in St. Louis County. Residues stored are shown on attached drawing subject, "Topographical Location of Plant Facilities for Mallinckrodt Chemical Works," MCW Drawing No. 6-1403-19.

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INSTRUCTIONS AND INFORMATION TO BIDDERS

1. The Bidder's attention is called to the requirement in the Special Conditions that the successful bidder will be required to obtain a license prior to the removal of any residues from the site.

2. The Bidder's attention is called to the Description contained in Article I of the Special Conditions, specifically to the relatively large quantities of rare elements contained in the pitchblende raffinate which contains one of the largest known amounts of concentrated scandium and ionium.

3. Bidders should note the requirement for a performance bond which shall be written in terms which will guarantee the removal of all residues.

4. THE BIDDER IS ADVISED THAT THE ATOMIC ENERGY COMMISSION WILL NOT PURCHASE DIRECTLY URANIUM RECOVERED FROM PROCESSING OF RESIDUES TO BE PURCHASED UNDER THIS INVITATION.

5. Samples. Bidders are invited to inspect the residues at the site and to take samples for the purpose of making their own estimates and assays of the quantities and contents of the materials for sale. Bidders may select a reasonable quantity, as determined by the Government, of samples for their retention and use for testing purposes. These samples and necessary labor and containers required for selecting and preparing the samples for shipment will be furnished without charge to the Bidder.

SALE OF GOVERNMENT PROPERTY

BID

Date of Bid: April 29, 1946

In compliance with Invitation No. AT-(23-2)-46 as identified on the cover page hereof and subject to the General and Special Terms and Conditions attached hereto and the instructions to bidders, all of which are incorporated as a part of this Bid, the undersigned offers and agrees, if this Bid be accepted within 60 calendar days (60 calendar days if no period be specified by the Bidder, but not less than 10 calendar days in any case) after date of Bid opening, to purchase the residues hereinafter described and to remove same within the specified number of calendar days after notice from the Government to proceed. There is attached a bid deposit in the amount of $2,000.

Item	Description	Bid Price
All residues located at the Airport Site	As described in Article I	Lump sum of $ 126,500.00

Bidder Represents: (Check one)

1. That he ☑ is, ☐ is not, a small business concern.

2. If Bidder represents he is a small business concern, he further represents his applicable classification as:

   (Check one) ☐(a); ☐(b); ☐(c); ☐(d).

3. (a) That he ☐ has, ☑ has not, employed or retained any company or person (other than a full-time bona fide employee working solely for the Bidder) to solicit or secure this contract, and (b) that he ☐ has, ☑ has not, paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the Bidder) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract; and agrees to furnish information relating to (a) and (b) above as requested by the Contracting Officer. (For interpretation of the representation, including the term "bona fide employee," see Code of Federal Regulations, Title 41, Part 150.)

Name and Address of Bidder (Street, city, zone, and State. Type or print)

620 No Beaudry
Los Angeles 26
Calif.

Signature of Person Authorized to Sign Bid

Signer's Name and Title (Type or Print)

President
CONTEMPORARY METALS CORPORATION

GENERAL SALE TERMS AND CONDITIONS

1. Inspection. The Bidder is invited, urged, and cautioned to inspect the property to be sold prior to submitting a bid. Property will be available for inspection at the places and times specified in the Invitation. In no case will failure to inspect constitute grounds for the withdrawal of a bid after opening.

2. Consideration of Bids. The Bidder agrees that his bid will not be withdrawn within the period of time specified for the acceptance thereof following the opening of bids (sixty (60) calendar days if no period be specified by the Government or by the Bidder but not less than ten (10) calendar days in any case) and that during such period his bid will remain firm and irrevocable. The Government reserves the right to reject any or all bids, and to waive any technical defects in bids as may be in the best interest of the Government.

3. Risk of Loss. (1) After mailing notice of award, and prior to passage of title to the Purchaser, the Government will be responsible for the care and protection of the property and any loss, damage, or destruction occurring during such period will be adjusted by the Contracting Officer. (2) After passage of title to the Purchaser, and prior to the date specified for removal, the Government shall be responsible only for the exercise of reasonable care for the protection of the property. (3) After passage of title and after the date specified for removal of the property, or any extension approved in writing by the Contracting Officer, all risk of loss, damage, or destruction from any cause whatsoever shall be borne by the Purchaser.

4. Limitation on Government's Liability. Except for transportation charges when a return of property at Government cost is authorized by the Government, the measure of the Government's liability in any case where liability of the Government to the Purchaser has been established shall not exceed refund of such portion of the purchase price as the Government may have received.

5. Oral Statements and Modifications. Any oral statement or representation by any representative of the Government, changing or supplementing this contract or any Condition thereof, is unauthorized and shall confer no right upon the Purchaser.

6. Covenant Against Contingent Fees. Purchaser warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial agencies maintained by the Purchaser for the purpose of doing business. For breach of this warranty, the Government shall have the right to annul this contract without liability or at its option, to recover from the Purchaser the amount of such commission, percentage, brokerage, or contingent fee, in addition to the consideration herein set forth.

7. Officials Not To Benefit. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, unless it be made with a corporation for its general benefit.

8. Disputes. Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Purchaser. The decision of the Contracting Officer shall be final and conclusive unless, within thirty (30) days from the date of receipt of such copy, the Purchaser mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the Commission. The decision of the Commission or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Purchaser shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Purchaser shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

9. Definitions. As used throughout this contract, the following terms shall have the meaning set forth below:

(1) The term "Contracting Officer" means the person executing the contract on behalf of the Government and includes his successors or any duly authorized representative of such person.

(2) The term "Commission" means the United States Atomic Energy Commission or any duly authorized representative thereof, including the Contracting Officer except for the purpose of deciding an appeal under Paragraph 8 hereof entitled "Disputes".

(3) The words "residues", "property" and "material(s)" are used interchangeably throughout this document and refer to the uranium-bearing material described in Article I.

SPECIAL CONDITIONS

ARTICLE I - DESCRIPTION OF RESIDUES

The residues offered for sale consist of uranium-bearing material accumulated by the Commission during its uranium refining activities at its Destrehan Street Plant, St. Louis, Missouri. The gross weights listed below are the approximate weights of the residues hauled to the site from the refinery. They do not include stone added for ramps and roads, earth added by rehandling of the residues, or moisture changes. In this connection, some of the existing roadways are constructed on residues offered for sale and the existing levels of these roadways are not indicative of the depth of the piles of residues at any given location. The estimated uranium content is based on an accumulation of assays taken on pipe samples from each batch hauled to the site. It is understood that the estimated weights and assays shown below are in no way guaranteed. Purchasers must rely on their own determinations as to qualitative and quantitative contents of the residues to be sold. which are generally described as follows:

Pitchblende Raffinate

The pitchblende raffinate is a residue resulting from processing Belgian Congo pitchblende together with other uranium concentrates. Approximate gross weight is 74,000 tons containing about 113 tons of uranium.

A systematic auger sampling program for the pitchblende raffinate piles was performed in June of 1953. Based on thirty-seven sample holes which provided ninety-six analytical samples, the metal values in approximately 50,000 tons of residue existing at that time were estimated as follows:

1,553,000 lbs. of Cobalt
1,845,000 lbs. of Nickel
971,000 lbs. of Copper

Subsequent additions of raffinate to these piles increased the gross weight to approximately 74,000 tons. Assuming the copper, cobalt and nickel content of the pitchblende ore processed during this period was the same as processed prior to June 1953 and neglecting any contribution to the metal values by other uranium-containing materials processed during this period, the total metal values in the present pile are estimated as follows:

[illegible],000 lbs. of Cobalt
[illegible]35,000 lbs. of Nickel
[illegible],098,000 lbs. of Copper

Other samples on which more complete analyses were made are shown in Table I. Due to the heterogeneity of the pitchblende raffinate, these analyses should be considered indicative of the composition of the material and in no sense representative of the gross composition.

Table I

Pitchblende Raffinate Composition

	1 (a)	2 (b)	3 (c)
Al	0.22%	0.26%	1.8%
Ca	11.0	11.9	2.7
Co	2.8	3.3	1.8
CO_2	1.4	1.9	--
Cr	--	--	0.02
Cu	0.9	1.95	0.9
Fe	1.2	1.4	0.7
Mg	5.0	1.9	0.04
Mn	0.12	0.16	0.04
Mo	0.33	0.23	0.03
Ni	4.1	3.5	3.1
NO_3	27.1	25.2	8.3
P_2O_5	0.96	1.1	--
Pb	Tr	Tr	1.8
R.E.	--	--	0.22(d)
S total	0.8	1.47	--
Sc	--	--	0.015
Se	1.5	0.73	--
Si	5.56	4.69	0.82
Sr	--	--	0.02
Th	--	--	0.0038(e)
Ti	--	--	0.007
U	0.13	0.13	0.14
V	Nil	Nil	0.3
Y	--	--	0.04
Solids	50.3	50.7	--
L.O.I @ 500°C	--	--	49.7
Soluble Matter	46.2	43.1	--

(a) 30-gallon sample from 3 locations using 4-inch auger, taken in February 1953. Reported on solids basis.

(b) 30-gallon shovel sample from surface of piles in 35 different locations, taken in February 1953. Reported on solids basis.

(c) Sample taken in the spring of 1955 from an area containing raffinate produced during a period in which primarily pitchblende was processed. Reported on ignited basis.

(d) Approximate rare earth distribution shown in Table II.

(e) Sample contained 0.00039% ionium.

Table II

Rare Earth Distribution for Pitchblende Raffinate
Sample 3 in Table I

Element	% of Total Rare Earths
La	3.5
Ce	6.0
Pr	7.7
Nd	13.5
Sm	5.3
Eu	5.0
Gd	16.9
Tb	7.0
Dy	24.3
Ho	2.4
Er	4.6
Tm	0.7
Yb	2.6
Lu	0.07

Colorado Raffinate

The Colorado raffinate is a heterogeneous residue resulting from processing primarily domestic uranium concentrates. Approximate gross weight is 32,500 tons containing about 48 tons of uranium. Estimated composition of the Colorado raffinate on an ignited basis is as follows:

	%		%
Al_2O_3	2.1	P_2O_5	1.2
CaO	41.8	PbO	0.05
Co	0.13	SO_3	15.8
Fe_2O_3	8.7	SiO_2	5.4
Halides	0.2	Th	0.1 - 1.0
MgO	21.2	TiO_2	0.2
MnO_2	0.8	U	0.62
MoO_3	0.05	V_2O_5	1.1
Na	0.5 - 5.0	Loss on Ignition	76.17
Ni	0.10		

Ag, As, B, Ba, Be, Bi, Cd, Cr, Cu, Ga, In, K, Nb, Sb, Sn, Sr, W, Y, Zn and Zr - all less than 0.1% each.

The nitrate content of the Colorado raffinate is similar to that of the pitchblende raffinate.

Barium Sulfate Cake (Unleached)

Barium sulfate cake (unleached) is a residue resulting from the refinery operation. Approximate gross weight is 1,500 tons containing about 22 tons of uranium. Composition of the cake is estimated as follows:

Barium Sulfate	60-80%
H_2O	15-35%
Uranium	1-2 %
Misc. Pb, Cu, Ni, Fe, etc.	1-2 %
Solids - rock, gravel, sand, etc.	1-2 %

Barium Cake (Leached)

Barium cake (leached) is a residue resulting from the refinery operation. Approximate gross weight is 8,700 tons containing about 7 tons of uranium. Composition of the cake is estimated as follows:

Barium Sulfate	60-80%
H_2O	15-35%
Uranium	0.05-0.15%
Miscellaneous Metals	1-2 %
Solids - rock, gravel, sand, etc.	1-2 %

Miscellaneous Residues

The miscellaneous residues with a gross weight of approximately 350 tons containing approximately 2 tons of uranium are stored in deteriorated drums. No other information is available on these residues.

ARTICLE II - LICENSE REQUIREMENTS

The residues described herein constitute source material, the receipt, possession, use or transfer of which are subject to licensing requirements and regulations promulgated by the Commission pursuant to the Atomic Energy Act of 1954, as amended (42 USC 2011). Accordingly, purchasers must obtain a license and comply with the requirements of the regulations pertaining to source material as set forth in 10 CFR, Parts 20, 40 and 70.

ARTICLE III - NOTICE TO PROCEED WITH REMOVAL AND TIME FOR REMOVAL

The Government will issue a notice to proceed with respect to removal of residues. In no event shall the Purchaser remove the residues prior to such notice to proceed. The Government will not issue a notice to proceed prior to the Purchaser's obtaining a license as required in Article II above.

After notice to proceed, the Purchaser shall remove the residues within 270 calendar days.

ARTICLE IV - QUANTITIES TO BE REMOVED

All material lying within the cross-hatched areas shown on Drawing No. 6-1403-19, which is attached hereto and made a part hereof, shall be removed by the Purchaser. If advantageous to the Purchaser, he may remove any residues lying immediately outside the cross-hatched areas.

All residues above ground level shall be removed within the cross-hatched areas. In case of disagreement on ground level elevations, they shall be established by producing 2' contours from elevations taken along perimeter fence and assuming there is uniform change in elevations along the north-south grid lines. If advantageous to the Purchaser, he may remove residues and/or contaminated earth below determined ground level.

Stone and other debris contained in the residue piles may be left on the site in designated areas established by the Contracting Officer. Upon completion of the Purchaser's removal operation, he shall leave the area in a graded condition providing drainage to the west end of the property.

ARTICLE V - SITE FACILITIES AVAILABLE FOR REMOVAL

The existing railroad spur, loading dock and tipple, covered storage area, office and change house will be available for use by the Purchaser without charge about January 1, 1963. Prior to January 1, 1963, these facilities will be used by a Commission contractor to remove other residues during regular working hours, 8:00 a.m. to 5:00 p.m., Monday through Friday. Mutual satisfactory arrangements for limited use of these facilities will be necessary during this period. Electric power and water are available at the site at the Purchaser's expense.

ARTICLE VI - PERFORMANCE BOND

The Purchaser shall be required to furnish a Performance Bond in the amount of $50,000 guaranteeing the removal of all residues.

ARTICLE VII - DISCLAIMER OF WARRANTY

The Government makes no guaranty, warranty, or representation, expressed or implied, as to the kind, size, weight, quality, character, description, or condition of the material; or its fitness for any use or purpose; or that it will not cause injury or damage to persons or property; or that any information (including the analysis, a part of the description, set forth in Article I) furnished, its contamination, or other matters which may concern it is complete or accurate; and the Government shall not be held responsible for any such injury or damage.

The Purchaser assumes all responsibility and liability for the property purchased hereunder.

ARTICLE VIII - PAYMENT

Payment of the purchase price shall be made within 30 days from the date of receipt of notice from the Government to proceed with the removal of the property.

ARTICLE IX - TITLE

Title to the property shall pass to the Purchaser upon payment of the purchase price as provided in Article VIII above.

ARTICLE X - LOADING AND REMOVAL

As elsewhere provided herein, the property sold hereunder is "as is", "where is" and all loading and removal of the property shall be at the expense of the Purchaser.

C. M. Roark
President
Contemporary Metals Corp.
630 No. Benton Way
Los Angeles 26, Calif.

MAY 4 1961

Mr. Robert Lowenstein
Director, Licensing & Regulation
U.S. Atomic Energy Commission
Germantown, Maryland

att: Mr Kirk

FROM: Contemporary Metals Corporation
St. Louis County, Missouri

DATE OF DOCUMENT: 7-20-62

DATE RECEIVED: July 27, 1962

NO.: 7830

LTR.: X MEMO: REPORT: OTHER:

TO: Donald A. Nussbaumer
Div. of Lic. & Reg.

ORIG.: X CC: OTHER:

ACTION NECESSARY ☐ NO ACTION NECESSARY ☐

CONCURRENCE ☐ COMMENT ☐

DATE ANSWERED: BY:

CLASSIF.: U POST OFFICE REG. NO.:

FILE CODE: 40-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. submitting plant safety practices and procedures in regard to personnel, and working practices, et.....

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer:	7/27	7-30-62	
c/file cy.			
1-compliance cy.		(File folder not in)	

ENCLOSURES:

REMARKS: ~~Mail Room Distribution:~~
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U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613958

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Rough Draft only
7/20/62

DOCKET NO. 40-6811

CONTEMPORARY METALS CORPORATION
Residues Processing Plant
St.Louis County,Missouri

I&R File Copy

PLANT SAFETY PRACTICES AND PROCEDURES

To All Staff and Employes:

Contemporary Metals Corporation under terms of an award from the United States Atomic Energy Commission has undertaken the purchase and processing of a stockpile of residues and concentrates left over from the days of World War II, a stockpile which contains valuable minerals, including copper,nickel,cobalt,scandium,rhenium and rare earths, as well as some remaining radioactive elements, uranium,thorium and ionioum. The job to be done is a complex operation of chemical and electrolytic actions which will recover the valuable minerals in usable form, remove the radioactive elements for disposal or marketing,and render the final waste products as nearly free of such materials as is technically possible.

While time and efficiency in production are important to the job at hand, the officers and directors of the corporation are concerned and eager that every member of the technical and management staff, and all employes,be conscious of the need to maintain the highest degree of safe practice throughout the entire operation --all the way from the loading dock at the A.E.C. site,through our own plant, and to the loading and shipping of the final products and wastes.

In many respects,plant safety practice will be found to parallel that of other milling,metallurgical and chemical plant operations, and the safety rules and the protective equipment found will be the same as in other modern operations of such kind. However,because of the fact that the material coming into the plant in this case does contain about two tenths of a percent radioactive elements, and some of the end products (the uranium, and the thorium-ionium compounds) will be of high radioactive-element content, it is important that all the latest knowledge and the most up-to-date protective and detecting equipment be used,so that in this field too there will be the highest degree of safe practice and health protection. The instructions and procedures which follow have this end as their objective. With the complete cooperation of every person working in the office,laboratory,plant or shipping department,we hope to make this operation one of maximum safety in every respect.

Clemons M.Roark,President
CONTEMPORARY METALS CORPORATION

DOCKETED
USAEC
Division of
Licensing & Regulation
JUL 27 1962
Docket Officer

RECEIVED
JUL 27 1962
U.S. Atomic Energy Commission
Division of
Licensing & Regulation

Div. of Compliance 7/30/62 - RRR

CONTEMPORARY METALS CORPORATION
St.Louis Residues Plant

PLANT SAFETY PROGRAM

I. Personnel

The Plant's Safety and Health Protection Program is under the direct charge of the Plant Safety and Health Director, who is personally responsible to the Plant Manager.

The Director is responsible for instituting and maintaining a continuing program of instruction and training in safe working practice and use of equipment, prevention of accidents, plant health measures,and a first aid and in-plant medical care program for all personnel.

A Safety Director for each shift is directly responsible to the Plant Safety and Health Director. Each shift Foreman, the Office Manager, and the Director of Research and Testing, are held personally responsible to see that all safety and health regulations and required practices are observed by the employes under them.

A First Aid and Medical Care Office is maintained around the cloak every working day.

II. General Safety Rules and Regulations

"General Plant Safety Rules and Regulations" have been prepared by the Plant Safety Director and are given to evey employe. The Director may supplement these from time to time, and all such changes,revisions or additions will be issued in writing.

A Plant Safety Committee composed of the Plant Manager, the Plant Safety Director,the Shift Safety Directors,the First Aid and Medical Director,and the Director of Research and Testing,plus a designated Safety Representative from each department,will meet weekly at such time as may be convenient to the group.

Employes should feel free to make suggestions,in a note or verbally to their Safety Representative,of any unsafe situations coming to theit attention or any improvements of procedure or equipment which might increase the level of safe working practice or health attention within the plant at any point.

All accidents or any illnesses should be reported at once to the First Aid and Medical Director and of course to the head of the department.

III.Safe Practices and Procedures for Working with Radioactive Materials

III.
Safe Practices and Procedures for working with Radioactive Materials

Introduction

Because Contemporary Metals Corporation is processing residue materials and concentrates, and some end products, which will contain uranium, thorium and ionium, which are radioactive materials, special rules and procedures have been prepared to insure maximum safety and full health protection with respect to all conditions and practices which arise from their presence.

Employes with technical familiarity or training regarding modern chemical or mineral processing are of course familiar with the radioactive characteristics of the lelments mentioned. For those who may not have had previous contact with radioactive materials in industry, it is no doubt sufficient to point out that one of the greatest of all modern advances in science was the discovery first, that certain elements throw off invisible particles or rays due to instability of the nucleus in the atom itself. Atoms that give off such nuclear radiation are called "radioactive."

We are all of us exposed to some degree of radiation throughout our lives --cosmic rays from outer space, x-rays in dental and medical care, for example. Even our food and water contain small traces of radioactive elements in many cases. The mere presence of such radiation is not a harmful factor in our lives; it is only when over-exposure to radiation, or a rise in radiation levels to degrees far above those to which we are accustomed, occurs that a hazardous condition is presented. Even when working with radioactive materials in laboratory or industrial processes, it is possible to exercise precautions which, if carefully followed, will insure conditions of completehealth and safety. It is the purpose of the text which follows to establish for our plant those rules, practices and working procedures which will fully protect every employe from harmful effects of radiation and to insure that products shipped from the plant will be fully protected so far as persons handling or receiving them are concerned.

Plant Radiation Problems

Since we cannot see or feel, taste or hear, radiation, the first problem is that of detecting radiation within the plant and of measuring its levels at the various points along the line. For this purpose, the plant has been provided with automatic sampling and monitoring devices at every stage of handling, processing, precipitating, and shipping, so that the levels of radiation are known in the materials themselves, in the air, from floors and walls of processing areas, and in the end products and wastes. Should for any reason the

Plant Housekeeping Practice

1.Every effort should be made to avoid spilling and unnecessary dusting. Chances of causing air-borne particles or of getting material on clothing or the body are greatly lessened when the material is kept inside the proper processing equipment,conveyor equipment or storage vessels. The basic design and choice of items of equipment throughout the entire plant in all circuits has been deliberately considered with the end of keeping the entire process as self-contained as possible and manual handling of material to a minimum.

2.Always cleanup spills at once;in wet sections by flushing with water;in dry sections with vacuum cleaners provided for this purpose. Your section foreman or safety representative will instruct as to the disposal of vacuum bags,mops,and other cleaning materials or utensils.

3.The rooms containing filtering equipment, and the areas where precipitates or concentrates are produced or stored must be especially watched and kept clean at all times.

Personal Cleanliness

Personal cleanliness is not only a fundamental of good health and hygiene, but in radioactive material handling is of basic importance.

1.Hands and face should always be washed before eating or smoking, and always after performing work around concentrates or precipitates or in handling the dry raw material.

2. Work clothes should be changed and washed frequently. Clothing that has been splashed with chemicals,precipitates or concentrates should always be washed at the end of the shift if not possible before.

3.An apron, rubber gloves and boots should be worn when cleaning filters or handling precipitates or concentrates. In our plant this is kept to a minimum by the greatest degree of automatic,continuous-flow equipment,but the rule is still important to remember. These items of clothing should be washed clean and returned to designated storage place when the work is completed.

4.Cuts or small wounds should be treated at once and should be kept covered with clean dressings in accordance with good first aid principles.

5.Eating or smoking is not permitted in any areas of dusting or in areas where concentrates or precipates are handled. Lunches should not be kept in any such areas.

6.Employes should always shower at the end of the shift, if employed within the plant or in loadiing and unloading areas. Hands,arms and face should be washed during the shift as necessary to remove any dust,precipitates or other materials.

7.Respirators,goggles,and all other protective equipment and clothing should be kept clean and in working order at all times. These items are furnished to you on a loan basis;their effectiveness will depend considerably upon the care you give them. Replacements of items or parts are available for issue as required.

a.Employes are to use no other such items except their own.

b.Such items shall be stored in your own locker so as not to become contaminated with dust.

c.Filters and facelets shall be changed as often as necessary;respirators should fit snugly over nose and mouth;they should be washed and sanitized frequently with materials available in the Store Room and in Safety Equipment Stations.

Screening and sampling

1.Keep these areas and pieces of equipment clean at all times, washing with water or cleaning with vacuum cleaner.

2.The dust collection system must be running properly in all areas where dry material is handled.

3.Inspection doors must be kept in place except when breakdowns or inspections require them to be opened.

4.Lunch pails,boxes or sacks may not be stored in any part of this section.

5.Employes are required to wash their hands and face before eating.

6. Employes in this section are required to wear their respirators whenever the plant is in operation.

Processing Areas

1.Be on constant watch against any leaks in the system; report any breakdown or flow stoppage at once to your foreman.

2.All cleanouts or inspection doors and hatches shall be kept closed at all times when in operation.

3.Aprons,galoshes and rubber gloves shall be worn in all cleanup operations or changeovers.These items of equipment and clothing shall be thoroughly washed after usage and replaced in their proper storage.

Final Product Areas

1.These areas shall be kept clean and free from spilled solids or liquids at all times.

2.An independent representative of the St.Louis Testing Laboratories will be sampling all end products periodically; he is to be given full cooperation.

3.Pumps,hose and storage tanks for liquid fertilizer products are to be continuously monitored against radioactive content; any effluent running above the minimum allowable trace content of radioactive material shall be confined to storage immediately and not pumped into cars pending further processing.

4.Likewise all shipments of copper,cobalt,nickel and other non-radioactive metals and compounds will be checked for any traces of residual radioactivity,and any such traces above the established permissive levels shall cause the product to be held up from shipment pending reprocessing.

5.Detection of radioactivity in the products mentioned above in paragraphs 3 and 4 shall be immediately reported to the Director of Research and Testing for immediate investigation of cause and its correction.If in his judgment the cause is serious or significant of improper processing or equipment failure, he shall immediately notify the Manager in charge of that shift who shall order closing down of the equipment or circuit in question until proper performance has been restored.

6. Handling,packaging,labeling,and shipment of radioactive end products (uranium,thorium or ionium or their compounds) shall be strictly in accordance with rules of the Atomic Energy Commission and the conditions of the plants A.E.C. license. These and other specific instructions are given to each employe in this department and are posted conspicuously within the department. They must be followed explicitly.

Conclusion

The above rules and practices are for your protection and that of your fellow workers within the plant. It is the personal responsibility of each of us to observe them;they will definitely be enforced!

radiation level in any area risd above the safety levels established with the Atomic Energy Commission, that part of the plant will be alarmed and immediately closed to general usage until the cause is determined and removed.

The primary consideration in working with radioactive materials,of course,is to guard against the material entering the body, and to prevent undue exposure to any source of radiation whose level is such that prolonged exposure might build up accumulated radiation within the body.

These two primary plant radiation problems are the problems of the plant officials and safety officials; their instructions are to resolve every doubt in favor of safety and health protection for the personnel of the plant.

But the third problem is that of the exercise of daily caution and safe working practice on the part of every individual within the organization. This problem cannot be solved solely by equipment,testing,or action by the Safety Directors. It is the day to day responsibility of each and every individual. The sections which follow are compiled from the rules and practices of other plants with long experience in this field. If they are carried out by everyone within the plant operation, a major factor in the maintenance of health and safety for all will be achieved.

Respiratory Protection

Dust respirators of the designated type for each job should be worn under the following conditions:

1.When loading equipment or trucks containing dry material are being cleaned out.

2.When sweeping or otherwise cleaning up dry materials on loading platform,dock,or other platform area, or any of the following areas or pieces of equipment:

Screening area, ore storage and transfer areas,and any other areas where dry material may be used or handled.

3.When working in the loading and unloading areas, or in screening and sampling.

4.When pulverizing,screening,splitting or otherwise preparing samples of dry material for testing.

5.When cleaning filters.

6.When working in the bagging or barreling department with the final products.

7.Under any conditions where air-borne dust is present.

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C. D. TROWBRIDGE
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ST. LOUIS TESTING LABORATORIES, INC.

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RADIOACTIVE ISOTOPES — FACILITIES AND TESTS

The expanding technology of radio isotopes has made their use indispensable to the complete testing laboratory. Qualified personnel equipped with the latest nuclear facilities, available through St. Louis Testing Laboratories, are ready to apply these new techniques to your particular testing and quality control problems.

Realizing the vast potential of these new techniques, St. Louis Testing Laboratories have combined their many years of experience in the non-destuctive testing field with one of the leaders in the applied Nucleonics field through an affiliation with Dr. W. R. Konneker of Nuclear Consultants Corporation who will direct these activities.

Although the use of nuclear techniques in this field is relatively new, a number of procedures are in daily use in the testing and analytical laboratories. Below are listed but a few:

1. Wear or friction studies
   - (a) in the study of cutting tools
   - (b) in the study of efficiency of lubricants
   - (c) in the design of bearings

2. Decontamination or cleaning tests
   - (a) in the study of efficiency of various solvents
   - (b) in the study of efficiency of various soaps or detergents
   - (c) in the evaluation of various cleaning procedures
   - (d) in the evaluation of efficiency of washing machines

3. Measuring flow rates
   - (a) in pipe lines
   - (b) in water mains
   - (c) in gas lines
   - (d) in sewer mains

4. Level gauging
   - (a) in closed tanks
   - (b) in tanks, containing highly volatile materials
   - (c) in tanks or bins containing solid materials such as concrete, stone, scrap metals

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ST. LOUIS TEST

RADIOACTIVE ISOTOPES — FACILITIES AND TESTS — (Continued)

5. Process control
   - (a) counting devices
   - (b) thickness gauging
   - (c) level gauging
   - (d) control of one material in a mixture
   - (e) control time of mixing by determination of homogenous mixture while still in mixer
   - (f) inventory measurement and control
   - (g) control of catalyst flow rate

6. Irradiation studies
   - (a) effect of high or low level radiation on materials
   - (b) effect of high or low level radiation on electronic components
   - (c) effect of high or low level radiation on foods, plants, or animals

In addition to the few above mentioned procedures the following services can also be obtained through the St. Louis Testing Laboratories.

1. Instrument and x-ray calibration
2. Radiation shielding design and testing for x-ray or isotopes installations
3. Radiation protection and analysis
4. Pollution Tests
   - (a) air sampling
   - (b) dust sampling
   - (c) water sampling
   - (d) environmental testing
5. Preparation of special tagged compounds and radiation sources for testing, quality control or research purpose.
6. Analysis of materials (food, water, fabricating materials) for radioactive contamination

Since tracer techniques have such a wide range of uses, may we suggest if you have a problem which is either difficult or impossible to solve with standard procedures, outline it for us — perhaps radioactive tracers can do the job.

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ST. LOUIS TEST

CONCRETE AND BUILDING MATERIALS, TESTS, FACILITIES AND EQUIPMENT

It is the purpose and intent of this laboratory to give high quality service and perform tests and inspections in strict conformance with applicable specifications. Properly trained and qualified personnel are eager and always ready to help serve you in the many problems that may arise in the building and construction industries.

Following is a list of some of the many tests which are performed for clients throughout this area as well as a list of the major items of equipment.

Mix design of concrete
Concrete plant control
Wet analysis of cement content of concrete (during pour)
Absorption and Compression Tests of concrete
Cement content of hardened concrete
Testing of load characteristics of roof deck materials
Field Inspection of coatings such as hot applied asphalt emulsions, etc.
Radiographic Inspection of concrete floors and walls for location of reinforcing rods or cavities
Coefficient of Expansion of brick and masonry units
Tests of: mortar strength cubes, brick, masonry units, pumice blocks, concrete pipe, clay pipe, natural stone, soundness tests by sodium sulphate method, moisture absorption tests, modulus of rupture, screen and sieve tests, water retention tests, and tests of water retention membrane curing compounds.

The following soil testing services are regularly rendered by our Laboratories:

Amount of material finer than No. 200 sieve
Cement content of soil cement mixtures
Field moisture equivalent of soils
Freezing and thawing test for compacted soil-cement mixtures
Individual piles, load settlement relationship
Liquid limit of soils
Moisture density relations of soils and soil cement mixtures
Field density determinations
Plastic limit of soils
Plasticity index of soils
Shrinkage factors of soils
Static load tests
Wetting and Drying Tests of soil cement mixtures.
Soil classification by the Casa Grande method.

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CONCRETE AND BUILDING MATERIALS, TESTS, FACILITIES AND EQUIPMENT (Continued)

Tests for the determination of vapor transmissions with various humidity differential as well as varying temperature conditions are made regularly in our Laboratories.

Some of the equipment available for use in our Concrete and Building Material Laboratory section are as follows:

> Compression machines, drying ovens, constant humidity chambers, special scales and balances, sieves, Laboratory concrete mixer and agitator (variable speed), heaters for capping compounds, capping molds, slump cones, rods, cylinder molds, cube molds, tensile brickette molds, earth augers (hand), boring equipment, hot and cold humidity cabinets for vapor transmission and humidity differential tests, core drilling equipment (diamond core drills), and Ames dial micrometers of 0.001" and 0.00001" increments, volumetric equipment for field density determinations, apparatus for lineal change of masonry units, liquid limit testing device, procter molds and auxiliary equipment, and one and two square foot bearing plates for soil load determinations and auxiliary items.

Machine shop facilities are available in our Laboratories for building and altering equipment as the case may be. With this equipment, we are able to expedite and complete special projects much more rapidly than could be accomplished by submitting the work to several different sources for preparation or building of specialized parts, etc. Moreover, the experience of our personnel in the various phases of testing offers to you a background of testing experience which we are sure you will find not only valuable but will actually save you dollars and time.

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METALLURGICAL AND PHYSICAL TESTING—FACILITIES AND TESTS

SCOPE OF SERVICES

The services offered by the St. Louis Testing Laboratories Metallurgical and Physical Testing Department embraces primarily the physical testing and inspection of the ferrous and non-ferrous metals. These include plate, sheet, tubing, pipe, forgings, fittings, castings, weldments and extrusions. Special services requiring inspection and testing of various materials manufactured by industry are conducted in their "raw" or in their finished condition.

MECHANICAL TESTING

The following tests which are conducted daily or on a routine basis, are Tensile, yield, elongation, reduction of area, bend tests, charpy and izod impact tests, brinell and rockwell hardness tests, compression, shear and flexural tests, structural loading and various testing of fixtures, jigs, manufactured products and miscellaneous materials. All testing procedures conform to the particular specification as required. Special sizes and shapes to be tested are prepared in accordance with individual specific requirements.

METALLURGICAL ANALYSIS

Microscopic examinations of materials as well as photomicrographs, photomacrographs, grain size, analysis of heat treated material, case hardened and nitrided steels, stringer and inclusion count, investigations of special materials and plating thicknesses are performed. These services are available for referee or quality control purposes.

During the fabrication of manufactured products it frequently becomes necessary to investigate a particular problem concerning an undesirable reaction of metallic parts. Microscopic examination and inspection to determine probable causes of failures or troubles are conducted for many midwestern industries.

Failures of metallic parts are investigated. These include castings, forgings, plate and sheet, weldments and other materials. Complete chemical, physical, metallurgical analysis and inspection to determine the cause of failure and consultation concerning these problems are services available. Welding metallurgy, revealing the structures of steels and weldments, which serves to acquaint the members of the welding industries, fabricators and designers with the conditions such as stresses, heat treatment, etc., which affect the physical properties of the fabricated units is a service of this Laboratory.

Examination of welds by a macroetchor to magnifications up to 2000 diameters for determination of the nature of weld orientation, fusion, defects, thermal effects, stresses and other metallurgical properties represents a typical cross section of the welding metallurgy conducted by our laboratory. Photomicrographs, photomacrographs and hardness surveys of weldments are also conducted.

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METALLURGICAL AND PHYSICAL TESTING — FACILITIES AND TESTS (Continued)

WELDING PROCEDURE AND PERFORMANCE TESTS

Tensile, bend and other tests required by specific procedures and code specifications for the qualification of a welding procedure are conducted in accordance with the various requirements as specified. A welding shop is available at our laboratories where welders may prove a procedure or qualify for welder certification. Consultation concerning the welding of difficult procedures and other instructions needed by welders in order to help them better understand the techniques required are also provided. In addition to the boiler and construction codes, various State and Federal specifications test procedure may be proved. Qualification of welder operator as to the requirements of these codes and certification of the tests are conducted regularly.

Complete machine shop facilities for the preparation of test specimens for procedure and welder qualification are included with the welding service.

INSPECTION OF MATERIALS

During the course of manufacturing and production, certain outside inspection is often required. Our inspection covers materials from the raw to the finished condition. Plant quality control involving full time or spot checking is available by appointment. These services include visual inspection, testing and witnessing tests, taking of samples and the analysis of material.

MAGNETIC PARTICLE AND DYE PENETRANT INSPECTION

These services are available in the laboratory and in the field. Our equipment is portable and is therefore available for outside inspection. Inspection of this nature can be obtained on metallic materials and certain other products.

CALIBRATION SERVICE

To establish the accuracy of certain portable equipment, gages, scales, relief valves, devices requiring tension, compression, hydraulics or torque calibration a specialized testing service is rendered.

HYDROSTATIC TESTS

In order to prove the safety factor in the operation of various internal pressure vessels hydrostatic pressure testing equipment is available. Materials tested include pipe, tubing, fittings, tanks, boiler drums and other special items. Pressures up to 40,000 PSI may be attained.

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METALLURGICAL AND PHYSICAL TESTING — FACILITIES AND TESTS (Continued)

METALLURGICAL AND PHYSICAL TESTING EQUIPMENT

The following equipment is available:

One 50,000 Lb. Capacity tensile and compression machine.
One 100,000 Lb. Capacity tensile and compression machine.
One 200,000 Lb. Capacity compression machine.

Various flat and "V" jaws, fixtures, jigs and adaptors as required in standard and specialized testing procedures for the above machines. A maximum working height of 6 feet and a width of 22 inches can be attained.

Rockwell hardness and brinell hardness machines.

Metallurgical microscope and camera — range, 2 diameters to 2000 diameters. Special microscope accessory adapators for grain size count, particle size measurement and count, plating thickness measurements, etc.

Dark room facilities for developing and printing film, film holders up to a 5x7 inch maximum.

Metallurgical specimen mounting press and moulds.

Polishing and sanding machines for specimen preparation.

Etching and macroetching equipment.

Charpy Impact and Izod impact machine with adaptor for tensile impact testing.

Sub-zero and elevated temperature equipment for testing of impact specimens.

Welding machines, hoods, fixtures, flame cutting and gas welding equipment.

Machine shop facilities for machining of test specimens from test welds. These include lathes, shaper, band saws, drill press, bench grinders and polishers, hand tools and various accessory items used in the preparation of these specimens.

Electric motors, fans and blowers.

Electric and gas fired stress relieving equipment.

10,000 PSI hydrostatic pressure pump.

40,000 PSI hydrostatic pressure pump.

Accessory adaptors and flexible high pressure leads, fittings and gages for hydrostatic pressure testing.

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RADIOGRAPHIC DEPARTMENT FACILITIES AND EQUIPMENT

The X-ray and Gamma Radiographic Department of the St. Louis Testing Laboratories, with its staff of highly trained specialists along with its up-to-date x-ray machines and gamma ray exposure devices for industrial radiography, is the most progressive independent laboratory rendering this type of service in the midwest area.

You are invited to submit your radiographic problems to us for review and consultation.

Film Interpretation: Qualified personnel review film and a complete report is issued according to the applicable standards.

Standards: A complete set of ASTM Radiographic Standards.
MIL-STD 248A Navy June 17, 1958
MIL-STD 271
Navship 250-692-2 Amendm. 1

ASME Boiler Pressure Vessel Code Section VIII
ASA B31.1 — 1955
API STD 1104
Standard submitted by individual companies are also used by our personnel.

Equipment: The "Siefert 400", the only unit of its kind owned and operated by a commercial testing laboratory in the United States, x-rays steel, up to 4" thick, which makes it extremely valuable for high precision inspection of metals in the thickness range as indicated above.

Other units in the x-ray department are:

GE OX-250 X-ray unit
GE OX-175 X-ray unit (portable)
GE LX-140 X-ray unit (portable)
Industrial X-ray unit 150-KV

In addition to our X-ray units, ten Iridium 192 Exposure Devices, Model STL-KBT-11, approved for a maximum of 40 curies of IR-192, are in use. All exposure devices are portable and loaded with Isotopes ranging from 1 to 20 curies.

For steel thickness ranging between 4 and 8 inches, a Cobalt 60 Exposure Device, Model STL-KBT-12C, with 9 curies of CO-60, is available at our Laboratories to be used at jobsites in the midwest section of the United States.

Recent addition to our gamma ray equipment is a Remote Controlled Crank Out Type Iridium 192 Exposure Device designed for a maximum of 10 curies.

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RADIOGRAPHIC DEPARTMENT FACILITIES AND EQUIPMENT (Continued)

The viewing and reading rooms as well as the working and darkroom areas are air conditioned. Temperature controlled developing solutions are a 'must' for our darkroom techniques.

In order to obtain high quality film, items such as film holders and lead screens are very important. For this purpose we have a large selection of plastic film holders with plastic zippers and various sizes and thicknesses of lead screens. Some sizes regularly used are as follows:

¾ x 7″	2¾ x 7″	1½ x 17″	7 x 17″
1 x 7″	5 x 7″	2¾ x 17″	14 x 17″
1½ x 7″	¾ x 17″	3½ x 17″	70 mm x 24″
2½ x 7″	1 x 17″	4½ x 17″	70 mm x 36″
			70 mm x 48″

Other RADIOGRAPHIC ACCESSORIES which are also of the latest types are:

Jordan Model A6B500SR Survey Meters
Keleket Model K-350B Survey Meters
NRD Instrum. Model [illegible] Survey Meter
Victoreen Dosimeter Charge Model 561/A
Pocket Dosimeter Pencil Type Model 541/A
Keleket Type G-1 High Intensity Illuminators
G.E. Fluorline Illuminator Model 491
G.E. Illuminators with Intensity Control
R.P. Drymaster X-Ray Film Dryers

PORTABLE DARKROOMS, equipped with developing, fixing, and washing tanks, electric dryers and water coolers to be taken to the jobsite for prompt service, are available for immediate call-outs.

In addition to the X-Ray Department, other non-destructive testing facilities are Zyglo Fluorescent Penetrant Inspection and Magnaflux Inspection. One 3000 Amp. KRH 3-D Unit for field and stationary inspection along with contact clamps, contact prods, magnaglo portable applicator gun, field indicator, and an illuminated 2″ 5X magnifier are in readiness for use at our laboratories or in the field. A portable magnaflux hand unit SK-1 is also available.

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CHEMICAL LABORATORY TESTING FACILITIES AND EQUIPMENT

The following services performed by the Chemical Section of St. Louis Testing Laboratories as well as equipment used in the analytical work are enumerated below.

In the field of Ferrous metals consisting of Steel, Gray Iron, and Stainless Steels, the following elements are determined as a daily routine operation for many midwestern industries.

Carbon, Chromium, Cobalt, Columbium, Copper, Manganese, Molybdenum, Nickel, Phosphorus, Selenium, Silicon, Sulfur, Titanium, Tungsten, and Vanadium. Special Ferro alloys, consisting of Ferro-Silicon, Ferro Manganese, Silicomanganese, Ferro Chromium, Ferro Vanadium, Ferro-Tungsten, Steelite, Tungsten Metal, and Ferro Molybdenum are analyzed to conformance with Specifications.

In the Non-ferrous metals field consisting of Brasses, Bronzes, Aluminum Alloys, Magnesium Alloys, Zinc Alloys, Nickel Alloys, Cobalt Alloys, and Tin and Lead Base Material, the following elements are analyzed as routine daily proceedings. Aluminum, Copper, Iron, Lead, Manganese, Nickel, Phosphorus, Silicon, Tin, Zinc, Arsenic, Beryllium, Cobalt, Silver, Sulfur, Cadmium, Chromium, Magnesium, Antimony, Bismuth, and Carbon. The complex combination of these alloys to form specification products are analyzed to meet individual specific requirements.

In addition to the quality control laboratory work performed by the Chemical Section, a large volume of Special Analytical work is done in both the Organic and Inorganic fields. Many types of ores are investigated as to their mining potential. Coals, Cements, Sand and Aggregates, and Concrete Admixtures are investigated. Boiling Nitric Acid Test for Corrosion-Resisting Steels (ASTM-A262-55T), Electrolytic Oxalic Acid Etching Test (ASTM-A262-55T), Mercurous Nitrate Test for Cracks in Brass, Macro Etching of Weldments, Cement Content of Hardened Portland Cement Concrete, and Extraction of Asphalt from Asphaltic Mixtures for Bitumen Content are some of the varied work performed by our Analytical Dept.

Salt Spray Testing using Industrial No. CA-1 Industrial Salt Fog and Humidity Test Cabinet conforming to Army, Navy, Air Force, Bureau of Standards, and A.S.T.M. Specifications is another facility this department has in operation.

Septic Tank Soil Investigation of home building sites is offered.

Water Analysis, both mineral and bacteriological surveys, are conducted.

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CHEMICAL LABORATORY TESTING FACILITIES AND EQUIPMENT (Continued)

In the field of Petroleum Chemistry, the following services are offered. Flash Point, Gravity, Viscosities, Pour Points, Fire Points, Water by Distillation, Thermal Value, Sulfur, Carbon Residue (Conradson), Ash, Neutralization Number, Saponification Number, Corrosion Test, and Distillation. Testing of Alcohols, Ketones, Glycols, and Carbinols against sales specifications consisting of Color, Acidity, Gravity, Distillation, Solubility, Turbidity, and Non-Volatile Content are daily routine work.

Another field covered by the Analytical Dept. is the problem of Air Pollution with regard to health hazards of employees and general air polution such as sulphur dioxide and carbon monoxide. The Greenburg-Smith impinger and the midget impinger freon powered and the Staplex Hi-Volume air sampler are used to sample atmospheric conditions. Dust concentration, particle, size and chemical composition are a specialty.

Special research problems varying from the type of foil in which ready to bake biscuits are wrapped to the effect of Ammonia Compounds on Aluminum Alloys used in electrical connectors are handled dexteriously by our Chemical Section.

A list of equipment available for use in the Chemical Department is as follows:

Drying Ovens, Miscellaneous Thermometers, Burrell Carbon Combustion Train, National Bureau of Standard Samples, Gas Fired Hot Plates, Electric Hot Plates, Platinum Electrodes, Fisher Electric Colorimeter, Fisher Nesslerimeter, Saybolt Viscosimeter, Kinematic Viscosimeters, Cleveland Open Cup Flash Point Apparatus, Pensky-Marten Flash Point Tester, Tag Closed Cup Tester, Pressure Gauges, Double Burette Stands, Burettes of various sizes, Work Tables 3' x 15', Electroplating Machines, Conradson Carbon Apparatus, Analytical Balances, Torsion Balances, Hydrometers (assorted), Leeds and Northrup Potentiometers, Distillation Flasks, Distillation Apparatus, Constant Temperature Bath, Electric Home Refrigerators, Beckman pH Meter, Environmental Test Chambers, Vacuum Pump, Controllable Temperature Muffle Furnaces, Platinum (30 ml) Crucibles. In conjunction with the above list of apparatus, some 300 pieces of Laboratory glassware are available for use Ball Mills and Pulverizers are available for sample preparation as well as other specialized sample preparation devices.

Weighing, Sampling and Inspection of Materials, and Umpire Analysis of Ore Concentrates are conducted by the Chemical Section of the Laboratories.

The Chemical Section has been engaged in Comparative Analysis Surveys on various types of material such as Cements, Brasses, Aluminums, and Steels.

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CHEMICAL LABORATORY TESTING FACILITIES AND EQUIPMENT (Continued)

In our endeavor to continue to serve industry more efficiently and completely, our Laboratories have moved forward by acquiring the most up-to-date types of equipment available in certain phases as discussed below.

In the field of instrumentation, a Beckmann Model DU Spectrophotometer with flame and ultraviolet attachments has been added. This instrument has greatly speeded up the service for such elements as Sodium, Potassium, Calcium, Lead, Magnesium, Iron, Titanium, etc. Moreover this instrument has made it possible to analyze certain materials that required long tedious hours by other methods. Two Leco Induction Furnaces have been added; one for volumetric carbon determinations in grey iron, steels, stainless steels, etc., and the other for sulfur in these materials. In addition, sulfur in coals, oils, ores, and other products can be determined quite rapidly and accurately.

Results on samples received in the early morning mail may be determined and reported before noon by special request.

The recent addition of a Tag Blue M Drying Oven (18x18x28) with a max. temperature of 355° F, an additional Hevi-Duty Temperature Controlled Muffle Furnace and an Ainsworth direct reading analytical balance has further increased the flexibility of our laboratory operation.

In the field of Air Pollution, a Drager Gas Detector has been added. With this instrument, rapid detection as well as the concentration of gas vapors of many compounds can be obtained in a matter of minutes. Some of the common gases that can be detected are Carbon Monoxide, Sulfur Dioxide, Hydrocarbons, Alcohols, Carbon Dioxide, Formaldehydes, Benzene, Toluene, Water Vapor, etc.

A new section has been established for Micro Analysis of Plants. Nitrogen, Phosphorus, Calcium, and Magnesium are some of the elements to be determined.

Recent additions to our Laboratory equipment includes Micro Kjeldahl Digestion and Distillations; Fischer Automatic Titrimeter, used for the determination of water, by the Karl Fischer method; Molecular Weight Apparatus (Beckman Freeze Point Method).

DOCKET NO. 40-6811

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ST. LOUIS TEST

FOR YOUR INFORMATION...

We respectfully submit, herewith, an outline of the services rendered by St. Louis Testing Laboratories, Inc., as well as some of the testing facilities available at our St. Louis office.

Though not intended to give a detailed listing of all the tests and analyses performed, it does, however, enumerate some of the various types of services conducted at our laboratories; and is being submitted for your present and future use.

Through our personnel, who are highy specialized in the fields of endeavor in which they work, you are gaining advantage of years (over 100 years composite of experience) when submitting your problems and samples to us for review and testing.

May we have your consideration and the privilege of working with you on laboratory problems.

Respectfully submitted,

C. D. Trowbridge

— We ask that you retain this in your file for consideration at such times as problems arise. We further express our desire of the privilege of working with you.

E/23

FROM: Contemporary Metals Corp.
Clemons M. Roark, Pres.

DATE OF DOCUMENT: 9-3-62
DATE RECEIVED: 9-11-62
NO.: 8922

LTR: X MEMO: REPORT: OTHER:

TO: Martin, J.

SIG.: X CC: OTHER:

ACTION NECESSARY ☐ CONCURRENCE ☐ DATE ANSWERED:
NO ACTION NECESSARY ☐ COMMENT ☐ BY:

CLASSIF.: U POST OFFICE:
REG. NO.:

FILE CODE: 4-2-811 (suppl only)

DESCRIPTION (Must be unclassified)
Ltr. re: Contract and gold given by Mr. Layfield to their Vice-President at recent St. Louis meeting.

REFERRED TO	DATE	RECEIVED BY	DATE
Martin	9-12		
Layfield	9/12		

ENCLOSURES:

REMARKS:

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 615958

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3255 (8-60)

Cordially yours,

Clemons M. Roark

Clemons M. Roark, Pres.
CONTEMPORARY METALS CORP.

CC: H. R. Osterwald
Gene Loose

RECEIVED
SEP 11 1962
U.S. Atomic Energy Commission
DIVISION OF
LICENSING & REGULATION

E/30

NONRECORD

8922

POST OFFICE DEPARTMENT
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

RECEIVED
OCT 9 1962
U.S. Atomic Energy Commission
Division of Licensing and Regulation

LOS ANGELES, CALIF. EDENDALE STA.
OCT 5 1962

INSTRUCTIONS: Fill in items below and complete #1 on other side, when applicable. Moisten gummed ends and attach to back of article. Print on front of article RETURN RECEIPT REQUESTED.

RETURN TO

REGISTERED NO. 25265	NAME OF SENDER USAEC, DL&R, Source & Special Nuclear Materials Branch Robert L. Layfield - 40-6811
CERTIFIED NO.	STREET AND NO. OR P. O. BOX Mail: C-058
INSURED NO.	CITY, ZONE AND STATE Washington 25, D. C.

POD Form 3811 Jan. 1958

E/36

FROM: Contemporary Metals Corp.
Los Angeles 2, Calif.

DATE OF DOCUMENT: 5-17-62
DATE RECEIVED: 5-21-62
NO.: 4307

LTR: X MEMO: REPORT: OTHER:

TO: Distribution

ORIG.: X CC: OTHER:

ACTION NECESSARY: X
NO ACTION NECESSARY:
CONCURRENCE:
COMMENT:
DATE ANSWERED:
BY:

CLASSIF.: U POST OFFICE
REG. NO:

FILE CODE: 40-0611

DESCRIPTION: (Must Be Unclassified)
Ltr. trans: (from Cleveland Board)

REFERRED TO	DATE	RECEIVED BY	DATE
Distribution:	5-2[illegible]		
w/file cy & file cy for concurrence			

ENC. Rtd 5-17-62 (4 cys rec'd)
cys - Hazelwood-Berkeley Airport Area (1 cy rec'd)
cys - Hazelwood to Kirkwood Area (1 cy rec'd)

REMARKS: Distribution: 1 - AEC PDR

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3265 (8-60)

U S GOVERNMENT PRINTING OFFICE: 1961 — 613958

DOCKET NO. 40-684

CLEMONS M. ROARK
Investments

2486 HUNTINGTON DRIVE
HOWARD BUILDING SUITE 2
SAN MARINO, CALIFORNIA

May 17,1962

Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D.C.

DLR: RLL

Dear Sir:

In accordance with the requirements of AEC Invitation No. AT-(23-2)-46, previously sent to you, and the conditions of "ACCEPTANCE OF BID" written April 12,1962 by F.H.Belsher, AEC Area Manager, we are herewith submitting four copies of Form AEC -2, "APPLICATION FOR SOURCE MATERIAL LICENSE" in connection with our purchase of certain uranium-bearing residues from the Atomic Energy Commission at Robertson, Missouri.

There are approximately 125,000 tons of various residues which we are to remove from the present site on Brown Road. We propose to screen and classify these materials on the present site, an operation which will involve no chemical change in the residues, but will merely screen out foreign scrap matter such as rock, concrete, wood, scrap iron, and other materials which have been dumped on the existing stockpiles from time to time over the past several years.

The screened and classified residues will then be hauled either by rail or by truck from a loading platform presently on the A.E.C. site to a site which we will acquire on a Wabash R.R. siding located approximately three miles from the A.E.C. site. The property which we will acquire by lease or purchase, if the requested license is granted, is of approximately 6.6 acres, and is accessible both by rail and truck. Water, gas, electricity and industrial septic tank facilities are on the property, which is owned by the National Tank Division of St.Louis Steel Casting Co. A 35,000 sq.ft. steel and concrete factory building and warehouse, plus a modern 4,000 sq.ft. administrative, engineering and laboratory office building adjoining thereto, offer an excellent facility for an all-weather, around-the-clock continuous processing plant which we will install to process the varibus residues and extract the recoverable minerals therefrom. (Maps and other information concerning this proposed location are enclosed herewith).

Copy Supplied
Perm. Document Copy
Div. of Compliance 5/22/62 - RLL

8005140549 3pp

Within the existing plant buildings we will install the necessary equipment for handling the residues, processing them, and recovering the elements and compounds of principal value, including the recovery of at least 90% of the balance of the contained uranium.

As you will have noted in the assays made by the U.S. Atomic Energy Commission, and reported in Tables I and II of the Invitation to Bid, the residues in their present from 0.05% to 0.62% uranium, plus (in some lots) vaery small traces of ionium-bearing thorium. The principal radio-active material present is in the form of un-recovered uranium in the stockpile of raffinate and the stockpiles of barium sulfate. Our own samples indicated that the average uranium content is approximately 0.22%. The AEC assays indicate a total uranium content of approximately 192 tons out of the 125,000 tons of material, which would be an average of only 0.152%. In any event, it is apparent that we are dealing with material of low radioactivity. Our work on processing these materials has indicated that our final waste "tailings" will contain less than 0.01% uranium and thorium.

The processing proposed is of chemical and electrolytic character. We expect to recover 90% or more of all the copper, nickel, cobalt, uranium, barium, scandium and rhenium, and 80% or more of the thorium and rare earth fractions. The principal products which will be produced will be the following:

1. Electrolytic copper sheet and powder.
2. Nickel and cobalt oxides.
3. Uranium, as $UO_2(OH)_2$ and U_3O_8.
4. A thorium-rare earth oxalate mixture.
5. Potassium perrhenate.

The final waste "tailings" will be dumped and spread over our own property as fill, or sold as a source of "trace minerals" for soil supplementation, the latter seeming to offer an attractive possibility, since the waste will contain appreciable percentages of phosphate and nitrate as well as trace minerals.

The entire procedure, from handling and loading at the original site, hauling to our own site, and processing and shipping, will be fully in accord with all requirements of the "Rules and Regulations", Part 20 of Title 10, of the U.S. Atomic Energy Commission. The application herewith submitted is made in full knowledge of the requirements of Regulation 10 CFR 20 and Regulation 10 CFR 40.

The application for license relates solely to the processing of the materials designated as the Airport Residues and listed in the A.E.C. Invitation No. AT-(23-2)-46. We are advised by the St. Louis Area office of the Commission that time is of the essence in the award made to us, and we respectfully urge that the review

of this application necessary to granting of license be made as expeditiously as possible. The writer, President of the applicant, Contemporary Metals Corporation,will stand ready to cooperate in every way possible, furnishing any further information that may be requested by the Division of Licensing and Regulation.

My I stress our full intention to comply with all requirements of good safety practice, not only as required by the AEC so far as the handling of radio-active material is concerned, but all along the line from original screening and classification procedures,hauling,plant processing,recovery and shipping of final products, in accordance with the best practice,and in full accord with all safety requirements and disposal requirements of local,county and state agencies.

We are fortunate in having one of our Directors, T.M.Dunkle, who will be in direct charge of the design and operation of our St.Louis facility and the recruitment and training of all personnel,is thoroughly competent in this field, as will be seen from his enclosed resume of qualifications.

Respectfully submitted,

CONTEMPORARY METALS CORP.
by

Clemons N.Roark,President

cc:J.Roy Owens,Secretary-Treasurer
Contemporary Metals Corp.
620 No.Benton Way
Los Angeles 26,Calif.

cc:F.H.Belcher,Area Manager
U.S.Atomic Energy Commission
P.O.Box 470
St.Charles,Missouri

FORM AEC-2
(2-61)
Previous editions are obsolete.

40-871

FORM APPROVED
BUREAU OF BUDGET NO. 38-R002.6

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described.

1. (Check one)
- [X] (a) New license
- [ ] (b) Amendment to License No. _____
- [ ] (c) Renewal of License No. _____
- [ ] (d) Previous License No. _____

2. NAME OF APPLICANT
CONTEMPORARY METALS CORPORATION

3. PRINCIPAL BUSINESS ADDRESS
620 No.Benton Way,Los Angeles 26,Calif.

4. STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED
A.E.C. site at Robertson,Missouri; also plant facility of applicant 3 miles from AEC site, samo to be leased or bought from National Tank Co.

5. BUSINESS OR OCCUPATION
Chemical and metallurgical processing.

6. (a) IF APPLICANT IS AN INDIVIDUAL, STATE CITIZENSHIP
-

(b) AGE
-

7. DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED
To be purchased from the A.E.C. and re-processed for recoverable minerals. Recovered uranium and thorium will be sold through AEC-licensed established channels. Other minerals will be sold in open metal market.

8. STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE

(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (*Including % U or Th.*)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (*in pounds*)
NORMAL URANIUM	U_3O_8, $U(SO_4)2.4H_2O$, and $UO_2(OH)_2$	Solutions and yellow cake.	125,000 tons of residues,containing approx.192 tons U.
URANIUM DEPLETED IN THE U-235 ISOTOPE	None	None	
THORIUM	$Th(SO_4)_2$ -sulphate $Th(C_2O_4)_2$ -oxalate	Solutions and powders	present in trace amounts in 74,000 ton

(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (*in pounds*)
125,000 tons of residues carrting approx. 193 tons (386,000 lbs.) of uranium and thorium. orisinal amount at site.

9. DESCRIBE THE CHEMICAL, PHYSICAL, METALLURGICAL OR NUCLEAR PROCESSES OR PROCEDURES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDING A THOROUGH EVALUATION OF THE POTENTIAL HAZARDS ASSOCIATED WITH EACH STEP OF THOSE OPERATIONS.
Leaching with ammonia or sulphuric acid, followed by precipitation and recovery of uranium,thorium and also non-radioactive minerals and compounds such as copper,nickel and cobalt. Circuit will handle 300 tons per day of material carrying 0.2% U.

10. DESCRIBE THE MINIMUM TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE THAT WILL BE REQUIRED OF APPLICANT'S SUPERVISORY PERSONNEL INCLUDING PERSON RESPONSIBLE FOR RADIATION SAFETY PROGRAM (OR OF APPLICANT IF APPLICANT IS AN INDIVIDUAL).
Supervision, training of personnel,and full safety program under the direction of Prof.T.M.Dunkle. See attached qualifications.

11. DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9; INCLUDE: (a) RADIATION DETECTION AND RELATED INSTRUMENTS (including film badges, dosimeters, counters, air-monitoring and other survey equipment as appropriate. The description of radiation detection instruments should include the type of radiation detected and the range(s) of each instrument.)

Safety program will provide continuous geiger counter monitoring in all areas that will process radioactive material. Dosimeters will be required for all personnel. A pulse height counter will be used to check all radioactive products and wastes as to isotope content. Other safeguards will be installed as requested by the A.E.C. or other agencies. Equipment will be largely obtained from Nuclear Chicago, and calibruted by them.

(b) METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED IN (a) ABOVE (for film badges, specify method of calibrating and processing, or name supplier.)

8005170550 5/8

16-11548-1

AEC approval if required.

11.(c). VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MISTS, GASES, ETC.

Adequate ventilation and filtration equipment will be installed to eliminate or control all dust, mists, and gases, to conform fully to all AEC requirements and local and state inspections and insurance underwriters. Final flow sheet and list of equipment, and final installation, subject to

12. DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY AND RELATE THESE PROCEDURES TO THE OPERATIONS LISTED IN ITEM 9; INCLUDE:

(a) PROCEDURES FOR USE OF NUCLEAR MATERIALS AND SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC., IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS.

Nuclear materials will be in dilute form in solutions until final precipitation. All processing, storage ans shipping areas will be monitored. No combustible or explosive materials will be used; established precautions on all uses of acids or other chenicals will be maintained at all times.

(b) EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTS WHICH MAY INVOLVE SOURCE MATERIAL.

Evacuation of personnel from area in question; subsequent monitoring by Safety Department til radiation becomes reduced to required safety levels in all areas.

(c) DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES:

Continuous monitoring in final stages of precipitation, drying and shipping of yellow cake and other products.

13. WASTE PRODUCTS: *If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here* ☐ *and explain on a supplemental sheet:*

(a) Quantity and type of radioactive waste that will be generated. Extremely low traces of U and Th may remain, less than 0.01%.

(b) Detailed procedures for waste disposal.

14. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 10 CFR 40 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING: N. ONE

(a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.

(b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.

(c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (*Specify instrument used, date of calibration and calibration technique used*) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.

(d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

CERTIFICATE

(This item must be completed by applicant)

15. *The applicant, and any official executing this certificate on behalf of the applicant named in Item 1, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.*

CONTEMPORARY METALS CORP.
(Applicant named in Item 2)

Dated May 17, 1962

BY: Clemons M. Roark

Clemons M. Roark

President.
(Title of certifying official authorized to act on behalf of the applicant)

WARNING: 18 U.S.C. Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U.S. GOVERNMENT PRINTING OFFICE 10—76348-1

FORM AEC-2
(2-61)
Previous editions are obsolete.

FORM APPROVED
BUREAU OF BUDGET NO. 38-R002.8.

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described.

1. (Check one)
- [x] (a) New license
- [ ] (b) Amendment to License No. .....
- [ ] (c) Renewal of License No. .....
- [ ] (d) Previous License No. .....

2. NAME OF APPLICANT
CONTEMPORARY METALS CORPORATION

3. PRINCIPAL BUSINESS ADDRESS
620 No.Benton Way,Los Angeles 26,Calif.

4. STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED
A.E.C. site at Robertson,Missouri; also plant facility of applicant 3 miles from AEC site, same to be leased or bought from National Tank Co.

5. BUSINESS OR OCCUPATION
Chemical and metallurgical processing.

6. (a) IF APPLICANT IS AN INDIVIDUAL: STATE CITIZENSHIP
-

(b) AGE
-

7. DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED
To be purchased from the A.E.C. and re-processed for recoverable minerals. Recovered uranium and thorium will be sold through AEC-licensed established channels. Other minerals will be sold in open metal market.

8. STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE

(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (*Including % U or Th.*)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (*in pounds*)
NORMAL URANIUM	U_3O_8, $U(SO_4)_2 \cdot 4H_2O$, and $UO_2(OH)_2$	Solutions and yellow cake.	125,000 tons of residues,containing approx.192 tons U.
URANIUM DEPLETED IN THE U-235 ISOTOPE	None	None	
THORIUM	$Th(SO_4)_2$ -sulphate $Th(C_2O_4)_2$ -oxalate	Solutions and powders	present in trace amounts in 74,000 ton

(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (*in pounds*)
125,000 tons of residues carrting approx. 193 tons (386,000 lbs.) of uranium and thorium. Original amount at site.

9. DESCRIBE THE PRINCIPAL PROCESSES AND PROCEDURES, INCLUDING ESTIMATES OF THE NUMBER OF EMPLOYEES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDING A THOROUGH EVALUATION OF THE POTENTIAL HAZARDS ASSOCIATED WITH EACH STEP OF THOSE OPERATIONS.
Leaching with ammonia or sulphuric acid, followed by precipitation and recovery of uranium,thorium and also non-radioactive minerals and compounds such as copper,nickel and cobalt. Circuit will handle 300 tons per day of material carrying 0.2% U.

10. DESCRIBE THE MINIMUM TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE THAT WILL BE REQUIRED OF APPLICANT'S SUPERVISORY PERSONNEL INCLUDING PERSON RESPONSIBLE FOR RADIATION SAFETY PROGRAM (OR OF APPLICANT IF APPLICANT IS AN INDIVIDUAL).
Supervision, training of personnel,and full safety program under the direction of Prof.T.M.Dunkle. See attached qualifications.

11. DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9, INCLUDE: (a) RADIATION DETECTION AND RELATED INSTRUMENTS (including film badges, dosimeters, counters, air-monitoring and other survey equipment as appropriate. The description of radiation detection instruments should include the type of radiation detected and the range(s) of each instrument.)

Safety program will provide continuous geiger counter monitoring in all areas that will process radioactive material. Dosimeters will be required for all personnel. A pulse height counter will be used to check

(b) METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED IN (a) ABOVE (for film badges, specify method of calibrating and processing, or name supplier.)
all radioactive products and wastes as to isotope content. Other safeguards will be installed as requested by the A.E.C. or other agencies. Equipment will be largely obtained from Nuclear Chicago, and calibrated by them.

TID-7035-1

AEC approval if required.

11(c). VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MISTS, GASES, ETC.

Adequate ventilation and filtration equipment will be installed to eliminate or control all dust, mists, and gases, to conform fully to all AEC requirements and local and state inspections and insurance underwriters. Final flow sheet and list of equipment, and final instal etion, subject to

12. DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY IN CONNECTION WITH THE PROPOSED CEDURES TO THE OPERATIONS LISTED IN ITEM 9; INCLUDE:

(a) PROCEDURES FOR USE OF NUCLEAR MATERIALS AND SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC., IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS

N uclear materials will be in dilute form in solutions until final precipitation. All processing, storage ans shipping areas will be monitored. No combustible or explosive materials will be used; established precautions on all uses of acids or other chemicals will be maintained at all times.

(b) EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTAL RADIATION EXPOSURE OR CONTAMINATION

Evacuation of personnel from area in question; subsequent monitoring by Safety Department til radiation becomes reduced to required safety levels in all areas.

(c) DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES.

Continuous monitoring in final stages of precipitation, drying and shipping of yellow cake and other products.

13. WASTE PRODUCTS: *If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here* ☐ *and explain on a supplemental sheet:*

(a) Quantity and type of radioactive waste that will be generated: Extremely low traces of U and Th may remain, less than 0.05%.

(b) Detailed procedures for waste disposal. NONE

14. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 10 CFR 40 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING:

(a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.

(b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.

(c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (*Specify instrument used, date of calibration and calibration technique used*) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.

(d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

CERTIFICATE

(This item must be completed by applicant)

15. *The applicant, and any official executing this certificate on behalf of the applicant named in Item 1, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.*

CONTEMPORARY METALS CORP.
(Applicant named in Item 2)

Dated May 17, 1962

By Clemons M. Roark

Clemons M. Roark

President
(Official authorized to act on behalf of the applicant)

WARNING: 18 U.S.C. Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U.S. GOVERNMENT PRINTING OFFICE 16—70648-1

Contemporary
Metals Corp.

Exhibit - Item 10 -Form AEC-2

Plant design, supervision, selection of personnel, and effected safety program will be in charge of Prof.T.M.Dunkle, presently of 4543 Colorado Street, Long Beach, California.

Prof.Dunkle is a Director of Contemporary Metals Corp.;
Professor of Chemistry and Metallurgy at Long Beach City College; and a
Consulting Mining Engineer and Mill Designer.

Educational Experience:

B.S. -University of California, Berkeley, Calif., 1942, in Chemical Engineering.
Graduate work towards M.S.- University of Southern California 1946-47; University of California at Los Angeles 1948-49; Long Beach State College 1950.
Credentials held: Life, General Secondary, Life-Special, Secondary Class B, Vocational.

Work Experience:

Engineer -Chief Field Engineers Office, Richmond Shipyards, 1942.
Chemist - Permanente Metals Corp., Permanente, Calif. 1942-44.
Chemical Engineer - Research Engineering Dept., Cutter Laboratories, Berkeley, Calif., 1944-46.
Teacher, Long Beach City College, 1946 to present.

Chief Chemist, and Vice President in Charge of Research and Development, Twining Laboratories of Southern California, 1947-present.
President, Platina Mines Corp., 1946-present.
President, Vega International, 1961-present.

Special Experience:

Completion of 8 weeks training program jointly sponsored by the American Society for Engineering Education and the U.S.Atomic Energy Commission, 1958.

MAY 2 5 1962

CLH:RLL
40-6801

Contemporary Metals Corporation
1039 South San Gabriel Blvd.
San Gabriel, California

Attention: Mr. Clemons M. Rourk
President

Gentlemen:

This refers to your letter dated May 17, 1962, requesting an AEC source material license.

In order to further review your application we require the following information:

1. More detailed description of the physical form of the residues in each stockpile indicating the relative water content (ie. are they dry sands, viscous clumps, dried sludge, etc.)

2. More detailed description of the screening and classifying process referred to in your May 17, letter as the initial treatment of the residues. Please include an explanation of the equipment if this process involves physical movement of the residues, and describe method of controlling generated dust.

3. Description of method for loading trucks and describe the trucks as designed to prevent blowing and spillage of residues.

4. Flow diagram of the separation and extraction processes indicating those areas or points in the process where dust, fumes or vapors may be generated.

5. Detailed description of the dust collection and ventilation equipment which will be used to control the evolved aerosols at each area or point described in 3 above.

6. A description of your method for determining the concentrations of airborne radioactivity during the loading of the residues, and within the extraction plant and in the plant effluent including type equipment, and location and frequency of such surveys.

OFFICE ▶						
SURNAME ▶	RLLayfield:rl	DANussbaumer				
DATE ▶	5/25/62	5/25/62				

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62701-2

MAY 2 5 1962

DLR:RLL
40-6801

Contemporary Metals Corporation
1039 South San Gabriel Blvd.
San Gabriel, California

Attention: Mr. Clemons M. Roark
President

Gentlemen:

This refers to your letter dated May 17, 1962, requesting an AEC source material license.

In order to further review your application we require the following information:

1. More detailed description of the physical form of the residues in each stockpile indicating the relative water content (ie. are they dry sands, viscous clumps, dried sludge, etc.)

2. More detailed description of the screening and classifying process referred to in your May 17, letter as the initial treatment of the residues. Please include an explanation of the equipment if this process involves physical movement of the residues.and describe method of controlling generated dust.

3. Description of method for loading trucks and describe the trucks as designed to prevent blowing and spillage of residues.

4. Flow diagram of the separation and extraction processes indicating those areas or points in the process where dust, fumes or vapors may be generated.

5. Detailed description of the dust collection and ventilation equipment which will be used to control the evolved aerosols at each area or point described in 3 above.

6. A description of your method for determining the concentrations of airborne radioactivity during the loading of the residues, and within the extraction plant and in the plant effluent including type equipment, and location and frequency of such surveys.

7. More detailed description of your waste disposal system including a diagram of the septic tank showing the capacity and construction material. Also, please indicate knowledge of any sub surface water reservoir into which the liquid residue will drain.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing and Regulation

Corrected Copy

INCOMING TELEGRAM

C-058

DOCKET NO. 40-6811

U.S. ATOMIC ENERGY COMMISSION
TWX UNIT

L&R File Copy

1962 JUN 8 PM 12 40

ACA007 1237P EDT JUN 8 62 WA338

(AC) (LLP099) NL PD DULLICATE AND CORRECTED COPY TDL HOLLYWOOD

CALIF JUN 7

DONALD A NUSSBAUMER, CHIEF SOURCE AND SPCL NUCLEAR MATL BR

DIVN OF LICENSING AND REGULATION

US ATOMIC ENERGY COMMISSION WASHDC

RECEIVED
JUN 8 - 1962
U. S. A. E. C.
Division of Licensing and Regulation

MR ROARK FROM OUR COMPANY HAS REQUESTED THAT I FORWARD YOU THE FOLLOWING SUPPLEMENTALINFORMATION FOR YOUR USE IN PROCESSING OUR REQUEST FOR AEC SOURCE MATERIALLICENSE YOUR REFERENCE DLR: RLL 40-6301 THE RADIATION COUNT OF THE VARIUM SULPHATE MARKETABLE PRODUCT WILL NOT EXCEED TWICE THE BACKGROUND COUNT TO THE BEST OF OUR KNOWLEDGE BASED ON ANY AEC OR ANY OTHER INDEPENDENT AGENCY THAT HAS TESTED ANY OF SUBJECT MATERIAL NO RADIUM HAS BEEN REPORTED HOWEVER WE WOULD LIKE TO INQUITE AT THIS TIME IF IT WOULD BE POSSIBLE TO SECURE THE COOPERATION OF THE ARGONNE

DOCKETED
USAEC
Division of Licensing & Regulation
JUN 8 - 1962
asc
Docket Officer

INCOMING TELEGRAM

5410

E/6

Copy Supplied
Div. of Compliance 6/11/62-RPB

8606120052 2PP

FROM: Contemporary Metals Corp.
Los Angeles, California

DATE OF DOCUMENT: June 8, 1962 | DATE RECEIVED: June 8, 1962 | NO.: 5410
LTR. | MEMO. | REPORT. | OTHER.

TO: D. Ruesbauer
L/B

ORIG.: X | CC: | OTHER: 2 cys. verifaxed

ACTION NECESSARY [X] | NO ACTION NECESSARY [ ] | CONCURRENCE [ ] | COMMENT [ ] | DATE ANSWERED: | BY:

CLASSIF.: Unc. | POST OFFICE REG. NO.:

FILE CODE: 10-6511

DESCRIPTION: (Must Be Unclassified)
TWX submitting addtl. info in support of their application for an ax lic. as req. by our 5-25-62 ltr.

REFERRED TO	DATE	RECEIVED BY	DATE
Ruesbauer: w/file cy. 1-compliance cy.	6-11-62		
	6/11		

ENCLOSURES:
NOTE: Corrective verrion of twx rec'd earlier today Ltd. 6-8-62.

REMARKS:
Mail Room Distribution:
1-PDR Or Copy

els

U. S. ATOMIC ENERGY COMMISSION
MAIL CONTROL FORM FORM AEC-3265 (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613358

(40-68 [illegible]

BILL MILLER'S Riverside HOTEL

RENO, NEVADA

Mr. Donald Nussbaumer
Director, Licensing & Regulation
U.S. Atomic Energy Commission
Germantown, Md.

Please [illegible] — no typewriter or secretary around here [illegible]

Dear Mr. Nussbaumer,

Mr. Osterwald, of the St. Louis area office of AEC, was kind enough to run down the matter of Radium in the barium sulfate stockpile, a question which you raised on the phone this week. He says it is negligible — something like 0.5 parts in a million. They consider it of no consequence! (Total of 17000 mgs. in entire stockpile!)

Hope you got our night letter and that the information was what you needed.

I should think the way to

5508

8606110430 2pp

FROM: Clement Roark
Reno, Nevada

DATE OF DOCUMENT: 6-10-62
DATE RECEIVED: 6-13-62
NO.: 5508

LTR: X
MEMO:
REPORT:
OTHER:

TO: Nunnebaumer

ORIG.: X
CC:
OTHER:

ACTION NECESSARY: X
NO ACTION NECESSARY:
CONCURRENCE:
COMMENT:
DATE ANSWERED:
BY:

CLASSIF.: U
POST OFFICE
REG. NO:

FILE CODE: 40-3811

DESCRIPTION: (Must Be Unclassified)
Ltr. furnishing supplemental data in conn with Contemporary's appl, in ref to question raised on phone.

REFERRED TO	DATE	RECEIVED BY	DATE
Nunnebaumer:	6-13		
w/file cy			
cy for Compliance			

ENCLOSURES:

REMARKS: H R Distributi n: 1 - A.C FDR

E/7

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3265 (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613958

FROM: C.H. Beard
Reno, Nevada

DATE OF DOCUMENT: 6/11/62 | DATE RECEIVED: 6/15/62 | NO.: 5614

LTR. X | MEMO. | REPORT: | OTHER:

TO: J.U. Belcher, St. Charles, Missouri
CC: D. Rusebeumer

ORIG.: X | CC: | OTHER:

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF.: U | POST OFFICE: | REG. NO.:

FILE CODE:

DESCRIPTION: (Must be Unclassified)
Ltr. re Radium content of Barium cake

ENCLOSURES:
Ltr. from Belcher to C. Beard dtd. 6/8/62

REFERRED TO	DATE	RECEIVED BY	DATE
Rusebeumer	6/15		

REMARKS:

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 619988

6/8

O:HRO

June 11, 1962

Mr. F. H. Belcher, Area Mgr.
U. S. Atomic Energy Commission
Box 470
St. Charles, Missouri

Dear Mr. Belcher,

Thank you so much for the confirmation of June concerning the radium contract of the barium cake in the airport residues.

I am sending one of the copies of your letters to Mr. Nussbaumer in Washington.

Sincerly yours,

C:HR:mg
cc Mr. Donald Nussbauer
enc.

DOCKET NO. 40-6811

LAB File Copy

CLEMONS M. ROARK
Investments

2486 HUNTINGTON DRIVE
HOWARD BUILDING SUITE 2
SAN MARINO, CALIFORNIA

Re. DLR:RLL
40-6811

June 13, 1962

Donald A. Nussbauaer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D.C.

Dear Mr. Nussbauaer:

In receiving your letter of May 25, 1962, I believe we have probably complied with answers and information to all seven points. Should there be any further information requested by this time would you please let me know as soon as possible.

Sincerely,

Clemons M. Roark

Clemons M. Roark
President
Contemporary Metals Corp.

CMR:msg

Cont. Copy to
Dir. of Compliance 6/18/62-RFL

8606120067 205

FROM:
CONTEMPORARY RESEARCH CORP.
San Marion, California
Clemons M. Zoark

DATE OF DOCUMENT: 6/13/62
DATE RECEIVED: 6/18/62
NO.: 5652

LTR: X
MEMO:
REPORT:
OTHER:

TO:
D. A. Nussbaumer

ORIG.: 1
CC:
OTHER: 2 verifax copies

ACTION NECESSARY ☐
NO ACTION NECESSARY ☐
CONCURRENCE ☐
COMMENT ☐
DATE ANSWERED:
BY:

CLASSIF.: U
POST OFFICE
REG. NO.:

FILE CODE: 40-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. advising us that they have complied with answers and information requested in our May 25, 1962 letter.

ENCLOSURES:

REFERRED TO	DATE	RECEIVED BY	DATE
D. A. Nussbaumer	6/18		
w/file cy			
cy for Compliance			
(Docket 40-6811 not in files)			

REMARKS:
Mail Room Distribution:
Public Document Room

U. S. ATOMIC ENERGY COMMISSION
MAIL CONTROL FORM FORM AEC-3265 (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 615958

E19

LR:RRL
40-6811

JUN 22 1962

Contemporary Metals Corporation
Riverside Hotel
Room No. 425
Reno, Nevada

Attention: Mr. Clemons M. Roark
President

Gentlemen:

This refers to your letters dated May 28, and June 8, 1962, supplying additional information in support of your application for an AEC source material license.

In order to continue the review of your application, we require the following information:

1. A more detailed description of the health physics experience and training of the person in charge of your radiation protection program, especially as related to handling of this type material. Also, please provide a copy of the written administrative and radiation safety procedures which will be given to personnel working in the processing areas.

2. Description of your method for determining the concentrations of surface contamination on floors and equipment including type equipment, frequency and location of such surveys.

3. Description of your method for determining the concentrations of airborne radioactivity within the processing area and in the gaseous effluent, including type equipment, location and frequency of such surveys.

4. Description of your method for determining the concentrations of radioactivity in the liquid effluent which is discharged into the septic tanks including type equipment, location and frequency of such surveys.

8606120061 4pp

E/10

JUN 22 1962

LR:RRL
40-6811

Contemporary Metals Corporation
Riverside Hotel
Room No. 425
Reno, Nevada

Attention: Mr. Clemons M. Roark
President

Gentlemen:

This refers to your letters dated May 28, and June 8, 1962, supplying additional information in support of your application for an AEC source material license.

In order to continue the review of your application, we require the following information:

1. A more detailed description of the health physics experience and training of the person in charge of your radiation protection program, especially as related to handling of this type material. Also, please provide a copy of the written administrative and radiation safety procedures which will be given to personnel working in the processing areas.

2. Description of your method for determining the concentrations of surface contamination on floors and equipment including type equipment, frequency and location of such surveys.

3. Description of your method for determining the concentrations of airborne radioactivity within the processing area and in the gaseous effluent, including type equipment, location and frequency of such surveys.

4. Description of your method for determining the concentrations of radioactivity in the liquid effluent which is discharged into the septic tanks including type equipment, location and frequency of such surveys.

AIR MAIL

5. Description of your method for determining the concentrations of radioactivity in the residues and wastes resulting from the various separation processes.

6. Description of your quality control procedures for each of the marketable products including tests and analyses which will be made to determine the radioactive material content of the products.

7. In your reply to our letter dated May 25, 1962, you failed to completely answer our questions concerning the septic tank and leaching bed system. In order to adequately evaluate your disposal system, we require the following:

   a. An estimate of the actual quantity of liquid wastes which will be discharged to this system per day, (i.e. is it 25,000 gallons per day, if not please clarify the entry on the flow sheet submitted in your letter dated May 28, 1962.)

   b. Description of the geological and hydrological characteristics of this area from the standpoint of radioactive material reaching nearby subterranean water reservoirs or other sources of potable water.

   c. Description of your proposed method for cleaning out the septic tanks in the event that they become full or inoperative.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation

cc: Mr. Gene Loose

5. Description of your method for determining the concentrations of radioactivity in the residues and wastes resulting from the various separation processes.

6. Description of your quality control procedures for each of the marketable products including tests and analyses which will be made to determine the radioactive material content of the products.

7. In your reply to our letter dated May 25, 1962, you failed to completely answer our questions concerning the septic tank and leaching bed system. In order to adequately evaluate your disposal system, we require the following:

   a. An estimate of the actual quantity of liquid wastes which will be discharged to this system per day, (i.e. is it 25,000 gallons per day, if not please clarify the entry on the flow sheet submitted in your letter dated May 28, 1962.)

   b. Description of the geological and hydrological characteristics of this area from the standpoint of radioactive material reaching nearby subterranean water reservoirs or other sources of potable water.

   c. Description of your proposed method for cleaning out the septic tanks in the event that they become full or inoperative.

Distribution:
Formal
Doc. Rm.
Suppl
Compl.
Br & Div Rfs
R. Layfield
Gene Loose

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation

cc: Mr. Gene Loose

OFFICE ▶	LR	LR				
SURNAME ▶	RLLayfield	DANussbaumer				
DATE ▶	6/21/62	6/22/62				

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62701-3

FROM: Clemons M. Roar (Contemporary Metals) San Marino, California	DATE OF DOCUMENT: June 26, 1962	DATE RECEIVED: June 28, 1962	NO.: 5998	
	LTR.: x	MEMO:	REPORT:	OTHER:
TO: Donald Nussbaumer Div. of Lic. & Reg.	ORIG.: x	CC:	OTHER: 2 cys. verifaxed	
	ACTION NECESSARY ☐ NO ACTION NECESSARY ☐	CONCURRENCE ☐ COMMENT ☐	DATE ANSWERED: BY:	
CLASSIF.: U POST OFFICE REG. NO.:	FILE CODE: 40-6811			

DESCRIPTION: (Must Be Unclassified)	REFERRED TO	DATE	RECEIVED BY	DATE
Ltr. ack. our 6-22-62 ltr. and advising that they will submit the information requested in about ten days.	Nussbaumer	6-29-62		
	w/file cy. & folder			
	1-compliance copy			
ENCLOSURES:	Layfield	4/19		
	No. A. T... Dec ... 464			
REMARKS: Mail Room Distribution: 1-Pub. Doc. Rm. Copy				

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

Re: LATRRL
40-6811

Dear Mr. Nussbaumer:

This will acknowledge your letter of June 22 and confirm my phone conversation with Mr. Layfield.

I am sure you realize that the questions now asked of us entail a degree of technical detail which actually requires us to go substantially further in design of plant facilities and decisions of equipment, to say nothing of expense, that is in some respects justified by us, not having any assurance that even then we will get our license.

However, I have talked at length with our Vice President, in charge of plant design, Mr. Gene Loose and with Professor T. M. Dunkle, who developed our process and flow sheet and who will be in charge of setting up the St. Louis operation. They feel that they can give you all the answers in the full detail requested, but it may take them about a week to ten days. This is the best we can do and I can only send to your St. Louis Regional Area office, from whom we got the award, our regrets at this additional delay. You may count on our reply as soon as possible.

E/11

8606120072 4pp

Re: LR:RRL
40-6811

I trust you will not misunderstand me; I am certainly more than willing to cooperate with the AEC in every reasonable respect. I think you must admit, however, that to come up with the complete "written administrative and radiation safety procedures which will be given to personnel working in the processing area" before we even have the full plant design completed, is calling for quite a bit. I am particularly concerned at this continued delay for more and more data when it could well mean that I will lose the option on the plant site and building (July 1) and then necessitate my having to start all over again.

Respectfully yours,

Clemons M. Roark

CMR:wmd
cc:Messrs. F. K. Belcher
T. M. Dunkle
Gene Loose

6/27/62

SOURCE AND SPECIAL NUCLEAR MATERIALS BRANCH DATE _____

Lowenstein, R. _____	Nussbaumer, D. A. _____	Teets, S. A. _____
Kirk, R. L. _____	Delaney, J. C. _____	L&R Mail Rm. _____
Price, E. R. _____	Lane, J. J. _____	Diggs, R. _____
Rogers, L. R. _____	McCreless, T. G. _____	Allen, M. _____
Luke, C. _____	Doulos, N. _____	Smith, H. _____
Johnson, L. E. _____	Harmon, D. F. _____	
Mason, J. R. _____	Lindberg, B. _____	
	~~Layfield, R. L.~~ _____	

From _____

E/12

June 27, 1962

Mr. Robert S. Flick
St. Louis County Health Department
123 Adams
Ferguson 35, Missouri

Dear Mr. Flick:

I am advised that before undertaking an industrial plant operation on the site of the old National Tank Company facility at Hazeltine in your County, I need to clear with your department and possibly obtain a permit from you.

Our company will be installing chemical processing equipment costing approximately $500.000 utilizing the existing buildings on the site. Basically, this will include equipment for handling and moving ores and concentrates hauled in from other locations previously ground to a mesh size of minus thirty to be put into solution with carbonate, sulfuric acid, or oxalic acid circuits. From the resulting solutions we will precipitate various metals such as copper, cobalt, nickel, uranium, and barium and their compounds for packaging and shipping.

We will have about 25,000 gallons per day of an effluent, 99.95% H_2°, which will have residual traces of these chemicals and minerals resulting from the fact that no recovery process is going to be 100% perfect in recovery. This effluent will flow into a leaching field formed by the natural sand and gravel present in the 6.5 acre property. Two 1,000 gallon septic tanks will service the sanitary facilities.

It is quite possible that we will also produce ammonia and phosphate fertilizers, and trace mineral soil conditioners, as a by-product.

The plant will be a continuous operation once started, on a three-shift basis, employing approximately 5 persons per shift in the plant besides supervisory and technical personnel of probably 4 persons. Three men will be required in

DOCKET [illegible]40-6811

[illegible] File Copy

Hotel Riverside
Reno,Nevada
July 12,1962

Mr.F.W.Belcher,Area Director
U.S.Atomic Energy Commission
P.O.Box 170
St.Charles,Missouri

File:HRO
Residues
Project

Dear [illegible],

We are still working to comply with all the requests of the Licensing and Regulation division of the AEC at Germantown,and this week Prof.Dunkle,Mr.Loose and an outside consultant in the field of safety regulations have been really busy on the details. I think we will have the final material ready to send to Mr.Nussbaumer by the end of this week.

[illegible] sample you sent Prof.Dunkle,he advises that it would be readily handled by our plant;so if and when we ever get going, [illegible] most certainly be interested in taking it off.

Incidentally,that barium sulfate sample sent to us instead of being 60-80% barium sulfate was mostly carbonate. Is this possible according to your records of the pile as a whole,or was this sample a fluke?

Very best regards,

Clemons M.Peark,Pres.
CONTEMPORARY METALS
CORPORATION

[illegible]

RKG

8606120080 2pp

FROM:
CONTEMPORARY METALS
Reno, Nevada
Clemons H. Roark

DATE OF DOCUMENT: 7/12/62 | DATE RECEIVED: 7/13/62 | NO.: 7390

LTR: X | MEMO: | REPORT: | OTHER:

TO:
F. H. Belcher -USAEC
St. Charles, Mo.
cc: Mr. Nussbaumer

ORIG.: 1 | CC: | OTHER: 2 verifax cys

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF.: U | POST OFFICE REG. NO.:

FILE CODE: 40-6 11

DESCRIPTION: (Must Be Unclassified)
Ltr. advising that they are still working to comply with all the requests of DLR for addit'l info and will have the final material ready by the end of week.

ENCLOSURES:

REFERRED TO	DATE	RECEIVED BY	DATE
D. A. Nussbaumer	7/13		
w/ file cy & file			
cy for Compl.			
	7/13		

REMARKS:
Mail Room Distribution:
Public Document Room

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3265 (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613958

Is this possible according to your records of the pile as a whole, or was this sample a fluke?

Very best regards,

Clemons H. Roark, Pres.
CONTEMPORARY METALS
CORPORATION

E/13

OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

TO : Files

DATE: July 16, 1962

FROM : Robert L. Layfield

SUBJECT: CONTEMPORARY METALS CORPORATION - DOCKET NO. 40-6811
TELECON WITH BILL DEVINE - PRODUCTION

DLR:RLL

Mr. Devine called me on July 12 in reference to licensing action concerning the subject Corporation for processing uranium ore residues presently stored at the St. Louis airport site. His primary concern was the residues which would remain from the separation process. Apparently there is some concern over the possibility of Contemporary Metal pulling out and leaving the residues. (Integrity?)

I informed Mr. Devine that we intended to license Contemporary if their procedures were adequate. This would include checking their assay procedures of the residues for radioactive content. Also, I informed him that if the residues were less than 0.05%, it was no longer considered as source material and need not be treated as such.

E/14

8606120039 1p

FROM: Contemporary Metals Corporation
L. A. California

DATE OF DOCUMENT: July 19, 1962 | DATE RECEIVED: July 25, 1962 | NO.: 7791

LTR: X | MEMO: | REPORT: | OTHER:

TO: B. Nussbaumer
Div. of IAE

ORIG.: X | CC: X | OTHER: 1 cy. verified

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF.: U | POST OFFICE | REG. NO.:

FILE CODE: LC-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. ref. our 6-27-62 ltr. and trans. under separate cover ~~~~~~~~ the draft safety procedures (Rec'd 7-26-62) which will be given to personnel. Included:

ENCLOSURES:
1-Chemical Lab. Testing Facilities
2-Radiographic Dept. Facilities & Equip.
3-Metallurgical & Physical Testing
4-Concrete & Bldg. Matls., Tests, Etc.
5-Radioactive Isotopes-Facilites & Tests

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer: w/file cy. & folder 1-compliance cy.	7-26-62		
Longfield	7/27		

REMARKS: Ma 1 Room Distribution:
1-Pub. Doc. Room Copy

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613916

E/15

DOCKET NO. 40-6811

L&R File Copy

DOCKETED USAEC Division of Licensing & Regulation JUL 26 1962 asc Docket Officer

Reno, Nevada
Hotel Riverside
July 19, 1962

Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
U.S. Atomic Energy Commission
Washington 25, D.C.

RECEIVED JUL 26 1962 U.S. Atomic Energy Commission Licensing & Regulation

Ref: DLR:RLL
40-6811

Subject: Application for License
St. Louis Airport Residue Project

Dear Mr. Nussbaumer,

Specifically replying to your letter of June 27, 1962:

1. I am sending under separate cover the draft safety procedures which will be given to personnel working in our plant. It must be understood that not only will we welcome any suggestions which the A.E.C. itself may offer, but we may also revise and add to this material once all final design and engineering details of the plant are completed and before employment is begun.

The specific individual we have in mind for employment as plant safety director, who will also be in charge of the radiation protection program, is Mr. Alan R. Denning, currently employed (for the past two and a half years) in a similar capacity with the Livermore Radiation Laboratory of the University of California. He has been fu lly cleared by the FBI and the AEC; is a graduate of Long Beach City College in Materials Testing; was formerly employed in this field by Douglas Aircraft Corp.; and is now in charge of Radiation Monitoring and Public Health Protection for the Livermore Laboratory at Camp Mercury, the AEC Test Site in Nevada.

2, 3, 4 and 5:

Methods for detecting radioactivity in the processing area, and in gasseous and liquid effluent will involve three types of equipment:

(a) Continuous monitoring by scintillator-type equipment which will be set to give both visual and audio-alarm at a level equal to half the allowable weekly dosage, on an hourly basis; with a second alarm given immediately at 6 mr/hr. The first alarm will be the signal for immediate in-person inspection and monitoring of the alarm area by the shift safety director. Should the second alarm be given before the cause of over-level radiation has been found, the entire area will be closed pending

Copy Sent ... Div. of Comp. 7/27/62 RKR

8606120086 3PP

7791

proper detection of the cause and its correction.

In addition to the continuous monitoring type of equipment, installed as shown on our flow sheet, we will also employ recorder-type equipment in the processing area, in the flow lines of the effluent, and in dust collection and ventillation equipment.

Finally, we plan to use manual inspection, each shift, using the Manual Gamma-Sensitive Systems manufactured by Nuclear-Chicago Corporation (of the DS 303)type. This equipment is particularly applicable to liquid effluent and solid waste detection usage. (Specific equipment nos. will be furnished if desired.)

As you will note under (7) below, we have changed our end circuit so that no plant effluent will go into the septic tank or leaching field; only the rest rooms will be hooked into the sewer line that feeds the ~~sp~~ septic tank under the present plan.

6. Our product control system will be under the Lawrence Warehouse Co.'s bonded system, whereby each load of material brought into the plant from the stockpile will be assayed by St. Louis Testing Laboratories, Inc., for mineral content, and at the same time for uranium, thorium and ionium content and radioactivity. St. Louis Testing Laboratories, Inc., as an independent testing laboratory will also be sampling and assaying and testing all products coming from the plant, both as to chemical content and as to any radioactivity. No shipments of any kind will leave the plant that are not fully within the established controls. I am enclosing a brochure of the Laboratories' facilities and experience in this field

7. Since filing our original application, we have found that we can market all of our liquid effluent in tank car lots as liquid fertilizer, as long as we are willing to vary t he ph content within a range of 6.5-8, which we can do, and as long as the uranium-thorium content does not exceed 0.01% --which we had already established as our control limit and which we had already represented to you in our original application. This means that we will not have to pass any liquid effluent into the septic tank or the leaching field; hence the daily discharge will be zero gallons.

Since the septic tanks will take only domestic waste water, cleaning them out is no problem; and we will use the same cleaning company service that was formerly used by National Tank Company.

Sincerely yours,

Clemons M. Roark, Pres.
CONTEMPORARY METALSCORP.

CC: F. H. Belcher, St. Louis
Gene Loose, Hollywood, Calif.

FROM: Contemporary Metals Reno, Nevada	DATE OF DOCUMENT: July 25, 1962	DATE RECEIVED: July 27, 1962	NO.: 7801
	LTR: X	MEMO:	REP. ST.:	OTHER:
TO: D. Nussbaumer Div. of L&R	ORIG.: X	CC: 1	OTHER: 1 cy. verifaxed
	ACTION NECESSARY ☐ NO ACTION NECESSARY ☐	CONCURRENCE ☐ COMMENT ☐	DATE ANSWERED: BY:
CLASSIF.: U	POST OFFICE REG. NO.:	FILE CODE: 40-6811	

DESCRIPTION: (Must Be Unclassified)	REFERRED TO	DATE	RECEIVED BY	DATE
Ltr. advising as of the equipment they will be using in ref. to the manual monitoring to be employed in their St. Louis plant.	Nussbaumer	7-27-62		
	w/file cy. 1-compliance copy			
ENCLOSURES:				
REMARKS: Mail Room Distribution: 1-Pub. Doc. Room Cy.				

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3206 (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613958

p/56 Portable survey meters for alpha, beta and gamma radiation measurements, Model 2612M or 2612F.

The alarm system for use with fixed detectors in the plant will probably be theor Model 1629, shown on p.55 of their general catalog.

Please let me know if you need any further information from us in connection with our application.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark

cc: Mr. Gene Loose
8606 Wonderland Ave.
Hollywood, Calif.

Copy Supplied
Facility Licensing Branch
Div. of Compliance 7/27/62-RLR

RECEIVED
JUL 27 1962
U.S. Atomic Energy Commission
DIVISION OF
LICENSING & REGULATION

E/17

DOCKET NO. 40-6811

L&R File Copy

Room 402
Hotel Riverside
Reno, Nevada

July 25, 1962

Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
U.S. Atomic Energy Commission
Washington 25, D.C.

Ref: ~~RRL~~/ DLR:RLL
40-6801

Dear Mr. Nussbaumer,

With further reference to the manual monitoring to be employed in our St. Louis plant, we will probably be using the following equipment described in the General Catalog of Nuclear-Chicago Corporation:

p/10 DS-303 Well Detector and a combination scaler/ spectrometer.

p/56 Portable survey meters for alpha, beta and gamma radiation measurements, Model 2612M or 2612P.

The alarm system for use with fixed detectors in the plant will probably be theor Model 1629, shown on p.55 of their general catalog.

Please let me know if you need any further information from us in connection with our application.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark

cc: Mr. Gene Loose
8606 Wonderland Ave.
Hollywood, Calif.

FROM: Contemporary Metals Corp.
Reno, Nevada

DATE OF DOCUMENT: July 30, 1962 | DATE RECEIVED: Aug. 1, 1962 | NO.: 795

LTR: X | MEMO: | REPORT: | OTHER:

TO: D. Nussbaumer
Div. of L&R

ORIG.: X | CC: | OTHER: 2 cys. verifaxed

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF.: U | POST OFFICE REG. NO.:

FILE CODE: LC-6511

DESCRIPTION: (Must Be Unclassified)
Ltr. re. telecon with Mr. Layfield and advisin that they will complete the file for their investment as soon as lic. is issued.

ENCLOSURES:

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer:	8-1-62		
w/file cy.			
1-compliance cy.			

REMARKS: Mail Room Distribution:
1-PDR Copy

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613958

Sincerely yours,

Clemons N. Roark
CONTEMPORARY METALS CORP.

CC:Mr.F.H.Belcher
Mr.Gene Loose

8/2/62

Licensing
AUG 1 - 1962
Mail Room

RECEIVED
AUG 1 - 1962
U.S. Atomic Energy Commission
DIVISION OF LICENSING & REGULATION

E/24

DOCKET NO. 40-6811

Mail File Copy

July 30,1962

Room 402
Hotel Riverside
Reno,Nevada

Mr.Donald A.Nussbaumer,Chief
Source and Special Materials Branch
Division of Licensing & Regulation
U.S.Atomic Energy Commission
Washington 25,D.C.

Re:St.Louis Residues
Airport prpject

att:Robert Layfield

Dear Mr.Nussbaumer,

I was pleased to talk with Mr.Layfield this morning, and appreciated his offer to phone me tomorrow after he has completed his review of our new material.

Just as soon as the license is issued, I will be able to complete the file for my investment people. We are most eager to get going on this project yet this summer if at all possible,so that the plant might be in actual operation by November 1.

Your interest is greatly appreciated.

Sincerely yours,

Clemons M.Roark
CONTEMPORARY METALS CORP.

CC:Mr.F.H.Belcher
Mr.Gene Loose

8/2/62

Licensing Branch
AUG 1 - 1962
Docket Officer

RECEIVED
AUG 1 - 1962
U.S. Atomic Energy Commission
DIVISION OF
LICENSING & REGULATION

8006120098 4PP

7925

RECORD OF TELEPHONE CONVERSATION

DATE 7/30/62

DOCKET 70-6811

COMPANY Contemporary Metals Corp

PERSON Clemens Roarke

SUMMARY OF CALL:

Requested (Mr Roarke) status of latest info submitted by him. Told him that I would call tomorrow.

EL

3-2011 Room 402

Standard Form 63
Nov. 1961 Edition
63-104

MEMORANDUM OF CALL | Date 7-31 | Time 4:25

TO- Mr. Layfield

☑ YOU WERE CALLED BY- ☐ YOU WERE VISITED BY-

Mr. Roark

TELEPHONE: | Number or code | Extension

☑ PLEASE CALL
☐ WILL CALL AGAIN
☐ RETURNING YOUR CALL
☐ IS REFERRED TO YOU BY:
☐ WAITING TO SEE YOU
☐ WISHES AN APPOINTMENT

LEFT THIS MESSAGE:

Operator 41 - FR 3-2011

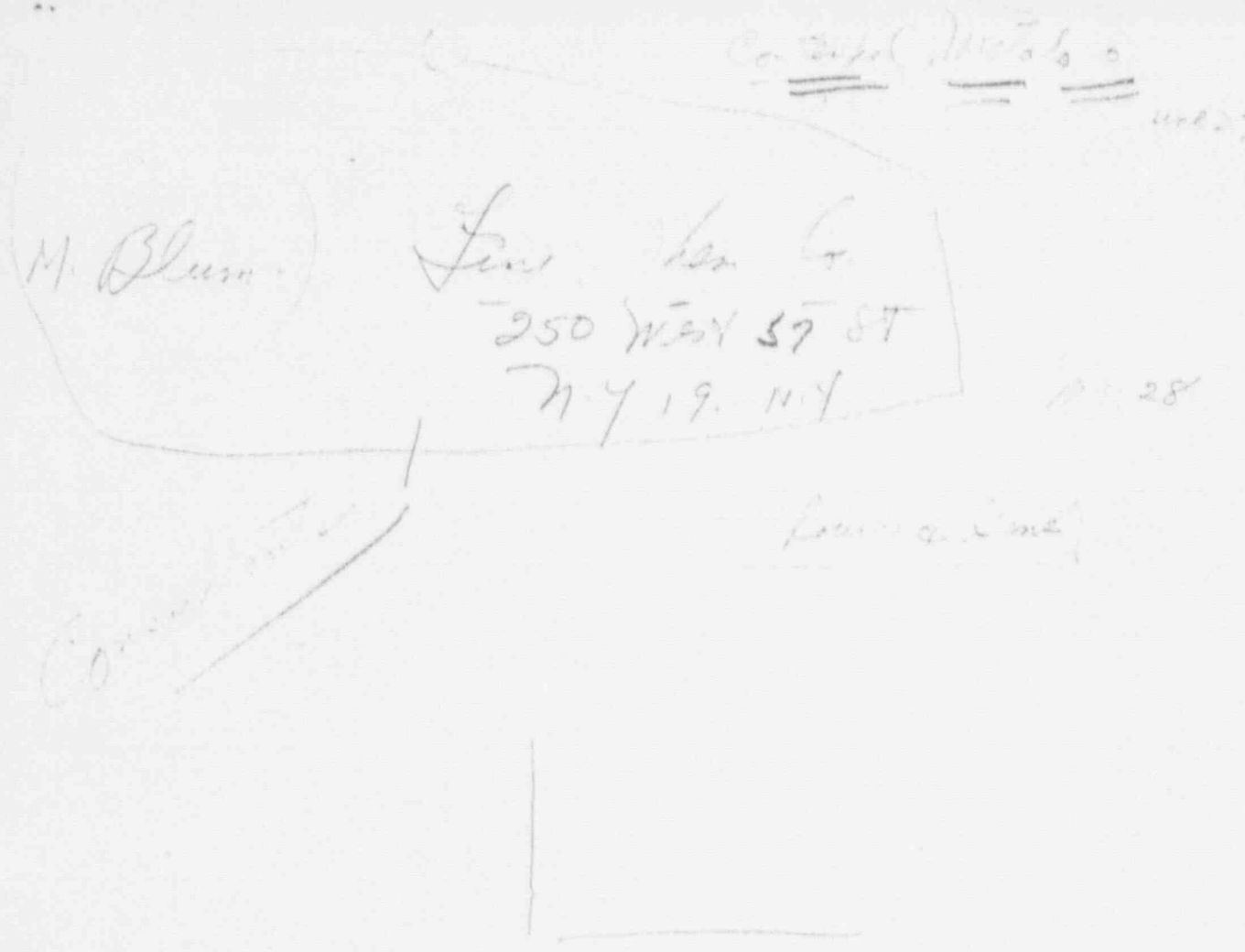
Reno, Nev. Rm 402

Area code 702

Received By- Bobbie

U.S. GOVERNMENT PRINTING OFFICE : 1962 O—633141

E/25


M. Blum
250 West 57 St
N.Y. 19. N.Y.

FROM: Contemporary Metals, Inc. Reno, Nevada	DATE OF DOCUMENT: 8-2-62	DATE RECEIVED: 8-6-62	NO.: 8027
	LTR: X	MEMO:	REPORT:	OTHER:
TO: D. Muenstaumer Div. of L&R	ORIG.: X	CC:	OTHER: 2 cys. verified
	ACTION NECESSARY ☐ NO ACTION NECESSARY ☒	CONCURRENCE ☐ COMMENT ☐	DATE ANSWERED: BY:
CLASSIF.: U	POST OFFICE REG. NO.:	FILE CODE: 40-6811	

DESCRIPTION: (Must Be Unclassified)
Ltr. regarding questions # 2,3, 4 & 5 of our original request and advising that the info. will be submitted as soon as possible.

REFERRED TO	DATE	RECEIVED BY	DATE
Muenstaumer	8-6-62		
w/file cy. & folder			
1-compliance cy.			

ENCLOSURES:

REMARKS: Mail Room Distribution:
1-Pub. Doc. Room Copy

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 613358

up a duplicate of the information, and from one source or the other I'll forward it on to you at once.

So I suppose I owe everyone an apology; I am truly sorry that such a delay should have occurred. We are so anxious to get the plant ready for actual operations before winter, and in my rush on other matters connected with the financing and construction plans I must have somewhere slipped up on completing my file for you.

Sincerely yours,

Clemons M. Rosark

CC: Gene Loose

9/17/62 - RFB

E/26

40-6811

L&R File Copy

August 2,1962

Hotel Riverside
Reno,Nevada

Mr.Donald A.Nussbaumer,Chief
Source and Special Materials Branch,
U.S.Atomic Energy Commission
Washington 25,D.C.

Re:St.Louis Airport residues
project application

Att:Mr.Robert Layfield

Dear Mr.Nussbaumer,

I called Mr.Gene Loose,our plant designer and vice-president of our company,who has been getting the technical meterial together for me, and told him that you and Mr.Layfield felt I still had not properly answered questions 2,3,4 and5 of your original request. I guess the slip-up is mine, for Gene tells me that Prof.Dunkle worked out all this for us and that it was sent to me more than two weeks ago. I'll hunt through my entire file tonight;meanwhile they will send me up a duplicate of the information,and from one source or the other I'll forward it on to you at once.

So I suppose I owe everyone an apology;I am truly sorry that such a delay should have occurred. We are so anxious to get the plant ready for actual operations before winter, and in my rush on other matters connected with the financing and construction plans I must have somewhere slipped up on completing my file for you.

Sincerely yours,

Clemons M.Roark

CC;Gene Loose

9/17/62-RFB

86061/20102 248

DLR:RLL
40-6811

AUG 6 - 1962

Contemporary Metals Corporation
Riverside Hotel
Room 425
Reno, Nevada

Attention: Mr. Clemons M. Roark
President

Gentlemen:

This refers to your letter dated July 19, 1962 and confirms the telephone conversation on August 1, 1962, between Mr. Roark, Mr. R. L. Layfield of this office, and myself.

As we discussed, your response to questions 2, 3, 4 and 5 of our letter dated June 27, 1962 are not satisfactory and we understand that you plan to resubmit this information. Also, we require a more detailed description of the health physics qualifications of the person who will be responsible for radiation safety in your plant including specific training and experience as related to the handling of this type material.

Further, please provide a more detailed description of the recorder type equipment which you indicate will be installed in the flow lines of the effluent and in the dust collection and ventilation equipment. Also, indicate the location, type and capacity of the ventilation equipment and the type and efficiency of the dust collection equipment.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing and Regulation

E/27

8606120110 2pp

DLR:RLL
10-6911

AUG 6 - 1962

Contemporary Metals Corporation
Riverside Hotel
Room 525
Reno, Nevada

Attention: Mr. Clemons M. Roark
President

Gentlemen:

This refers to your letter dated July 19, 1962 and confirms the telephone conversation on August 1, 1962, between Mr. Roark, Mr. R. L. Layfield of this office, and myself.

As we discussed, your response to questions 1, 3, 4 and 5 of our letter dated June 27, 1962 are not satisfactory and we understand that you plan to resubmit that information. Also, we require a more detailed description of the health physics qualifications of the person who will be responsible for radiation safety in your plant including specific training and experience as related to the handling of this type material.

Further, please provide a more detailed description of the recorder type equipment which you indicate will be installed in the flow lines of the effluent and in the dust collection and ventilation equipment. Also, indicate the location, type and capacity of the ventilation equipment and the type and efficiency of the dust collection equipment.

Distribution:
Formal
Doc. Rm.
Suppl.
Br. and Div. rfs
Compll
RLLayfield, LR

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing and Regulation

OFFICE ▶		LR	LR		
NAME ▶		RLLayfield	DANussbaumer		

FROM: Contemporary Metals Corp.
San Gabriel, California

DATE OF DOCUMENT: Aug. 31, 1962

DATE RECEIVED: Sept. 5, 1962

NO.: 874

LTR. x MEMO: REPORT: OTHER:

TO: R. Layfield
Div. of Lic

ORIG.: x CC: OTHER: 2 cys. verified

ACTION NECESSARY ☐ NO ACTION NECESSARY ☐
CONCURRENCE ☐ COMMENT ☐
DATE ANSWERED: BY:

CLASSIF.: L POST OFFICE REG. NO:

FILE CODE: 40-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. submitting addtl. info as a supplement to their ltr. of 8-28-62.

ENCLOSURES:

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaum r:	9-5-62		
w/file cy.			
1-compliance cy.			
(File for ref in)			
[illegible]	[illegible]		

REMARKS: Mail Room Distribution:
1-Pub. Doc. Room Copy

U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1961 — 813958

E/29

DOCKET No. 40-6811

CONTEMPORARY
METALS
CORPORATION

1039 S SAN GABRIEL BLVD SAN GABRIEL CALIF
PHONE ATLANTIC 61249

I&R File Copy

DATE: 31 AUGUST 1962

TO: MR. R. L. LAYFIELD, ASST-CHIEF
SOURCE AND SPECIAL NUCLEAR MATERIALS BRANCH
DIVISION OF LICENSING AND REGULATION
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

FROM: CONTEMPORARY METALS CORPORATION
620 NORTH BENTON WAY
LOS ANGELES 26, CALIFORNIA

REFERENCE: DLR:RLL
40-6811

THE FOLLOWING INFORMATION IS SUPPLEMENTAL TO OUR LETTER TO YOU DATED AUGUST 28, 1962.

AS A RESULT OF AN ON SITE INSPECTION OF THE AIRPORT SITE STOCKPILES AT BROWN ROAD, ROBERTSON, MISSOURI, AND THE PROPOSED PROCESSING PLANT FACILITIES AT 7210 POLSON LANE, HAZELWOOD MISSOURI, WE WISH TO SUGGEST THE FOLLOWING MODIFICATIONS OF PROCEEDURE AND MONITORING.

PHASE 1:
1). WASH BODY, WHEELS AND TIRES OF TRUCKS BEFORE LEAVING AIRPORT SITE TO INSURE THE REMOVAL OF ALL STOCKPILE MATERIAL FROM THE EXTERIOR OF THE TRUCKING EQUIPMENT.
2). MONITOR LOADING AREA AT AIRPORT SITE WITH PORTABLE AIR SAMPLER UNIT (GAST, FILTER-QUEEN OR EQUAL) ONCE DURING EACH EIGHT HOUR SHIFT.
3). INSTALL WATER SAMPLING UNIT EXISTING AT AIRPORT SITE OR EQUAL IN POND SUMP JUST EAST OF COLDWATER CREEK NEAR SOUTHWEST CORNER OF AIRPORT SITE TO MONITOR LIQUIDS DRAINING INTO COLDWATER CREEK.
4). ELIMINATE ITEM 5 LISTED UNDER "FREQUENCY & COMMENT PHASE 1 & 2, AREA 1" AS SHOWN ON PAGE 2 OF OUR ABOVE REFERENCED LETTER TO YOU DATED AUGUST 28, 1962.

PHASE 3:
1). ERECT CHAIN LINK FENCE AROUND STOCKPILE RESIDUE AREA TO DETER UNAUTHORIZED PERSONNEL FROM ENTERING AND TRESPASSING.
2). MONITOR STOCKPILE, LOADING AND SCREENING AREA WITH PORTABLE AIR SAMPLER UNIT (GAST, FILTER-QUEEN OR EQUAL) ONCE DURING EACH EIGHT HOUR SHIFT.
3). ELIMINATE ITEM 3 LISTED UNDER "FREQUENCY & COMMENT PHASE 3, AREA 2" AS SHOWN ON PAGE 2 OF OUR LETTER DATED AUGUST 28, 1962.

PHASE 4:
1). DELETE "ITEM 1., UNDER PROCEEDURE REFERENCE 6, PAGE 12 OF OUR SAID LETTER AND SUBSTITUTE THE FOLLOWING: "1). HEALTH PHYSICS PERSONNEL TO MAKE DAILY SWIPE TESTS AT AREA NUMBERS 3, 5, 6, 7, 8, 9, 10, 11, 12, CHANGE ROOM AND PLANT FOREMAN OFFICE TO DETERMINE IF ANY AREAS HAVE BEEN CONTAMINATED AS THE RESULT OF ANY AIR BORNE MATERIAL OR UNDETECTED LEAKS IN THE CLOSED PRODUCTION SYSTEM."
2). PERSONNEL SHALL BE CAREFULLY INSTRUCTED IN GOODHOUSEKEEPING AND PERSONAL CLEANLINESS PROCEDURES PARTICULARLY AS THEY APPLY TO THE CHANGE ROOM PROCEDURES TO INSURE THAT THEY ARE "CLEAN" WHEN

Div. of Licensing 9/6/62-RKK

ACKNOWLEDGED

8005140557 3

PHASE 4 CONT'D: THEY LEAVE THE PLANT TO GO HOME. INDIVIDUAL LOCKERS TO BE PROVIDED TO FACILITATE THE INDIVIDUAL AND PERSONAL STORAGE OF "STREET" AND "WORK" CLOTHING. A NEW DOOR WILL BE INSTALLED IN THE EASTERLY WALL OF THE CHANGE ROOM TO PERMIT INGRESS AND EGRESS OF PERSONNEL BETWEEN THE OUTSIDE AREA OF THE PLANT AND THE CAREFULLY MAINTAINED CHANGE ROOM.

3). ELIMINATE ITEM 2 UNDER PROCEDURE REFERENCE 1 AND ITEM 1 UNDER PROCEDURE REFERENCE 2 AS SHOWN ON PAGE 11 OF OUR SAID LETTER.

4). ELIMINATE ITEMS 1 AND 2 UNDER PROCEDURE REFERENCE 7 AS SHOWN ON PAGE 12 OF OUR SAID LETTER AND SUBSTITUTE THE FOLLOWING: "1. FOUR GENERAL AIR SAMPLING UNITS (GAST, FILTER-QUEEN OR EQUAL) TO BE PLACED GEOMETRICALLY AT THE CENTERS OF THE FOUR QUADRANTS OF THE TWO MAIN BAYS OF THE PLANT AREA. FILTER PAPERS TO BE EVALUATED IN CMC LABORATORY ONCE EVERY EIGHT HOUR SHIFT.

AIR BORN RA IN ALL PHASES OF THIS OPERATION NOT TO EXCEED 7×10^{-11} MICRO CURIES PER MILLI-LITRE.

IF YOU SHOULD DESIRE ANY FURTHER INFORMATION RELATIVE TO YOUR REVIEW OF OUR REQUEST FOR AEC SOURCE MATERIAL LICENSE PLEASE FEEL FREE, AND AUTHORIZATION IS HEREBY GRANTED, TO CALL ANY OF THE FOLLOWING MEMBERS OF OUR COMPANY COLLECT:

GENE LOOSE
VICE-PRESIDENT
LOS ANGELES, CALIFORNIA
OLDFIELD 62540

J. ROY OWENS
TREASURER
LOS ANGELES, CALIFORNIA
DUNKIRK 43510

C. E. LOOSE
MANAGER, WEST COAST OFFICE
ALHAMBRA, CALIFORNIA
ATLANTIC 27195

DIRECT DIALING FOR ALL OF ABOVE 213.

VERY TRULY YOURS,

GENE LOOSE, VICE-PRESIDENT
CONTEMPORARY METALS CORPORATION

GL/BR

CONTEMPORARY
METALS
CORPORATION

1039 S SAN GABRIEL BLVD SAN GABRIEL CALIF
PHONE ATLANTIC 61249

DOCKET NO. 40-6811

L&R File Copy

DATE: 28 AUGUST 1962

TO: MR. DONALD A. NUSSBAUMER, CHIEF
SOURCE AND SPECIAL NUCLEAR MATERIALS BRANCH
DIVISION OF LICENSING AND REGULATION
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

FROM: CONTEMPORARY METALS CORPORATION
620 NORTH BENTON WAY
LOS ANGELES 26, CALIFORNIA

REFERENCE: DLR:RLL
40-6811

THE FOLLOWING SUPPLEMENTAL INFORMATION IS IN ANSWER TO YOUR LETTER DATED AUGUST 6, 1962, TO ASSIST YOU IN REVIEW OF OUR REQUEST FOR AN AEC SOURCE MATERIAL LICENSE DATED MAY 17, 1962.

I BELIEVE THAT YOU WILL FIND ALL OF YOUR REQUESTED INFORMATION COVERED IN DETAIL IN THE FOLLOWING PAGES OR ON ENCLOSED REVISED BLUE PRINT, "SCHEMATIC PLAN FOR CONTEMPORARY METALS CORP., RESIDUE PROCESSING PLANT" DATED MAY 28, 1962, REVISED AUGUST 17, 1962.

MR. ROARK HAS TOLD ME THAT MR. R. L. LAYFIELD, FROM YOUR OFFICE WILL BE IN THE AEC ST. LOUIS AREA OFFICE ON THURSDAY THE 31ST OF AUGUST, SO I WILL PLAN TO BE THERE AT THE SAME TIME IN CASE HE HAS ANY FURTHER QUESTIONS OR ENCLOSED MATERIAL REQUIRED ANY REVISION.

VERY TRULY YOURS,

GENE LOOSE, VICE-PRESIDENT
CONTEMPORARY METALS CORPORATION

DOCKETED
USAEC
Division of
Licensing & Regulation
AUG 30 1962
Docket Officer

GL/BR
ENC: BLUE PRINT
~~NUCLEAR-CHICAGO CATALOG SHEET~~
COPY: MR. R. L. LAYFIELD, % MR. OSTLAND
MR. C. M. ROARK, RENO, NEVADA

E/28

8005140552

MONITORING REFERENCES

AREA	MONITORING EQUIPMENT*	FREQUENCY & COMMENT
1 PHASE 1 & 2. AIRPORT SITE, LOADING AREA, AIRPORT SITE TO HAZELWOOD -- BERKELEY, MISSOURI.	PORTABLE SURVEY INSTRUMENTS. PHASE 1. RADIATION SURVEY. MODEL 2514 HIGH & MEDIUM RANGE "CUTIE-PIE". SURVEY METER FOR GAMMA & BETA RADIATION. MODEL PC43 RIGID EXTENSION ARM (6'). MODEL 2672 ALPHA SURVEY METER. MODEL 1629 ALARM RATEMETER. MODEL P15 GM PROBE. MODEL D50 GM DETECTOR. MONTHLY FILM-BADGE SERVICE (GAMMA). MODEL NO402 GAMMA DOSIMETERS (SELF-READING). MODEL NO403 CHARGER.	1). MONITOR ORIGINAL STOCKPILE AT AREA SCHEDULED FOR NEXT LOADING TO DETECT ANY VOLUMES OF RADIOACTIVE MATERIAL IN EXCESS OF 5 MR. 2). MONITOR TRUCK BODY AND CAB FOR RA LEVEL BEFORE LEAVING AIRPORT SITE TO PROTECT DRIVER & PREVENT TRANSPORTATION OF ANY CONCENTRATIONS THRU PUBLIC STREETS IN EXCESS OF 5 MR DURING PHASE 2. 3). PERSONNEL MONITORING EQUIPMENT TO BE USED BY ALL PERSONS OPERATING DRAG LINE OR LOADING EQUIPMENT, AND TRUCK DRIVERS. 4). IF AT ANY TIME DURING LOADING OPERATION THE STOCKPILE MATERIAL SHOULD BECOME DRY ENOUGH TO GENERATE ANY DUST THE PERSONNEL WORKING IN THE AREA SHALL WEAR RESPIRATORS. 5). ALARM RATEMETER TO BE POSITIONED AT DRAG LINE OPERATOR'S FEET AND SET TO ALARM AT 2.5 MR. 6). ALL PERSONNEL WORKING IN EXCESS OF 20 HR/WK IN STOCKPILE AREA TO HAVE QUARTERLY BIOASSAY.
2 PHASE 3. STOCKPILE OF RESIDUE SOUTH OF CRANE YARD.	PHASE 3 & 4 RADIATION SURVEY. MODEL 2514 HIGH & MEDIUM RANGE "CUTIE-PIE" SURVEY METER. MODEL PC43 RIGID EXTENSION ARM (6'). MODEL 2651 LOW RANGE SURVEY METER FOR GAMMA RADIATION. MODEL 2672 ALPHA SURVEY METER. MODEL 1629 ALARM RATEMETER. MODEL P15 GM PROBE. MODEL D50 GM DETECTOR.	1). PERSONNEL MONITORING EQUIPMENT TO BE USED BY ALL PERSONS OPERATING DRAG LINE OR LOADING EQUIPMENT. 2). IF AT ANY TIME DURING LOADING OPERATION THE STOCKPILE MATERIAL SHOULD BECOME DRY ENOUGH TO GENERATE ANY DUST THE PERSONNEL WORKING IN THE AREA SHALL WEAR RESPIRATORS. 3). ALARM RATEMETER TO BE POSITIONED AT DRAG LINE OPERATOR'S FEET AND SET TO ALARM AT 2.5 MR. 4). ALL PERSONNEL WORKING IN EXCESS OF 20 HR/WK IN STOCKPILE AREA TO HAVE QUARTERLY BIOASSAY.
3 PHASE 4. REJECT CONVEYOR MONITOR SYSTEM.	PHASE 4 MONITORING SYSTEMS. REJECT CONVEYOR MONITOR SYSTEM. MODEL 1629 ALARM RATEMETER. MODEL P15 GM PROBE. MODEL D50 GM DETECTOR.	1). 3 DETECTORS LOCATED AT CONVEYOR BELT AND CONNECTED TO AUTOMATIC ALARM RATEMETER. ONE DETECTOR CENTERED ABOVE BELT AND ONE DETECTOR AT 60° TO THE RIGHT AND ONE 60° TO THE LEFT OF CENTER

AREA	MONITORING EQUIPMENT*	FREQUENCY & COMMENT
		DETECTOR. THIS SYSTEM WILL PROVIDE A CONTINUOUS MONITORING AND ALARM SYSTEM TO PREVENT THE DISCHARGE OF ANY RA MATERIAL ABOVE .5 MR TO REJECT STOCKPILE.
4 PHASE 4.	PLANT FEED MONITOR. MODEL 1629 ALARM RATEMETER. MODEL R1000A CHART RECORDER. MODEL DS200 SCINTILLATION DETECTOR (2" CRYSTAL). MODEL J95A ROSEPIECE	1). THE PLANT FEED SYSTEM WILL BE ENCLOSED TO THE MIXING TANK AND WILL NOT CARRY MATERIAL THAT WILL REGISTER IN EXCESS OF 2.5 MR MAXIMUM. AT THIS POINT ALL OF THE MATERIAL COMING INTO THE PLANT WILL BE CONTINUOUSLY MONITORED IN COMBINATION WITH AUTOMATIC ALARM RATEMETER AND CHART RECORDER TO PROVIDE A PERMANENT RECORD OF ALL MATERIAL ENTERING THE FLOW IN THE PLANT. CAREFUL GAMMA MONITORING.
5 VENTED COVERED TANKS. 6 7 8 9	MODEL 1629 ALARM RATEMETER. MODEL P15 GM PROBE. MODEL D90 GM DETECTOR. PC-33 EXTENSION CABLE AND APPROPRIATE RANGE CHAMBER.	1). ALL OF THESE TANKS TO BE COVERED AND VENTED TO "HOLD-UP" TANK A. HOLD-UP TANK A OUTPUT WILL BE CONNECTED THRU PUMP AND PIPE TO PLANT FEED AT AREA 4. THE OUTPUT WILL BE CONTINUOUSLY AND AUTOMATICALLY MONITORED WITH AUTOMATIC ALARM RATEMETER, SET TO ALARM AT 2.5 MR. IF OUTPUT REACHES 2.5 MR OUTPUT WILL BE SHUT OFF AND HOLD-UP MATERIAL DILUTED DOWN TO 2.5 MR OR LESS BEFORE OPENING TO RECYCLE TO AREA 4. 2). USE EXTENSION CABLE AND CHAMBER ATTACHED TO "CUTIE-PIE" AND DROP THRU TEST PIPE TO CHECK RA LEVEL IN HOLD-UP TANK.
10 RAFFINATE CYCLE PREGNANT SOLUTION.	MODEL 1629 ALARM RATEMETER. MODEL P15 GM PROBE. MODEL D90 GM DETECTOR.	1). THE RA OF THE PREGNANT SOLUTION AT THIS POINT SHOULD BE NIL AND THE CONTINUOUS AUTOMATIC MONITORING WILL BE SET FOR 2 TIMES BACKGROUND. 2). IF PREGNANT SOLUTION EXCEEDS 2 TIMES NORMAL BACKGROUND THE SOLUTION WILL BE BY-PASSED TO A SMALLER STANDBY FILTER AND SOLUTION WILL NOT BE PERMITTED TO GO BEYOND AREA 10 MONITORING POINT UNTIL SOLUTION DROPS TO 2 TIMES NORMAL BACKGROUND OR LESS. (IT SHOULD BE NOTED THAT NORMAL BACKGROUND MIGHT RISE IN ST. LOUIS

	AREA	MONITORING EQUIPMENT*	FREQUENCY & COMMENT
	RAFFINATE CYCLE PREGNANT SOLUTION CONT'D.		AREA DUE TO ATMOSPHERIC TESTING IN OTHER AREAS, THEREFORE THE ALARM SYSTEM WILL BE CALIBRATED TO CORRECT FOR ANY SIGNIFICANT INCREASE IN BACKGROUND ABOVE NORMAL). 3). THE SLURRY WILL BE TRANSPORTED BY MEANS OF AN ENCLOSED SCREW CONVEYOR TO THE COVERED ACID LEACHING TANK. RA LEVEL IN SYSTEM BEYOND LARGE FILTER AT AREA 10 TO FILTER AHEAD OF AREA 11, SHOULD NOT EXCEED 1.25 MR.
11	$UO_2(OH)_2$ ROOM	MODEL 1221 ALARM RATEMETER. MODEL P11 GM PROBE. MODEL D29 GM DETECTOR. "STAPLEX" AIR SAMPLER UNIT. (STAPLEX CO., AIR SAMPLER DIVISION, 765 5TH AVENUE, BROOKLYN 32, NEW YORK).	1). $UO_2(OH)_2$ FROM DRUM FILTER BY ENCLOSED SCREW CONVEYOR TO SEMI-AUTOMATIC BAGGING MACHINE INTO POLY-ETHYLENE HEAT SEALED BAGS INTO STEEL DRUMS. THIS ROOM PARTITIONED FROM REST OF PLANT WITH MECHANICAL VENTILATOR OF SUFFICIENT CAPACITY TO PROVIDE NEGATIVE PRESSURES AT DISCHARGE END OF BAG MACHINE. ALARM RATEMETER SET TO ALARM AT 75 MR AND SHUT FEED SYSTEM DOWN AT 100 MR. ROOM TO BE POSTED "HIGH RADIATION AREA". ANYONE ENTERING RESTRICTED AREA TO WEAR FILM BADGE, RESPIRATOR AND PROTECTIVE CLOTHING. 2). MECHANICAL VENT TO BE CONTINUOUSLY AND AUTOMATICALLY MONITORED WITH AUTOMATIC ALARM RATEMETER. VENT TO ALSO BE MONITORED WITH AIR SAMPLER UNITS AND PAPERS ANALYZED IN LABORATORY ONCE DURING EACH 8 HOUR SHIFT, 2 HOURS AFTER START OF SHIFT. RA OF AIR PASSING THRU VENT AND FILTER NOT TO EXCEED 7×10^{-11} MICRO CURIES PER MILLI-LITRE.
12	BARIUM SULPHATE CYCLE, BASIC SOLUTION DISCHARGE.	MODEL 1221 ALARM RATEMETER. MODEL P11 GM PROBE. MODEL D29 GM DETECTOR.	1). URANIUM THORIUM CONTENT IN THIS SOLUTION NOT TO EXCEED .1%. SET ALARM RATEMETER TO ALARM AT 2 TIMES BACKGROUND TO SHUT OFF FEED PUMP TO DRUM FILTER AUTOMATICALLY. (IT SHOULD BE NOTED THAT NORMAL BACKGROUND MIGHT RISE

AREA	MONITORING EQUIPMENT*	FREQUENCY & COMMENT
BARIUM SULPHATE CYCLE, BASIC SOLUTION DISCHARGE CONT'D.		IN ST. LOUIS AREA DUE TO ATMOSPHERIC TESTING IN OTHER AREAS, THEREFORE THE ALARM SYSTEM WILL BE CALIBRATED TO CORRECT FOR ANY SIGNIFICANT INCREASE IN BACKGROUND ABOVE NORMAL).
13 OFFICE AREA	OFFICE AREA MONITOR. MODEL 1629 ALARM RATEMETER. MODEL P11 PROBE. MODEL D34 GM DETECTOR. "STAPLEX" AIR SAMPLER UNIT.	1). MONITORING SYSTEM IN OFFICE AREA WOULD APPEAR TO BE SUPERFLUOUS DUE TO PHYSICAL SEPARATION BETWEEN PLANT AND OFFICE BUT AUTOMATIC ALARM RATEMETER AND DETECTOR WILL ALSO BE PROVIDED IN THIS AREA AT THE COLD AIR RETURN DUCT IN THE AIR CONDITIONING UNIT. 2). AIR SAMPLING TO FOLLOW PROCEDURE DESCRIBED FOR AREA 11 FREQUENCY & COMMENT 2).

LABORATORY RADIATION ASSAYS FOR ALPHA ANALYSIS OF AIR SAMPLER FILTER PAPER AND GAMMA ANALYSIS OF SOLUTION WILL BE CONDUCTED IN THE CMC PLANT LABORATORY USING THE FOLLOWING EQUIPMENT.

MODEL 202 DECADE SCALER FOR PROPORTIONAL COUNTING.
MODEL D43 GAS FLOW DETECTOR (2").
MODEL M5 PROPORTIONAL SEMI-AUTOMATIC SAMPLE CHANGER.
MODEL 3037 LEAD SHIELD.
MODEL CY343 ADAPTER RING.
MODEL VK3 REGULATOR VALVE.
MODEL GP-10 PROPORTIONAL COUNTING GAS.
MODEL 3764 PREAMPLIFIER.
MODEL SC22 SAMPLE PANS.
MODEL DS202 SCINTILLATION WELL COUNTER.
MODEL 1810 RADIATION ANALYZER.
MODEL RT2 CESIUM CALIBRATION SOURCE.
MODEL TT2 TEST TUBES.

PERSONNEL MONITORING EQUIPMENT TO BE USED BY ALL PERSONS ENTERING RESTRICTED AREAS.

MONTHLY FILM BADGE SERVICE (GAMMA).
MODEL NC402 GAMMA DOSIMETERS (SELF READING).
MODEL NC403 CHARGER.

GENERAL NOTES:

*ALL MONITORING EQUIPMENT MODEL NAMES AND NUMBERS REFER TO EQUIPMENT MANUFACTURED AND DISTRIBUTED BY NUCLEAR-CHICAGO CORPORATION, 333 EAST HOWARD AVENUE AT NUCLEAR DRIVE, DES PLAINES, ILLINOIS, UNLESS OTHERWISE NOTED.

B. HEALTH PHYSICS SHALL BE REQUESTED TO MONITOR AND APPROVE THE DISCHARGE OR REMOVAL OF RADIOACTIVE LIQUIDS OR GASES FROM HOLD-UP TANKS.

C. ST. LOUIS TESTING LABORATORIES SHALL BE REQUESTED TO MONITOR ALL MARKETABLE RADIOACTIVE MATERIAL PRIOR TO REMOVAL FROM THE PROCESSING SITE.

VI SHIPMENT OF RADIOACTIVE MATERIAL

A. RADIOACTIVE OR CONTAMINATED MATERIAL SHALL NOT BE GIVEN TO AN OUTSIDE VENDOR UNLESS APPROVED BY HEALTH PHYSICS.

B. HEALTH PHYSICS SHALL BE REQUESTED TO MONITOR AND APPROVE ALL SHIPMENTS OF RADIOACTIVE OR CONTAMINATED MATERIAL.

C. SHIPPING CONTAINERS WHICH HAVE BEEN USED FOR THE SHIPMENT OF RADIOACTIVE MATERIAL SHALL BE MONITORED INTERNALLY AND EXTERNALLY FOR RADIOACTIVE CONTAMINATION FOLLOWING REMOVAL OF THE RADIOACTIVE MATERIAL.

VII DECONTAMINATION

A. DECONTAMINATION IS THE RESPONSIBILITY OF THE OPERATING GROUP. SUCH DECONTAMINATION SHALL BE PROMPTLY EFFECTED UPON NOTIFICATION BY HEALTH PHYSICS.

B. PERSONAL DECONTAMINATION SHALL BE PERFORMED IN A MANNER SPECIFIED BY HEALTH PHYSICS.

VIII PROTECTIVE EQUIPMENT AND DETECTION INSTRUMENTS

A. ALL RADIATION PROTECTION EQUIPMENT AND RADIATION DETECTION INSTRUMENTATION USED TO PROTECT AGAINST RADIOLOGICAL HAZARDS SHALL BE SPECIFIED OR APPROVED BY HEALTH PHYSICS PRIOR TO PROCUREMENT OR UTILIZATION.

B. RADIATION DETECTION INSTRUMENTATION USED FOR RADIATION PROTECTION SHALL BE CALIBRATED TO STANDARDS SPECIFIED BY HEALTH PHYSICS.

C. EMPLOYEES SHALL NOT USE RADIATION DETECTION INSTRUMENTATION FOR RADIATION PROTECTION PURPOSES UNLESS THEY HAVE BEEN THOROUGHLY INDOCTRINATED BY HEALTH PHYSICS IN THE USE OF SUCH INSTRUMENTATION AND IN THE INTERPRETATION AND APPLICATION OF MONITORING RESULTS.

D. RADIATION PROTECTION EQUIPMENT AND RADIATION DETECTION INSTRUMENTATION SHALL NOT BE USED FOR OTHER THAN THEIR INTENDED PURPOSE WITHOUT THE EXPRESS APPROVAL OF HEALTH PHYSICS.

E. PERSONNEL MONITORING INSTRUMENTS, SUCH AS FILM BADGES AND DOSIMETERS, SHALL BE WORN ON THE WRIST OR CHEST UNLESS OTHERWISE SPECIFIED BY HEALTH PHYSICS.

F. LOSS OF OR DAMAGE TO PERSONNEL MONITORING INSTRUMENTS SHALL BE REPORTED IMMEDIATELY TO HEALTH PHYSICS.

G. NO EMPLOYEE SHALL CAUSE OR ATTEMPT TO CAUSE AN ABNORMAL INDICATION ON ANY PERSONNEL MONITORING INSTRUMENT.

H. EMPLOYEES SHALL PROMPTLY RETURN FILM BADGES TO APPROPRIATE BADGE RACK AT THE END OF EACH PERIOD, NORMALLY FOUR WEEKS FOR EVALUATION.

IX RADIATION EXPOSURES

A. NO EMPLOYEE SHALL KNOWINGLY EXPOSE HIMSELF OR OTHERS TO RADIOACTIVITY

BY HEALTH PHYSICS AT LEAST TWENTY-FOUR HOURS PRIOR TO WORK INITIATION. TAGGED AREA ENTRY PERMIT IS REQUIRED FOR ALL CONTRACTOR OPERATIONS IN TAGGED AREAS.

H. DOORS TO TAGGED AREAS SHALL REMAIN CLOSED.

III USE OF RADIOACTIVE MATERIAL

A. RADIOACTIVE MATERIAL SHALL NOT BE USED IN AN OPERATION UNLESS APPROVED BY HEALTH PHYSICS.

B. RUBBER OR OTHER APPROVED GLOVES SHALL BE WORN WHEN HANDLING RADIOACTIVE OR CONTAMINATED MATERIALS.

C. PROTECTIVE EQUIPMENT, AS SPECIFIED BY HEALTH PHYSICS, SHALL BE WORN IN ALL RADIOLOGICAL OPERATIONS.

D. OPERATIONS THAT MIGHT LEAD TO THE INGESTION OF RADIOACTIVE MATERIAL (E.G., PIPETTING BY MOUTH) ARE PROHIBITED.

E. ALL RADIOLOGICAL OPERATIONS CONDUCTED DURING NORMAL OFF-SHIFT HOURS SHALL RECEIVE PRIOR REVIEW BY HEALTH PHYSICS.

F. RADIOLOGICAL OPERATIONS INVOLVING FIRE, SAFETY OR NON-RADIOACTIVE TOXIC MATERIAL HAZARDS SHALL BE REVIEWED BY HEALTH PHYSICS.

G. THE DESIGN, CONSTRUCTION OR MODIFICATION OF ALL EXPERIMENTS, EQUIPMENT, OR FACILITIES INVOLVING RADIOACTIVITY OR RADIATION PRODUCING DEVICES SHALL BE REVIEWED BY HEALTH PHYSICS.

H. ADEQUATE CONTAINMENT PRECAUTIONS SHALL BE APPLIED WHERE RADIOACTIVE MATERIALS ARE POURED, HEATED, OR PLACED UNDER PRESSURE OR VACUUM.

I. THE CUTTING, ABRADING, WELDING, ETC., OF RADIOACTIVE OR CONTAMINATED MATERIAL SHALL NORMALLY BE PERFORMED IN PROPERLY VENTILATED AND FILTERED ENCLOSURES APPROVED BY HEALTH PHYSICS.

J. OPERATIONS UTILIZING RADIOACTIVE GASES, LIQUIDS OR FINELY DIVIDED RADIOACTIVE SOLIDS SHALL NORMALLY BE PERFORMED IN PROPERLY VENTILATED AND FILTERED ENCLOSURES APPROVED BY HEALTH PHYSICS.

K. RADIOACTIVE WASTE GASES AND VAPORS SHALL BE COLLECTED IN SUITABLE CONTAINERS FOR DISPOSAL UNLESS PROVISIONS ARE MADE FOR ATMOSPHERIC RELEASE THROUGH STACKS APPROVED AND MONITORED BY HEALTH PHYSICS.

IV CONTAINMENT OF RADIOACTIVE MATERIAL

A. ALL RADIOACTIVE OR CONTAMINATED MATERIAL NOT IN IMMEDIATE USE SHALL BE STORED IN ADEQUATELY SHIELDED AND LABELLED CONTAINERS.

B. ALL GLASS OR OTHER FRAGILE CONTAINERS FOR RADIOACTIVE OR CONTAMINATED MATERIAL SHALL BE SURROUNDED BY AN ADEQUATE SECONDARY CONTAINER.

C. ALL CONTAINERS OF RADIOACTIVE OR CONTAMINATED MATERIAL SHALL BE APPROPRIATELY LABELLED.

D. RADIOACTIVE MATERIAL SHALL NORMALLY BE STORED ONLY IN TAGGED AREAS OR THOSE AREAS AND RECEPTACLES APPROVED BY HEALTH PHYSICS.

V DISPOSAL OF RADIOACTIVE MATERIAL

A. RADIOACTIVE MATERIAL, REGARDLESS OF THE QUANTITY, SHALL NOT BE PLACED IN "COLD" SINKS OR OTHER DRAINS.

I GENERAL

A. HORSEPLAY WITH RADIOACTIVITY OR RADIATION PRODUCING DEVICES IS EXPRESSLY PROHIBITED.

B. ALL OUTSIDE CORRESPONDENCE RELATIVE TO THE RADIOLOGICAL SAFETY PROGRAM AT CONTEMPORARY METALS CORPORATION IS THE RESPONSIBILITY OF HEALTH PHYSICS. SUCH CORRESPONDENCE BY EACH EMPLOYEES IS PROHIBITED UNLESS APPROVED BY HEALTH PHYSICS SUPERVISION.

C. "RADIATION" AND "CONTAMINATION" SIGNS, TAGS, LABELS, ETC., SHALL BE POSTED AND REMOVED ONLY BY OR AT THE DIRECTION OF HEALTH PHYSICS.

D. LABORATORIES AND/OR PROCESS AREAS SHALL BE MAINTAINED IN AN ORDERLY MANNER REFLECTING GOOD HOUSEKEEPING PRACTICES.

E. A LOG BOOK OF ALL TESTS, SAMPLINGS AND ANALYSIS READINGS AND ASSAYS TAKEN BY HEALTH PHYSICS PERSONNEL ON ALL SHIFTS TO BE MAINTAINED IN LABORATORY OFFICE TWENTY FOUR HOURS A DAY AND READILY AVAILABLE TO ALL AUTHORIZED PLANT OR INSPECTING PERSONNEL.

F. ANY UNUSUAL PHENOMENA NOTED OR ANY HEALTH OR SAFETY WORK NOT COMPLETED ON ANY ONE SHIFT SHALL BE PASSED ON IN WRITING TO THE HEALTH PHYSICS PERSONNEL ON THE SUCCEEDING SHIFT AND IF DEEMED ADVISABLE ALSO TO SUCCEEDING SHIFT PLANT FOREMAN AND A COPY OR ORIGINAL OF ANY SUCH COMMUNICATION ALSO FILED IN THE LABORATORY OFFICE. ANY AND ALL COPIES TO BE SIGNED BY PERSON ORIGINATING AND RECEIVING THE COMMUNICATION.

G. ALL HEALTH PHYSICS RECORDS TO BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND AT THE EXPIRATION OF SUCH FIVE YEAR PERIOD MAY BE DISPOSED OF ONLY AFTER THE PASSAGE OF A RESOLUTION AUTHORIZING DISPOSAL BY THE BOARD OF DIRECTORS OF CONTEMPORARY METALS CORPORATION.

H. MARKETABLE PRODUCT QUALITY CONTROL WILL BE MAINTAINED UNDER A CONTRACT WITH THE ST. LOUIS TESTING LABORATORIES.

II TAGGED AREAS

A. SMOKING, EATING, DRINKING, STORAGE OF EDIBLES AND APPLICATION OF COSMETICS ARE PROHIBITED IN TAGGED AREAS.

B. PERSONNEL MONITORING INSTRUMENTS (FILM BADGES AND/OR DOSIMETERS) SHALL BE WORN AT ALL TIMES IN TAGGED AREAS.

C. PERSONS HAVING OPEN (IMPROPERLY PROTECTED) CUTS OR SKIN BREAKS ARE PROHIBITED FROM ENTERING TAGGED AREAS.

D. ALL RADIOACTIVE MATERIAL ENTERING OR LEAVING A TAGGED AREA SHALL BE MONITORED FIRST BY HEALTH PHYSICS.

E. ANYTHING LEAVING A TAGGED AREA SHALL BE MONITORED FIRST BY HEALTH PHYSICS.

F. ANYTHING BEING RETURNED FROM A TAGGED AREA TO A STOCK ROOM OR TOOL CRIB SHALL BE MONITORED FIRST BY HEALTH PHYSICS.

G. ALL OUTSIDE CONTRACTOR OPERATIONS IN TAGGED AREAS SHALL BE REVIEWED

IN EXCESS OF THAT PERMITTED BY APPLICABLE REGULATIONS.

B. PERSONAL RADIATION EXPOSURES, MEASURED BY FILM BADGES OR DOSIMETERS, SHALL BE REPORTED TO AND DISCUSSED WITH ONLY THE EXPOSED EMPLOYEE, HIS SUPERVISION AND APPROPRIATE MEMBERS OF HEALTH PHYSICS, MEDICAL AND MANAGEMENT.

C. CMC WILL EMPLOY NUCLEAR-CHICAGO MONTHLY FILM-BADGE SERVICE WHICH INCLUDES REPORTS SHOWING MOST RECENT RESULTS, ACCUMULATIVE RESULTS FOR CALENDAR QUARTERS AND FOR THE YEAR TO DATE INCLUDING THE MAINTENANCE OF REQUIRED GOVERNMENT RECORDS.

X INCIDENTS AND INJURIES

A. ANY INJURY, NO MATTER HOW SMALL, RECEIVED WHILE WORKING IN A TAGGED AREA SHALL BE REPORTED IMMEDIATELY TO MEDICAL.

B. ALL INCIDENTS (SPILLS, EXPLOSIONS, FIRES, ETC.) INVOLVING RADIOACTIVITY SHALL BE REPORTED IMMEDIATELY TO THE HEALTH PHYSICS OFFICE AND TO THE SHIFT PLANT FOREMAN.

C. ALL INCIDENTS SUSPECTED OR KNOWN TO HAVE CAUSED THE INTERNAL DEPOSITION OF RADIOACTIVE MATERIAL SHALL BE REPORTED IMMEDIATELY TO HEALTH PHYSICS OFFICE WHO WILL IMMEDIATELY ARRANGE FOR THE TRANSPORTATION OF ANYONE SO INGESTING TO THE NEAREST MEDICAL CENTER CAPABLE OF HANDLING SUCH CASES. THE DIRECTOR OF HEALTH PHYSICS SHALL MAINTAIN AT ALL TIMES IN THE HEALTH PHYSICS OFFICE A LISTING OF SUCH MEDICAL CENTERS AVAILABLE FOR USE AFTER THOROUGHLY INVESTIGATING THE EXPERIENCE AND ABILITY OF SUCH CENTERS TO HANDLE CASES OF THIS NATURE.

XI RULES, REGULATIONS AND PROCEDURES

A. THE PROVISIONS OF THE PLANT SAFETY PRACTICES AND PROCEDURES PERTINENT TO RADIOLOGICAL SAFETY CONSTITUTE SUPPLEMENTAL HEALTH PHYSICS RULES REQUIRING COMPLIANCE BY ALL EMPLOYEES.

B. PROCEDURES ESTABLISHED BY HEALTH PHYSICS SHALL BE FOLLOWED BY ALL EMPLOYEES.

C. ALL PROVISIONS OF THE FOLLOWING FEDERAL, STATE AND LOCAL REGULATIONS ON RADIATION PROTECTION CONSTITUTE HEALTH PHYSICS RULES. SUPERVISION ARE EXPECTED TO KEEP THEMSELVES AND EMPLOYEES INFORMED OF THE APPLICABLE PORTIONS OF SUCH REGULATIONS.

1. ATOMIC ENERGY COMMISSION (AEC), CHAPTER 0530, "HEALTH AND SAFETY" APPLIES TO ALL AEC CONTRACT OPERATIONS.

2. CODE OF FEDERAL REGULATIONS, TITLE 10, PART 20, "STANDARDS FOR PROTECTION AGAINST RADIATION" APPLIES TO ALL AEC LICENSEE OPERATIONS.

3. CODE OF FEDERAL REGULATIONS, TITLE 49, PART 71 - 78, "EXPLOSIVES AND OTHER DANGEROUS ARTICLES" APPLIES TO THE SHIPMENT OF RADIOACTIVE MATERIALS FROM CMC INSTALLATIONS.

D. CMC SHALL CARRY WORKMEN'S COMPENSATION INSURANCE AND PREPARE ANY STATEMENTS REQUIRED BY ANY GOVERNING BODY HAVING JURISDICTION.

E. CMC SHALL CARRY PUBLIC LIABILITY INSURANCE COVERING ALL PHASES OF THE OPERATION (EXCEPTING THOSE AREAS COVERED BY INSURANCE OF ANY SUB-CONTRACTS..).

XII HEALTH PHYSICS PERSONNEL QUALIFICATIONS

A. DIRECTOR: SHALL BE RESPONSIBLE TO MANAGEMENT FOR EXECUTION, MAINTENANCE AND SUPPLEMENT OF ENTIRE HEALTH DIVISION. CONDUCTING SURVEYS, ROUTINE MONITORING, INCIDENT INSPECTIONS, MAINTENANCE OF MONITORING EQUIPMENT AND LABORATORY, TRAINING OF PERSONNEL IN HEALTH PHYSICS AND POSTING OF NOTICES, MAINTENANCE OF REQUIRED HEALTH RECORDS, ETC.

B. THE DIRECTOR SHALL HOLD A BACHELOR OF SCIENCE DEGREE IN ONE OF THE LIFE SCIENCES, OR EQUAL, SHALL HAVE HAD A MINIMUM OF FIVE YEARS EXPERIENCE IN INDUSTRIAL HEALTH AND OR SAFETY WORK OR EQUAL, AND SHALL HAVE HAD A MINIMUM OF TWO YEARS OF EXPERIENCE IN A PLANT HANDLING THIS TYPE OF MATERIAL AS A PRIME CONTRACTOR TO THE AEC OR EQUAL.

C. THE DIRECTOR SHALL BE RESPONSIBLE FOR THE DIRECT SUPERVISION OF HEALTH PHYSICS PERSONNEL IN PLANT AND LABORATORY DURING ALL SHIFTS FOR EVERY DAY THAT PLANT OPERATES.

D. THE DIRECTOR SHALL BE RESPONSIBLE FOR PASSING ON THE TRAINING AND EXPERIENCE QUALIFICATIONS OF ALL HEALTH PHYSICS PERSONNEL AND SHALL PREPARE WRITTEN REPORTS ON SUCH QUALIFICATIONS FOR PLANT MANAGER'S APPROVAL PRIOR TO HIRING OF ANY PERSONNEL.

PROCEDURE REFERENCES

(1)

1. SURVEY STOCKPILE TO DETERMINE RA LEVELS THROUGHOUT BY OBTAINING READINGS OVER ENTIRE SURFACE AND THE TAKING OF CORE SAMPLES AT THE 1/4, 1/2, 3/4 AND FULL DEPTH OF PILE. (THIS MAY BE OMITTED IF SUCH A SURVEY HAS BEEN MADE AND IS AVAILABLE FOR EVALUATION).

2. DRAG LINE TO BE USED IN ALL MOVING OF MATERIAL TO CONTINUOUS BELT OR BUCKET LOADING PIT. OPERATOR TO BE IN REMOTE POSITION WHERE RA LEVEL WILL BE MAINTAINED AT 2 1/2 MR OR LESS.

3. ALL TRUCK LOADS TO BE CONTINUOUSLY MONITORED DURING LOADING OPERATION. IF RADIATION LEVEL REACHES 4 MR/HR OUTSIDE THE TRUCK BODY OR INSIDE THE CAB PRIOR TO BEING LOADED TO MAXIMUM CAPACITY LOADING OF TRUCK WILL CEASE AND TRUCK WILL PROCEED WITH PARTIAL LOAD.

4. IF ANY AREAS OF UNEXPECTED HIGH CONCENTRATIONS ARE ENCOUNTERED PERSONNEL IN CHARGE OF LOADING OPERATION MAY PROCEED AS DESCRIBED IN (3) ABOVE OR LOAD INTO SPECIALLY SHIELDED CONTAINERS FOR TRANSPORTATION. RA LEVEL OUTSIDE CONTAINERS NOT TO EXCEED 4 MR/HR.

5. LOADING AREA AND TRUCKS SHALL BE POSTED AS A "RADIATION AREA" WITH SIGNS BEARING SYMBOL AND WORDS AS DESCRIBED IN TITLE 10 ATOMIC ENERGY PART 20. § 20.203.

(2)

1. DRAG LINE TO BE USED IN ALL MOVING OF MATERIAL TO CONTINUOUS BELT BUCKET LOADING PIT. OPERATOR TO BE IN REMOTE POSITION WHERE RA LEVEL WILL BE MAINTAINED AT 2 1/2 MR OR LESS.

2. LOADING AREA SHALL BE POSTED AS A "RADIATION AREA" WITH SIGNS BEARING SYMBOL AND WORDS AS DESCRIBED IN TITLE 10 ATOMIC ENERGY PART 20. § 20.203.

(3)

1. "HOLD-UP" TANK "A" 300 GAL. CAPACITY TO BE USED FOR CONTINUOUS COLLECTION OF ANY GASES THAT MIGHT BE EMITTED FROM COVERED AND VENTED TANKS IN AREAS 5, 6, 7, 8 AND 9. THIS ENCLOSED SYSTEM PREVENTS THE ESCAPE OF ANY DUSTS, FUMES, MISTS, VAPORS OR GASES INTO THE ATMOSPHERE ON PLANT AREA. IF ANY SUCH MATERIALS SHOULD COLLECT IN THE HOLD-UP TANK AND CREATE A RA CONDITION SUCH CONDITION WILL BE DETECTED AS THE RESULT OF WEEKLY MONITORING AND THE RA MATERIAL WILL BE DILUTED TO 2.5 MR OR LESS AND RETURNED TO PLANT FEED CYCLE AT AREA 4. (SEE TYPICAL CROSS SECTION "X-X".)

(4)

1. "HOLD-UP" TANK "B", 20,000 GAL. CAPACITY TO BE USED FOR EMERGENCY STORAGE IN CASE OF AN "INCIDENT" AT ANY AREA SHOWN ON SCHEMATICS PLAN SHEET 1, AT POINTS MARKED "B" TO TANK "B". ALL OF THESE POINTS WILL BE CONNECTED WITH A PUMPING SYSTEM THRU A PIPELINE TO/DUCT LIQUIDS OR SLURRYS TO HOLD-UP TANK WHERE THESE MATERIALS CAN BE MONITORED AND SAFELY STORED WHILE PRODUCTION SYSTEM IS EXAMINED TO DETERMINE AND CORRECT CAUSE OF INCIDENT. AFTER PRODUCTION SYSTEM IS REPAIRED OR READJUSTED AND UPSTREAM THE MATERIAL IN HOLD-UP TANK CAN BE DILUTED AND REDUCED 2.5 MR OR LESS AND RETURNED TO PLANT FEED CYCLE AT AREA 4. (SEE TYPICAL CROSS SECTION "X-X").

(5)

1. "HOLD-UP" TANK "C" OF 500 GAL. CAPACITY TO BE CONNECTED TO PERSONNEL DECONTAMINATION SHOWERS. RA LEVEL OF LIQUID IN TANK CAN THEN BE MONITORED AND IF NEEDED ANY DILUTED AND REDUCED TO 2.5 MR OR LESS AND RETURNED TO PLANT FEED CYCLE AT AREA 4.

2. PERSONNEL DECONTAMINATION SHOWERS SHALL BE PROVIDED AT THE HAZELWOOD PLANT AND THE AIRPORT SITE. TANK AT AIRPORT SITE TO LEACH INTO GROUND. ANY

PROCEDURE REFERENCES CONT'D.

PERSONNEL FOUND TO BE CONTAMINATED EXTERNALLY SHALL WASH IN A MANNER NOT TO SPREAD INITIALLY LOCALIZED MATERIAL OR ASSIST THE CONTAMINANT IN ENTERING THE BODY (EXCESSIVE SCRUBBING WHICH ABRAIDS THE SKIN). TURCO HAND CLEANER (TURCO PRODUCTS, INC., LOS ANGELES) WILL BE USED IN THE DECONTAMINATION WASHING OF THE BODY.

(6) 1. HEALTH PHYSICS PERSONNEL TO MAKE DAILY "SWIPE" TESTS AT STRATEGIC POINTS ON MACHINERY, FLOORS AND WALLS THROUGHOUT THE PLANT WHERE DESIGNATED BY HEALTH PHYSICS DEPARTMENT, TO DETERMINE IF ANY AREAS HAVE BEEN CONTAMINATED AS THE RESULT OF ANY AIR BORNE MATERIAL OR UNDILUTED LEAKS IN THE CLOSED PRODUCTION SYSTEM.

2. IF RESPIRATORS HAVE BEEN USED IN EITHER OF THE LOADING AREAS OR ANYWHERE ELSE IN THE PLANT AS THE RESULT OF ANY UNUSUAL OR EMERGENCY CONDITION, "NOSE SWIPES" SHALL BE TAKEN TO DETERMINE THE EFFECTIVENESS OF RESPIRATORY PROTECTION. ALL SWIPES TO BE MEASURED IN CMC LABORATORY.

(7) 1. 4 GENERAL AIR SAMPLING UNITS (STAPLEX) TO BE PLACED THROUGHOUT THE PLANT AT POINTS RECOMMENDED BY HEALTH PHYSICS. FILTER PAPERS TO BE EVALUATED IN CMC LABORATORY ONCE EVERY 8 HOURS.

2. GRAVITY VENTILATORS IN ROOF OF PLANT TO BE REPLACED WITH MECHANICAL VENTILATORS AND FITTED WITH 100% ABSOLUTE FILTERS.

(8) 1. ALL CONTAINERS IN WHICH RADIOACTIVE MATERIALS ARE SHIPPED OR STORED SHALL BE LABELED ACCORDING TO TITLE 10 - ATOMIC ENERGY - CHAPTER 1 - AEC PART 20 § 20.203.

(9) 1. LOCAL FIRE CODES TO BE OBSERVED IN PLANT CONSTRUCTION AND OPERATION.

(10) 1. ALL MATERIALS SELECTED FOR PROCESSING EQUIPMENT TO SAFELY CONTAIN CORROSIVE MATERIALS IN SYSTEM TO PREVENT LEAKAGE OR SPILLAGE.

(11) 1. PROCESSING AREA OF PLANT TO BE CONSPICUOUSLY POSTED AS A "RADIATION AREA".

(12) 1. PERSONNEL SHALL BE INSTRUCTED AND NOTICES TO EMPLOYEES POSTED AS PROVIDED FOR IN TITLE 10 CHAPTER I AEC PART 20 § 20.206.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

IN REPLY REFER TO
DLR:RLL
40-6811

SEP 25 1962

Contemporary Metals Corporation
~~1039 South San Gabriel Boulevard~~
~~San Gabriel, California~~
620 North Benton Way
Los Angeles 26, California

Attention: Mr. Clemons Roark
President

Gentlemen:

Enclosed is Source Material License No. SMB-654.

Please note that this license is scheduled to expire on January 1, 1964, and that the license authorizes the processing only of those residues at the stockpile site on Brown Road, Robertson, Missouri. If you intend to acquire, for processing, any other materials which require an AEC license, it will be necessary that you apply for an amendment to this license.

Further, this license requires you to conduct your radiological survey program in accordance with the procedures described in your application and supplements thereto. In addition to the procedures described in your application, the issuance of this license is based on the qualifications and experience of Mr. Alan R. Denning who your application specifies will be the Director of your radiation safety program and on the qualifications of the St. Louis Testing Laboratory for performing your quality control services as you specified in your application. If at any time the services of Mr. Denning or the St. Louis Testing Laboratory are not available, it will be necessary that you obtain AEC approval of other individuals or firms to perform these services through an amendment to this license.

In addition, your license requires that you submit to this office after the first three (3) months of operations, a report containing the results of the required radiological surveys. As specified, this report must be submitted no later than thirty (30) days after initial three (3) month operating period.

E/32

DLR:RLL
40-6811

SEP 25 1962

Contemporary Metals Corporation
1039 South San Gabriel Boulevard
San Gabriel, California

Attention: Mr. Clemens Roark
President

Gentlemen:

Enclosed is Source Material License No. SNB-554.

Please note that this license is scheduled to expire on January 1, 1964, and that the license authorizes the processing only of those residues at the stockpile site on Brown Road, Robertson, Missouri. If you intend to acquire, for processing, any other materials which require an AEC license, it will be necessary that you apply for an amendment to this license.

Further, this license requires you to conduct your radiological survey program in accordance with the procedures described in your application and supplements thereto. In addition to the procedures described in your application, the issuance of this license is based on the qualifications and experience of Mr. Alan R. Denning who your application specifies will be the Director of your radiation safety program and on the qualifications of the St. Louis Testing Laboratory for performing your quality control services as you specified in your application. If at any time the services of Mr. Denning or the St. Louis Testing Laboratory are not available, it will be necessary that you obtain AEC approval of other individuals or firms to perform these services through an amendment to this license.

In addition, your license requires that you submit to this office after the first three (3) months of operations, a report containing the results of the required radiological surveys. As specified, this report must be submitted no later than thirty (30) days after initial three (3) month operating period.

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Since your program will entail the processing of uranium and thorium bearing materials in the insoluble form as well as the soluble form, it will be necessary for you to determine compliance with the Commission's regulations concerning concentrations of radioactivity in restricted areas in accordance with the applicable notes of Appendix B, 10 CFR 20, copy enclosed.

In order for us to complete our records, we require two (2) additional copies of the plot plan of your facilities at Polson Lane, Hazelwood, Missouri, transmitted with your letter dated May 28, 1962.

Also, we require two (2) additional copies of your letter dated August 28, 1962, and the revised blueprint entitled, "Schematic Plan for Contemporary Metals Corporation, Residue Processing Plant", transmitted with this letter.

If you have any questions regarding your license, please communicate with us.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation

Enclosures:
1. SKB-634
2. 10 CFR 20 & 40

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DATE ▶	9/21/62	9/27/62				

Form AEC-

Form AEC-410
(1-61)

UNITED STATES
ATOMIC ENERGY COMMISSION

SOURCE MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954, and Title 10, Code of Federal Regulations, Chapter 1, Part 40, "Licensing of Source Material," and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, possess and import the source material designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission, now or hereafter in effect, including Title 10, Code of Federal Regulations, Chapter 1, Part 20, "Standards for Protection Against Radiation," and to any conditions specified below.

Licensee	3. License No. SMB-654, as renewed
1. Name Contemporary Metals Corporation	4. Expiration Date January 1, 1964
2. Address 1039 South San Gabriel Boulevard San Gabriel, California	5. Docket No. 40-6811

6. Source Material	7. Maximum quantity of source material which licensee may possess at any one time under this license
Uranium and thorium.	125,000 tons of residues presently stockpiled at Brown Road, Robertson, Missouri.

CONDITIONS

8. Authorized use (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)

For use in accordance with the procedures described in the licensee's application dated May 17, 1962, and supplements dated May 28, July 19 & 20, August 28 & 31, 1962. and December 6, 1963

9. Authorized places of use: Residue stockpile at Brown Road, Robertson, Missouri, and the licensee's processing facility at 7210 Polson Lane, Hazelwood, Missouri.

10. Process operations shall begin only at such time as the licensee has completed the installation of all equipment and facilities as described in the application and supplements thereto. However, removal and preparatory operations at the residue stockpile site may begin at such time as the equipment and facilities described in the application and supplements thereto for this operation have been completed.

8005140533 2pp

FORM AEC-374A
(12-57)

U. S. ATOMIC ENERGY COMMISSION

Page 2 of 2 Pages

SOURCE AND PRODUCT MATERIAL LICENSE

Supplementary Sheet

License Number SMB-654

11. Mr. Alan R. Denning shall serve as the Director of the radiological safety program described in the application and supplements thereto specified in Item 8 of this license.

12. The St. Louis Testing Laboratory shall perform the quality control services as described in the application and supplements thereto specified in Item 8 of this license.

13. The licensee shall submit after the first three (3) months of operations, a report containing the results of the required radiological surveys.

14. The licensee is hereby exempt from the requirements of Section 20.203(e)(2) and 20.203(f)(2), 10 CFR 20, for areas and containers within the plant, provided all entrances to the plant are conspicuously posted in accordance with Section 20.203(e)(2) and with the words, "Any area or container within this mill may contain radioactive material".

RAR 9/21/62
JH 9/24/62

For the U. S. Atomic Energy Commission

Date SEP 25 1962

by

Division of Licensing and Regulation
Washington 25, D. C.

OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

TO : Files

DATE: September 25, 1962

FROM : Robert L. Layfield, Source & Special Nuclear Materials Branch, Division of Licensing & Regulation

SUBJECT: PRE-LICENSING VISIT TO THE CONTEMPORARY METALS CORPORATION PROPOSED FACILITY AT HAZELWOOD, MISSOURI, AND RESIDUE STOCKPILES AT ROBERTSON, MISSOURI, DOCKET NO. 40-6811

The Contemporary Metals Corporation was awarded a contract by the AEC for the removal of uranium-bearing residues from stockpile areas at Robertson, Missouri. These residues were generated by the Commission at its Destrehan Street Plant, St. Louis, Missouri. The applicant intends to process these residues at its Hazelwood facility which is about three (3) miles from the stockpile site. Attempts will be made to extract the associated minerals and other recoverable by-products for resale (e.g. copper nickel and ~~coolant~~). There is an estimated 125,000 tons of these residues. The uranium content ranges from 0.05% to 0.62% plus traces of ionium (thorium-230). The average source material content will be approximately 0.2% by weight.

Facilities

Residue Stockpile - Robertson, Missouri

The residues have resulted from the processing of Belgian Congo pitchblende and domestic uranium ores from Colorado mining operations. The pitchblende raffinate consists entirely of residues dumped on the ground at the stockpile site. In addition to mounds of residues, the Colorado raffinate includes unleached barium sulfate cake and leached barium cake resulting from refinery operations, and miscellaneous residues stored in drums. These residues have been exposed to the elements for several years. The water content is estimated to be about 15 - 35%.

Processing Plant - Hazelwood, Missouri

The applicant has obtained approximately 6.6 acres of land situated in south St. Louis. This is an industrial zone. There is a large (35,000 square feet) steel and concrete factory building existing at this site. The applicants propose to adapt this building for their specific needs. The final facility will consist of a main processing area, chemistry laboratory, change room and office areas.

E/33

The process tanks will be of the wood stave type. These tanks will be enclosed and vented to an underground hold-up tank, Conveyance between processes will be accomplished via enclosed screw conveyors or pumps.

Scope of Operations

Residue Stockpile - Robertson, Missouri

The residues will be moved to the loading pit via lines and bull dozers. Enclosed bin, bottom dump type trucks will be loaded via automatic conveyor operation.

Remarks:

1. All personnel involved in these operations will be supplied with film badges and dosimeters for personnel monitoring.

2. Water spray equipment is available for adding water to operations with dry materials.

3. Air samples will be taken once during each eight hour shift. (Filter Queen or Staplex.)

4. Trucks will be washed prior to leaving the stockpile site enroute to the processing facility.

5. Water resulting from decontamination of trucks will be monitored for radioactivity prior to release from an existing settling pond.

Receipt at Process Plant - Hazelwood, Missouri

Upon arrival at the processing plant, the residues will be deposited within a fenced-in area.

These residues will be moved to the loading pits via drag lines and bull dozers. A continuous conveyor belt will supply the residues into a grizzly for classification and rejection of foreign materials (rocks, wood, etc.). Rejects will be taken to an on-site dump for storage. There will be no crushing or grinding.

Remarks:

The same procedures and precautions for personnel safety will be observed during these operations as those established in the initial loading operation. In addition, continuous monitoring of feed will be performed to detect abnormal radium content. Airborne radioactivity should be a minimum due to water content of residues.

Main Process

The feed material will be routed into one of two cycles for processing - the raffinate cycle or the barium sulfate cycle - depending on the nature of the respective feed materials.

Raffinate Cycle

The raffinate feed material undergoes an initial dissolution in an ammonia-water mixture. The resultant mixture will then be dumped into a drum filter. The residues from this filtration process will be pumped into an acid leach tank (all uranium should be in this residue), then transferred into the barium sulfate cycle for removal of the uranium.

The pregnant solution from the afore mentioned drum filter operation will be pumped through an acid leach tank into another drum filter. During this filtering operation, the thorium (ionium) and rare earths will be received. The filtrate from this operation should contain only trace quantities of radioactive materials. It is from this solution that the copper, nickel, cobalt are obtained. Also, the remaining solution will be sold as fertilizer.

Barium Sulfate Cycle

The barium sulfate feed material will be initially dissolved in an acid-water mixture. This solution will then be pumped into a drum filter. The barium ($BaSO_4$) will be separated as a solid for shipment to market. (Radium should accompany the $BaSO_4$.) A letter from St. Louis Operations Office indicated that their records showed about 17 grams of radium would be contained in the total 10,000 tons of barium material or about 2×10^{-3} u/gm. (Reference letter dated June 8, 1962, F. H. Belcher.)

The pregnant solution from this operation will be pumped into a hold-up tank prior to pumping into a NH_4OH mixture to precipitate the uranium which will be separated via a drum filter. (The uranium bearing slurry from the raffinate cycle enters the $BaSO_4$ cycle at this step in the process.) The residue from the filtering operation will contain the uranium as $UO_2(OH)_2$. The basic solution should be relatively free of radioactivity and will be sold as fertilizer.

Remarks:

1. All of these processes will be accomplished in closed tanks which will be vented to an underground hold-up tank. The applicant states that the condensate from this hold-up tank will be returned to the process. Thus, there should not be any gaseous effluent except as noted below on the $UO_2(OH)_2$ bagging operation.

2. Drum filters are the enclosed type.

3. The St. Louis Testing Laboratory of St. Louis (or equivalent laboratory) will perform all product quality control analyses for radioactivity content.

$UO_2(OH)_2$ Bagging Operation

This operation has been placed within a partitioned room. The $UO_2(OH)_2$ from the drum filter operation is fed into a semi-automatic bagging machine via an enclosed screw conveyor. Poly-ethylene bags in steel drums will be used to contain this material shipment. An operator is required to enter the room only to heat seal the bags.

Remarks:

1. This material will be relatively wet since there are not any drying processes preceeding the bagging operation.

2. A mechanical ventilator will be installed at the discharge end of the bagging machine. The effluent from this vent will pass through a filter before being discharged.

3. The effluent will be monitored via permanently mounted air filters. Filter paper will be analyzed each eight hour shift.

4. Ambient air in the plant will be continuously monitored for concentrations of airborne radioactivity. Staplex (or equivalent) will be used.

Shipment of Marketable Products

The St. Louis Testing Laboratory will test and certify the radioactive material content in all marketable products. The quality control limits appear conservative with respect to 0.05% source material.

General Health and Safety Procedures

There will be four general air sampling devices (Gast, Filter Queen or equivalent) continuously monitoring the air in the main process building. They will be situated at the geometric center of the four quadrants of the main building.

Concentrations of airborne radioactivity in the vacinity of the loading operations at the stockpile site and at the main plant will be measured once each eight hour shift. Gast, Filter Queen or equivalent air samplers shall be used.

Air samples shall be taken in the $UO_2(OH)_2$ bagging room once each eight hour shift. Staplex (or equivalent) samplers will be used.

Proportional counting system will be used to analyze air samples.

Smear Surveys

Surveys to determine the concentration of radioactive materials on the surfaces of floors and equipment shall be performed daily. The smear-type survey will be employed. Smear papers will be counted on a proportional counting system.

Gaseous Effluent Discharge

There will not be any gaseous effluent except from the $UO_2(OH)_2$ bagging operation. This effluent will be filtered and monitored continuously. The gases from the process tanks will be vented to an underground hold-up tank.

Liquid Effluent Discharge

All liquid process wastes will be collected and sold as fertilizer. Source material content must be less than 0.01% for transfer according to the applicant.

Protective Clothing and Equipment

All working personnel will be required to wear coveralls and safety shoes in the restricted area. P.C. clothing shall be maintained in separate lockers in change room.

Health and Safety Instructions

The applicants have submitted copies of written health and safety requirements and precautions. Personnel hybiene and good house-keeping are stressed.

Recommendations

The applicants have provided a fairly extensive health and safety program for the protection of the public health and to minimize danger to life or property. However, in view of the fact that the applicants do not have their facility or procedures established, I feel that the license should be issued with certain qualifications and the following conditions appended:

"The licensee shall not receive for processing, any material other than that presently stored at the stockpile site, Brown Road, Robertson, Missouri."

Further, the license should be so worded that the licensee must employee the St. Louis Testing Laboratory as their quality control laboratory and Mr. Denning as their Director of health and safety or the licensee must notify us of any changes in these services.

The licensee should be exempted from Section 20.203(e) and 20.203(f) "Labeling" provided that all plant entrances are properly labeled.

X COLLECT
X

SEP 2 8 1962

USAEC, GERMANTOWN, MARYLAND
DONALD A. NUSSBAUMER, CHIEF
SOURCE & SPECIAL NUCLEAR MATERIALS BRANCH
DIVISION OF LICENSING AND REGULATION

USAEC, WELDON SPRING, MISSOURI
ATTENTION: MR. FRED H. HELCHER, AREA MANAGER

SOURCE MATERIAL LICENSE NO. SMB-654 ISSUED EFFECTIVE SEPTEMBER 25, 1962 TO CONTEMPORARY METALS CORPORATION, SAN GABRIEL, CALIFORNIA. REFERENCE DLR:RLL DOCKET NO. 40-6811.

Distribution:
~~Formal~~
Doc. Rm.
Suppl.
Br. and Div. rfs
~~Compl.~~
RLLayfield, LR

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OFFICE ▶	RLLayfield:ral	LR	LR			
SURNAME ▶	Rm. C-171 FX: 3171	RLLayfield:rl	DNussbaumer			E 34
DATE ▶		9/28/62	9/28/62			

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-8

[redacted]

A: Clemons Hoard (Contemporary Metals) Reno, Nevada	DATE OF DOCUMENT Oct. 24, 1962	DATE RECEIVED 10-31-62	NO.: 9746
	LTR. X	MEMO:	REPORT:
	OTHER:		
I: Donald Nussbaumer Div. of Lic. & Reg.	ORIG.: X	CC:	OTHER:
	ACTION NECESSARY ☐ NO ACTION NECESSARY ☐	CONCURRENCE ☐ COMMENT ☐	DATE ANSWERED: BY:
CLASSIF.: U	POST OFFICE REG. NO:	FILE CODE: 40-6811	

DESCRIPTION: (Must Be Unclassified)

Ltr. enk. receipt of [redacted] lic. and advising us of the flow sheet developments, etc...

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer: w/file cy. & fold 1-compliance copy	10-16-62		
Longfield	10/24		

ENCLOSURES:

REMARKS: Mail Room Distribution: 1-[redacted] Copy

ACKNOWLEDGED

U. S. ATOMIC ENERGY COMMISSION MAIL CONTROL FORM FORM AEC-326 (8-60)

☆ U. S. Government Printing Office: 1962 - 637308

E/35

DOCKET NO. 40-6811

L&R File Copy

Hotel Riverside
Reno,Nevada

October 14,1962

Mr.Donald A.Nussbaumer,Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
U.S.Atomic Energy Commission
Washington 25,D.C.

Ref:DLR:RLL
40-6811

Dear Mr.Nussbaumer,

This is just to let you know how very much we appreciated the efforts made by you and Mr.Layfield in finally getting our license cleared for the St.Louis operation.

We have brought up-to-date our flow sheet to reflect the discussions which Mr.Layfield had with Mr.Loose,and I have submitted our full program to the investment group in New York for approval of our budget,so that we may get started by the required date. The only problem I see so far is that the St.Louis Steel Casting Co., owners of the building and site which we propose to buy,got discouraged over the long delay,and may have sold the entire property that we wanted. This would indeed be a sad development. But our original option time has long since expired,and I won't know til Monday whether or not my request for a wek's extension will be approved.I need that time to get to New York,close my deal there, and return to St.Louis. Here's hoping for the best,as the alternatives were nowhere near as desirable,and would of course require an amendment to the license.

Sincerely yours,

Clemons N.Roark,Pres.
CONTEMPORARY METALS CORP.

CC;J.Roy Owens,SecTreas.

Copy Supplied
Public Document Room
Div. of Compliance 10/16/62-RLL

RECEIVED
OCT 16 1962
Commission
OF REGULATION

DOCKETED
USAEC
Division of
Licensing & Regulation
OCT 16 1962
Docket Officer

CTLL

ACKNOWLEDGED

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mporary Metals Corp.
Gabriel, California

DATE OF DOCUMENT	DATE RECEIVED	NO.:
10-26-62	11-1-62	1016

LTR. x 4 encl. | MEMO: | REPORT: | OTHER:

O: D. Nussbaumer, Div. of IAE

ORIG.: x | CC: | OTHER:

ACTION NECESSARY ☐ | CONCURRENCE ☐ | DATE ANSWERED:
NO ACTION NECESSARY ☐ | COMMENT ☐ | BY:

CLASSIF.: | POST OFFICE REG.:

FILE CODE: 40-3811(suppl. only)

DESCRIPTION: (Must Be Unclassified)

Ltr. trans:

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer	11-1-62		
w/file cy. & folder			

ENCLOSURES: (2 cys. rec'd)

Cys. of an 8-31-62 memo fr Contemporary Metals to Layfield.

NOTE: Cys. of this 8-31-62 were rec'd 10-?-62 & cys. were reproduced for distribution.

REMARKS: Mail Room Distribution:

E/37

U. S. ATOMIC ENERGY COMMISSION MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U. S. Government Printing Office: 1962 - 637308

CONTEMPORARY
METALS
CORPORATION

1038 S SAN GABRIEL BLVD SAN.GABRIEL CALIF
PHONE ATLANTIC 61249

OCTOBER 28,1962

MR.DONALD A.NUSSBAUMER,CHIEF
SOURCE AND SPECIAL MATERIALS BRANCH
DIVISION OF LICENSING AND REGULATION
U.S.ATOMIC ENERGY COMMISSION
WASHINGTON 25,D.C.

DLR: RLL
40- 6811

DEAR MR.NUSSBAUMER,

I BELIEVE YOU REQUESTED TWO ADDITIONAL COPIES OF THE ENCLOSED MEMORANDUM FROM CONTEMPORARY METALS CORP. TO MR.LAYFIELD.

WE WILL SHORTLY BE UNDERWAY IN ST.LOUIS.

SINCERELY,

CLEMONS M.ROARK,PRES.
CONTEMPORARY METALS CORP.

PS: OUR NEW ADDRESS IS

SUITE 16A
16262 WHITTIER BLVD.
WHITTIER,CALIFORNIA

I WILL CONTINUE TO BE IN RENO, ROOM 402
HOTEL RIVERSIDE
RENO,NEVADA

8606120129 2pp

Distribution:
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Doc. Room
Formal
Suppl.
L&R reading
S&SNM reading
R. L. Layfield

DLR:RLL
40-6811

NOV 9 19

Contemporary Metals Corporation
Suite 16 A
16262 Whittier Boulevard
Whittier, California

Attention: Mr. Gene Loose
Vice President

Gentlemen:

This refers to your letter dated October 28, 1962, transmitting two additional copies of your letter dated August 31, 1962. However, our letter of September 25, 1962, requested two additional copies of your letter dated August 28, 1962, and two copies of the revised blueprint entitled, "Schematic Plan for Contemporary Metals Corporation, Residue Processing Plant", transmitted with your August 28 letter. Therefore, we still require this material to complete our records.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation

E/38

8609120411 2pp

OFFICE ▶	DL&R	DL&R				
SURNAME ▶	Layfield:bar RRR	DANussbaumer				
DATE ▶	11/9/62	11/9/62				

DLR:RLL
40-6811

NOV 9 1962

Contemporary Metals Corporation
Suite 16 A
16262 Whittier Boulevard
Whittier, California

Attention: Mr. Gene Loose
Vice President

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Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

NOV 27 1963

40-6811

Contemporary Metals Corporation
Suite 16A
16262 Whittier Blvd.
Whittier, California

Attention: Mr. Clemons M. Roark, President

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen:

Notice is given that Source Material License Number SMB-654 expires on January 2, 1964.

If you desire to continue your program using source material(s), an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. The application should be submitted using Form AEC-2, enclosed, in accordance with the instructions provided with the form. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Title 10, Code of Federal Regulations, Part 40, Section 40.43(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing source material without a valid license.

If you do not wish to renew your license, please complete the enclosed form "Certification of Status of Source Material Activities Under United States Atomic Energy Commission Source Material License Number SMB-654", and return it to this office.

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of an application for license renewal remains with the licensee.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing & Regulation

Enclosures:
10 CFR, 20 & 40
Form AEC-2
"Certification. . ."

E/39

8606160153 2pp

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

NOV 27 1963

40-6811

Contemporary Metals Corporation
Suite 16A
16262 Whittier Blvd.
Whittier, California

Attention: Mr. Clemons M. Roark, President

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen:

Notice is given that Source Material License Number SMB-654 expires on January 1, 1964.

If you desire to continue your program using source material(s), an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. The application should be submitted using Form AEC-2, enclosed, in accordance with the instructions provided with the form. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Title 10, Code of Federal Regulations, Part 40, Section 40.43(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing source material without a valid license.

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Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing & Regulation

DISTRIBUTION:
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Document Room
Div. of Compliance

Enclosures:
10 CFR, 20 & 40
Form AEC-2
"Certification. . ."

DICTATED .....
APPROVED DW 11/27/63

FROM: Contemporary Metals Co.
San Gabriel, Calif.

DATE OF DOCUMENT: 12-9-63

DATE RECEIVED: 12-11-63

NO.: 8090

LTR.: X

MEMO:

REPORT:

OTHER:

TO: D. Nussbaumer
DL&R

ORIG.: X

CC:

OTHER:

ACTION NECESSARY ☐ CONCURRENCE ☐ DATE ANSWERED:

NO ACTION NECESSARY ☐ COMMENT ☐ BY:

CLASSIF.: U

POST OFFICE REG. NO.:

FILE CODE: LC-6011

DESCRIPTION: (Must Be Unclassified)

Ltr. req. renewal of [illegible]-651.

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer w/file cy. & file 1-compliance cy.	12-12		

ENCLOSURES:

REMARKS: Mail Room Distribution:
1-PDR Copy

ACKNOWLEDGED

E/40

U.S. ATOMIC ENERGY COMMISSION MAIL CONTROL FORM FORM AEC-326S (8-60)

DOCKET NO. 40-6811

L&R File Copy

CONTEMPORARY
METALS
CORPORATION

1039 S SAN GABRIEL BLVD SAN GABRIEL CALIF
PHONE ATLANTIC 61249

Suite 201, 500 Plumas
Reno, Nevada

December 9, 1963

Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D.C.

Ref: 40-6811
SNB-654

Dear Mr. Nussbaumer,

Thank you for your letter of November 27, which has just reached me. (Please note my new address; apparently we failed to send it to you).

Yes we definitely are requesting a renewal of our license, and I have forwarded the forms and instructions to Mr. Gene Loose, our Vice President in Los Angeles, as he did most of the work in preparing the original application.

He will rush the application to you as quickly as possible.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corporation

cc: Gene Loose, 8606 Wonderland Ave.
Hollywood 46, Calif.

cc: F.H. Belcher, Area Manager
U.S. Atomic Energy Commission
St. Charles, Mo.

DOCKETED
USAEC
LICENSING & REGULATION
DEC 11 1963
DOCKET OFFICER

12/13/63 RFK

8606120149 2pp

DLR:RLL
40-6611

DEC 31 1963

Mr. Clemens M. Fenk
Suite 201, 500 Plumas
Reno, Nevada

Dear Mr. Fenk:

Enclosed is Source Material License No. SMB-654, as renewed. Please note that all conditions of this license remain the same.

In our letter dated November 9, 1962, we requested two additional copies of your letter dated August 28, 1962, and two copies of the revised blue print entitled "Schematic Plan for Contemporary Metals Corporation Residue Processing Plant," transmitted with this information and still need it in order to complete our records.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials
Branch
Division of Licensing and Regulation

Enclosure:
SMB-654, as ren

DISTRIBUTION:
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(Lic. only)

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SURNAME ▶	RLL:ed	DLR:elmer			
DATE ▶	12/31/63	12/31/63			

AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE

8005140560 1P

Form AEC-410
(1-61)

UNITED STATES
ATOMIC ENERGY COMMISSION

COPY

SOURCE MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954, and Title 10, Code of Federal Regulations, Chapter 1, Part 40, "Licensing of Source Material," and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, possess and import the source material designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission, now or hereafter in effect, including Title 10, Code of Federal Regulations, Chapter 1, Part 20, "Standards for Protection Against Radiation," and to any conditions specified below.

Licensee	3. License No.
1. Name Contemporary Metals Corporation	SMB- 654, as renewed
2. Address 1039 South San Gabriel Boulevard San Gabriel, California	4. Expiration Date January 1, 1965
	5. Docket No. 40-6811

6. Source Material	7. Maximum quantity of source material which licensee may possess at any one time under this license
Uranium and thorium.	125,000 tons of residues presently stockpiled at Brown Road, Robertson, Missouri.

CONDITIONS

8. Authorized use (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)
For use in accordance with the procedures described in the licensee's application dated May 17, 1962, and supplements dated May 28, July 19 & 20, August 28 & 31, 1962; and December 9, 1963.

9. Authorized places of use: Residue stockpile at Brown Road, Robertson, Missouri, and the licensee's processing facility at 7210 Polson Lane, Hazelwood, Missouri.

10. Process operations shall begin only at such time as the licensee has completed the installation of all equipment and facilities as described in the application and supplements thereto. However, removal and preparatory operations at the residue stockpile site may begin at such time as the equipment and facilities described in the application and supplements thereto for this operation have been completed.

8005140506 2RC

SOURCE

MATERIAL LICENSE

Supplementary Sheet

License Number SMB-654

11. Mr. Alan R. Denning shall serve as the Director of the radiological safety program described in the application and supplements thereto specified in Item 8 of this license.

12. The St. Louis Testing Laboratory shall perform the quality control services as described in the application and supplements thereto specified in Item 8 of this license.

13. The licensee shall submit after the first three (3) months of operations, a report containing the results of the required radiological surveys.

14. The licensee is hereby exempt from the requirements of Section 20.203 (e)(2) and 20.203 (f)(2), 10 CFR 20, for areas and containers within the plant, provided all entrances to the plant are conspicuously posted in accordance with Section 20.203(e)(2) and with the words, "Any area or container within this mill may contain radioactive material."

RRR 12/31/63

For the U. S. Atomic Energy Commission

DEC 31 1963

Date

by

Division of Licensing and Regulation
Washington 25, D. C.

L&R File Copy

INCOMING TELEGRAM

1964 JAN 1 AM 3 17

U.S. ATOMIC ENERGY COMM.
TWX UNIT

RECEIVED
JAN 1 1964
U. S. Atomic Energy Commission
Division of
Licensing & Regulation

313A EST JAN 1 64 OA036 LC006

72 NL PD LOS ANGELES CALIF 31

A NUSSBAUMER, CHIEF

RCE AND SPECIAL NUCLEAR MATERIALS BRANCH DIVISION OF LICENSING AND REGULATION UNITED STATES ATOMIC ENERGY COMMIS

ON WASHDC

YOUR REFERENCE: 40-6

11 SMB-554. SOURCE MATERIALS LICNSE FORM AEC-2 HAS BEEN EXECUTED AND MAILED TO YOUR GERMANTOWN OFF

CE. SUBJECT APPLICATION REMAINS THE SAME AS ORIGINAL APPLICATION WITH THE EXCEPTION OF QUESTION NUMBER ONE WHICH INDICATES THAT THE APPLICATION IF A REQUEST FOR RENEWAL

GENE LOOSE VICE PRESIDENT CONTEMPORARY METALS CORP 620 NORTH BENTON WAY LOS ANGELES CAL

DOCKETED
USAEC
LICENSING & REGULATION
JAN 1 - 1964
DOCKET OFFICER

40-6811 SMB-654 AEC-2 620.

Copy Supplied
Public Document Room
Div. of Compliance 1/2/64

8606120157 1P. INCOMING TELEGRAM

GOVERNMENT PRINTING OFFICE: 1964 — 725-6

FROM: Contemporary Metals Corp.
Berkely, Mo.

DATE OF DOCUMENT: 10-29-61 | DATE RECEIVED: 11-9-61 | OTM: 79

LTR: x | MEMO: | REPORT: | OTHER:

ORIG: | CC: 1

TO: F. R. Belcher, USAEC
cc to Nussbaumer

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF: U | POST OFFICE: | REG. NO.: | FILE CODE: 40-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. fm Contemporary to Belcher advising of their being ready to purchase the stockpile at 50 Brown Rd. in accord. w/terms under SMB-654.....

ENCLOSURES:

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer: w/file cy. & file 1-compliance cy.	11-10		

NUSSBAUMER:

PLEASE ADVISE AS TO WHETHER OR NOT FULL DISTRIBUTION IS TO BE MADE.

A. Cabell

REMARKS: Mail Room Distribution:
1-PDR Copy

U. S. ATOMIC ENERGY COMMISSION — MAIL CONTROL FORM — FORM AEC-326S (8-60)

E143

DOCKET NO. 40-6811

File Copy

P.O. Box 508
Berkeley, Mo.
63134

October 29, 1964

Mr. F.W. Belcher
Area Manager U.S. Atomic Energy Co.
P.O. Box 470
St. Charles, Missouri

Dear Mr. Belcher:

We are now ready to proceed immediately with the purchase of the residue stockpile at 50 Brown Rd. under our bid proposal for the price of $[illegible],000 cash, to post our $50,000 performance bond with the Commission, and to begin work forthwith under full compliance with the bid term and conditions and our Source Material License No. [illegible]-654.

Knowing of the Commission's desire to have the removal of the stockpile from the pavement site at the earliest possible date we have arranged for a schedule of freight cars with the Belart Railroad which will permit us to complete the movement in three hundred days. To accomplish this, however, we will need permission from the Commission to extend, at our expense, the present on-site railroad loading siding to accommodate more cars. The engineers for the Wabash Railroad have prepared a plan of the proposed extension which we will submit to you for approval as soon as we have received your revised "Notice to Proceed". We have made a firm purchase contract with the General Electric Company and the Harper Investment Company for the land, buildings, and equipment at 7210 Telgon Lane for the site of our processing plant, which will be installed and operated in full accordance with the safety and other conditions represented to the Commission in our original application for license.

Compl Copy 11/10/64-RPB

ACKNOWLEDGED

8606120163 3pp

the stockville payment
notice proceed will

olly yours,

Lemon in Board

ons M. Bank, Inc.
mporary Metals Corp.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:

DEC 9 1964

40-6811

Contemporary Metals Corporation
Suite 201, 500 Plumas
Reno, Nevada

Attention: Mr. Clemons M. Roark

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen:

Notice is given that Source Material License Number ~~SMB-654~~ expires on January 31, 1965.

If you desire to continue your program using source material(s), an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. The application should be submitted using Form AEC-2, enclosed, in accordance with the instructions provided with the form. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Title 10, Code of Federal Regulations, Part 40, Section 40.43(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing source material without a valid license.

If you do not wish to renew your license, please complete the enclosed form "Certification of Status of Source Material Activities under United States Atomic Energy Commission Source Material License Number SMB-654", and return it to this office.

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of an application for license renewal remains with the licensee.

DISTRIBUTION:
Doc. Room
Suppl.
Compliance
Enclosures:
10 CFR, 20 & 40
Form AEC-2
"Certification. . ."

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

DICTATED 12/7/64

APPROVED CRR 12/9/64

E/44

8006120167 1p.

40-5611

U. S. GOVERNMENT PRINTING OFFICE: 1964 — 0-739

FROM:	DATE OF DOCUMENT:	DATE RECEIVED:	NO.:
Contemporary Metals Corp. P. O. Box 5936 Berkeley, Mo. (Clemons M. Roark)	12-14-64	12-16-64	5653
TO:	LTR. X MEMO: REPORT: OTHER:		
Belcher of AEC, Missouri w/cc to D. Nussbaumer	ORIG.: 1 cc CC: OTHER:		
	ACTION NECESSARY ☐ NO ACTION NECESSARY ☐	CONCURRENCE ☐ COMMENT ☐	DATE ANSWERED: BY:
CLASSIF.: U POST OFFICE REG. NO.	FILE CODE: 40 —		

DESCRIPTION: (Must Be Unclassified)

Ltr. re release of funds and purchasing of GE plant as of 12-18-64.

REFERRED TO	DATE	RECEIVED BY	DATE
D. Nussbaumer	12-16		
Files	12/16		
No Action Required			
		Dempf, Clerk cordet	

ENCLOSURES:

REMARKS:

U. S. ATOMIC ENERGY COMMISSION **MAIL CONTROL FORM** FORM AEC-326S (8-60)

facilities, and initial administrative and engineering expenses. The balance will be in a second release when we are ready to install the equipment called for in our flow sheet, may be modified in any final recommendations of our technical staff as they complete the working drawings and specifications. Meanwhile we will have been moving the stockpile from 50 Brown Rd. to 7210 Nolson Lane with all possible speed.

As previously committed by us to you, we will agree that the 400 days under the final proceed order may start from November 6, 1964.

We will be purchasing the GE plant as of December 18, 1964.

Our key personnel will report for duty right after Christmas; I am happy to report that every man in the organization as represented will be available; so we should be able to make up some of our lost time. I know that it is of concern to the Commission that the stockpile material be moved from its present site as quickly as possible.

Thank you for your patience all these months. We intend to see that you do not regret it.

E/45

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corp.

5653

cc: Donald A. Nussbaumer

P.O. Box 5936
Berkeley, Mo.
63134

December 14, 1964

F.H. Belcher, Area Manager
U.S. Atomic Energy Commission
P.O. Box 470
St. Charles, Missouri

Dear Mr. Belcher:

I find that I shall have to return to New York one more time, after all, to close for the release of our funds. The three million dollar budget that we had apprpved has been slightly modified to provide for an initial release of $1,250,000 this week to pay for the stockpile, plant, loading facilities, and initial administrative and engineering expenses. The balance will be in a second release when we are ready to install the equipment called for in our flow sheet, may be modified in any final recommendations of our technical staff as they complete the working drawings and specifications. Meanwhile we will have been moving the stockpile from 50 Brown Rd. to 7210 Folson Lane with all possible speed.

As previously committed by us to you, we will agree that the 400 days under the final proceed order may start from November 6, 1964.

We will be purchasing the GE plant as of December 18, 1964.

Our key personnel will report for duty right after Christmas; I am happy to report that every man in the organization as represented will be available; so we should be able to make up some of our lost time. I know that it is of concern to the Commission that the stockpile material be moved from its present site as quickly as possible.

Thank you for your patience all these months. We intend to see that you do not regret it.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.

8606120172 248

cc: Donald A. Nussbaumer

5653

DML:KEL
40-6811

DEC 3 1 1964

Mr. Clemons M. Roark
7210 Polson Lane
P. O. Box 5936
Berkeley, Missouri

Dear Mr. Roark:

Enclosed is Source Material License No. SMB-654, as renewed.

Please note that all conditions of this license remain the same.

Very truly yours,

Robert L. Layfield
Source & Special Nuclear Materials Br.
Division of Materials Licensing

Enclosure:
SMB-654, as renewed

DISTRIBUTION:
Doc. Room
Compliance
State Health (lic. only)
N. Doulos, ML
Br. & Div. RFs
Suppl.

8606120180 1p.

E146

OFFICE ▶	DML	DML				
SURNAME ▶	KLauterbach:jb	RLayfield				
DATE ▶	12-31-64	12/31/64				

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-3

Form AEC—410
(1-61)

UNITED STATES
ATOMIC ENERGY COMMISSION

SOURCE MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954, and Title 10, Code of Federal Regulations, Chapter 1, Part 40, "Licensing of Source Material," and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, possess and import the source material designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission, now or hereafter in effect, including Title 10, Code of Federal Regulations, Chapter 1, Part 20, "Standards for Protection Against Radiation," and to any conditions specified below.

Licensee	
1. Name: Contemporary Metals Corporation 2. Address: 1039 South San Gabriel Boulevard, San Gabriel, California	3. License No.: SMB-654, as renewed 4. Expiration Date: January 31, 1966 5. Docket No.: 40-6811
6. Source Material: Uranium and thorium.	7. Maximum quantity of source material which licensee may possess at any one time under this license: 125,000 tons of residues presently stockpiled at Brown Road, Robertson, Missouri.

CONDITIONS

8. Authorized use (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)

For use in accordance with the procedures described in the licensee's application dated May 17, 1962, and supplements dated May 28, July 19 & 20, August 28 & 31, 1962, December 9, 1963 and December 24, 1964.

9. Authorized places of use: Residue stockpile at Brown Road, Robertson, Missouri, and the licensee's processing facility at 7210 Polson Lane, Hazelwood, Missouri.

10. Process operations shall begin only at such time as the licensee has completed the installation of all equipment and facilities as described in the application and supplements thereto. However, removal and preparatory operations at the residue stockpile site may begin at such time as the equipment and facilities described in the application and supplements thereto for this operation have been completed.

8601120191 4pp

SOURCE MATERIAL LICENSE

Supplementary Sheet

License Number SMB-654, as renewed

11. Mr. Alan R. Denning shall serve as the Director of the radiological safety program described in the application and supplements thereto specified in Item 8 of this license.

12. The St. Louis Testing Laboratory shall perform the quality control services as described in the application and supplements thereto specified in Item 8 of this license.

13. The licensee shall submit after the first three (3) months of operations, a report containing the results of the required radiological surveys.

14. The licensee is hereby exempt from the requirements of Section 20.203 (e)(2) and 20.203 (f)(2), 10 CFR 20, for areas and containers within the plant, provided all entrances to the plant are conspicuously posted in accordance with Section 20.203 (e)(2) and with the words, "Any area or container within this mill may contain radioactive material."

K.E.R. 12/31/64

RLL 12/31/64

For the U. S. Atomic Energy Commission

Robert L. Layfield

DEC 31 1964

U. S. GOVERNMENT PRINTING OFFICE: 1964 — 725-[illegible]

DOCKET NO. 40-6811

FROM	DATE OF DOCUMENT	DATE RECEIVED	NO.
~~CONTEMPORARY~~ CONTEMPORARY METALS CORP. BERKELEY, MO.	1-4-65	1-6-65	62

LTR.	MEMO.	REPORT	OTHER
X			

TO: D. NUSSBAUMER

ORIG.	CC	OTHER
X		

ACTION NECESSARY ☐	CONCURRENCE ☐	DATE ANSWERED
NO ACTION NECESSARY ☐	COMMENT ☐	BY

CLASSIF.: U — POST OFFICE — REG. NO.

FILE CODE: 40-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. advising of proceeding at once with the purchase of the plant at 7210 Polson Lane and the stockpile from AEC.

REFERRED TO	DATE	RECEIVED BY	DATE
D. NUSSBAUMER	1-7		
1 cy to file and file FOR ACTION			
1 cy to Compliance			

ENCLOSURES:
(1 cy of ltr.)

REMARKS:
MAIL ROOM DISTRIBUTION: 1 to PDR ROOM

62

U. S. ATOMIC ENERGY COMMISSION — MAIL CONTROL FORM — FORM AEC-326S (8-60)

request for license renewal.

We are proceeding at once with the purchase of the plant at 7210 Polson Lane and the stockpile from the AEC.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corp.

CMR/bh

Compliance copy 1/7/65 D. RRR

E/47

P.O. Box 5936
Berkeley, Mo.
63134

January 4, 1965

Mr.Donald Nussbaumer
United States
Atomic Energy Commission
Washington 25, D.C.

Docket No.: 40-6811

Dear Mr. Nussbaumer;

Thanks for the notice of December 29th regarding our request for license renewal.

We are proceeding at once with the purchase of the plant at 7210 Polson Lane and the stockpile from the AEC.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corp.

CMR./bh

Compliance copy D. RRR 1/7/65

8006120196 24

40-6811

3 Files

P.O. Box 5936
Berkeley, Mo.
63134

January 11, 1965

Mr. Robert L. Layfield
United States Atomic Energy Commission
Source & Special Nuclear Materials Br.
Division of Material Licensing
Washington,D.C. 20545

Dear Mr. Layfield:

This will acknowledge your letter of December 31, 1964, and the enclosed source material license No. SMB-654 as renewed.

We expect to be getting started on this work very shortly.

Thank you for your cooperation.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corp.

CMR/bh

cc; F.H. Belcher
Roy Owens

E/48

8606120149 lp

P.O. Box 5936
Berkeley, Missouri
63134

40-6811

March 26, 1965

Mr. F.H. Belcher
Area Manager
United States Atomic Energy Commission
P.O. Box 470
St. Charles, Missouri

Atten: Mr. John Green

Dear Mr. Belcher:

Confirming my phone conversation this morning with Mr. Green I'm pleased to report that we have almost completely complied with all of the conditions required for the release of the funds for our St. Louis stockpile project. It is true that we have continued to be delayed from time to time by factors beyond our control but, gradually each of the delays has been overcome.

We are having a M.A.I. appraisal report made by Mr. Tom McReynolds of Webster Grove, which is a necessary condition for establishing the relative value of land, buildings, and equipment at 7210 Polson Lane. We are also getting written conformation of our loading cost and freight charges, since these were last obtained several months ago.

I can therefore, in all honesty assure you and the Commission that we are indeed able to go ahead with the project and that we will make the payment of $126,500. and post our performance bond in the very near future.

Sincerely yours,

Clemons M. Roark

Clemons M. Roark, Pres.
Contemporary Metals Corp.

8606 120204 1p.

E/49

CMR/bh

cc: AEC Source Material Division
Russell, Ivison, Modell and Waldron Capital Corp.

OREGON PACIFIC INDUSTRIES
330 North M Street
Lakeview, Oregon

22 June 1965

Atomic Energy Commission
Sources & Special Nuclear Materials Br.
Division of Materials Licensing
Washington, D.C.

Attn: Robert L. Layfield
DML:KEL 40-6811

File Copy

Dear Sir:

Our auditors, Peat Marwick, Mitchell & Co., 70 Pine Street, New York, New York, 10005, are conducting an examination of our accounts and that of our affiliate, Contemporary Metals Corporation, and we shall be obliged, therefore, if you will confirm directly to them our license #SMB-654; DML:KEL 40-6811. Please furnish our auditors the details, conditions and/or limitations of this license.

A self addressed, air mail, special delivery, envelope is enclosed for your convenience.

Sincerely,

OREGON PACIFIC INDUSTRIES

Alan Baer
President

AB:s

DML:KEL
40-6811

JUL 19 1965

Peat, Marwick, Mitchell & Company
70 Pine Street
New York, New York 10005

Gentlemen:

As requested in the letter dated June 22, 1965 from Mr. [illegible]n Baer, President, Oregon Pacific Industries, this will confirm that Source Material License No. SMB-654, as renewed, was issued on December 31, 1964 to Contemporary Metals Corporation, 1039 South San Gabriel Boulevard, San Gabriel, California. For your information a copy of License No. SMB-654, as renewed, is enclosed. Please note that operations conducted under this license must be performed in accordance with documents referenced in the license.

Under separate cover we are enclosing copies of AEC Regulations 10 CFR 20 and 10 CFR 40 entitled "Standards for Protection Against Radiation" and "Licencing of Source Material", respectively. The regulations in Part 40 establish the procedures and criteria for the issuance of a source material license and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in Part 20 establish standards for protection against radiation hazards arising out of activities covered by licenses issued by the Commission.

Very truly yours,

DISTRIBUTION:
Suppl.
Doc. Room
Compl., Region I
Br. & Div. RFs

Robert L. Layfield
Source & Special Nuclear Materials Branch
Division of Materials Licensing

Enclosures:
As stated

8606120217 1P

E/S!

OFFICE ▶	DML	DML				

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:

DEC 8 1965

40-6811

Clemons M. Roark, President
CONTEMPORARY METALS CORP.
P. O. Box 5936
Berkeley, Missouri 63134

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen:

Notice is given that Source Material License Number SMB-654 expires on January 31, 1966.

If you desire to continue your program using source material(s), an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. The application should be submitted using Form AEC-2, enclosed, in accordance with the instructions provided with the form. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Title 10, Code of Federal Regulations, Part 40, Section 40.43(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing source material without a valid license.

If you do not wish to renew your license, please complete the enclosed form "Certification of Status of Source Material Activities under United States Atomic Energy Commission Source Material License Number SMB-654", and return it to this office.

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of an application for license renewal remains with the licensee.

DISTRIBUTION:
Suppl.
Document Rm.
Compliance, Reg.

Enclosures:
10 CFR, 20 & 40
Form AEC-2
"Certification . . ."

Very truly yours,

Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

E/ST

DICTATED 12/6/65

APPROVED

8606120231 1p

☆U.S. GOVERNMENT PRINTING OFFICE: 1961 — 725-805

40-6811

Contemporary Metals Corp.
Berkeley, Mo.

DATE OF DOCUMENT	DATE RECEIVED	NO.
12-24-65	12-27-65	4070

LTR.	MEMO.	REPORT:	OTHER:
x			

TO: P. Layfield

ORIG.: 1 CC: OTHER:

ACTION NECESSARY ☐	CONCURRENCE ☐	DATE ANSWERED:
NO ACTION NECESSARY ☐	COMMENT ☐	BY:

CLASSIF.: U POST OFFICE: REG. NO.:

FILE CODE: DOCKET: 40-6811

DESCRIPTION: (Must Be Unclassified)

Ltr. ref. lic. SNB-654 and hereby advising of their formation of a new corp., which will be called Continental Mining & Milling Co., etc....and trans:

ENCLOSURES:

(1 cy.)

Ltr. 12-24-65 fm Contemporary Metals to F. H. Belcher, Area Manager for AEC regarding the 50 Brown Road Residues Stockpile.....

REFERRED TO	DATE	RECEIVED BY	DATE
Nussbaumer: 12-29			
w/file cy.			
1-compliance cy.			

REMARKS:

Mail Room Distribution:
1-PDR Copy

ACRS BOSED

4070

U. S. ATOMIC ENERGY COMMISSION **MAIL CONTROL FORM** FORM AEC-326S (8-60)

The incorporation of the original Contemporary Metals Corporation and Lakeview Minerals, Inc. group, and those of the investing sponsors, under the same management and safety direction as was formed for the Contemporary Metals Corporation.

2. Mr. Ofsthun and I met this week with Mr. F. H. Belcher, Area Manager of the U.S. Atomic Energy Commission in Weldon Springs. There we reviewed with him the financial structure of the new company, its participation by the Contemporary Metals Corp. personnel, and the proposed change of site (which I discussed with you by phone from St. Louis two weeks ago). It was agreed that we would immediately submit a revised proposal to the AEC for stockpile acquisition and moving of the material to our site. This application, together with our check or letter of credit for $126,500, and our revised license application to your office, will be filed on or before December 30, 1965.

We have received the forms sent by Mr. Donald A. Nussbaumer and will file them this coming week.

Sincerely yours,

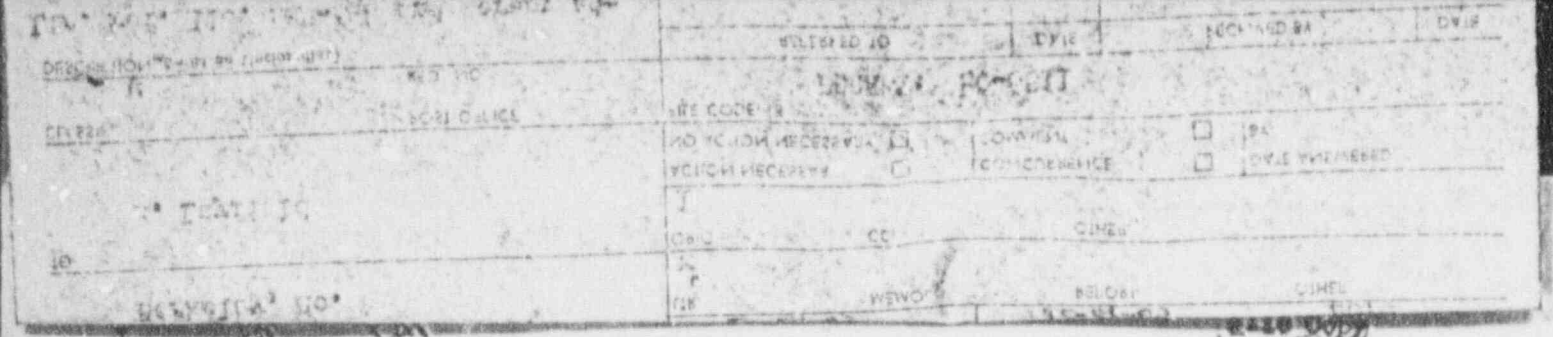
Clemens M. Roark, Director
Contemporary Metals Corp.
Continental Mining & Milling Co.

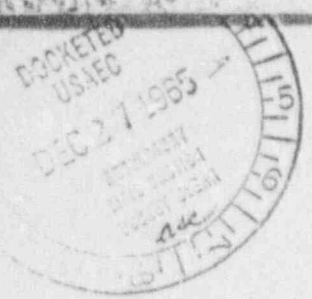
E/53

Copy Provided Compliance KRC 1/4/66

cc: Mr. F. H. Belcher
Mr. D. Glen Ofsthun

ACRS BOSED





CONTEMPORARY METALS CORPORATION
P.O.Box 5436
Berkeley,Mo.
63134

December 24,1965

Mr.Robert Layfield
Division of Materials Licensing
Source & Materials Special Nuclear Branch
U.S.Atomic Energy Commission
Washington,D.C. 20545

Re: License No. SMB -654

Dear Mr.Layfield,

Following the phone conversation held with you and our General Counsel,Mr.D.Glen Ofsthun, from New York City, we have taken the following steps:

1.We have initiated formation of our new corporation,which will be called Continental Mining & Milling Co., representing the interests ofthe original Contemporary Metals Corporation and Lakeview Minerals,Inc. group. and those of the investing sponsors,under the same management and safety direction as was formed for the Contemporary Metals Corporation.

2.Mr.Ofsthun and I met this week with Mr.F.H.Belcher,Area Manager of the U.S.Atomic Energy Commission in Weldon Springs. There we reviewed with him the financial structure of the new company,its participation by the Contemporary Metals Corp. personnel, and the proposed change of site (which I discussed with you by phone from St.Louis two weeks ago). It was agreed that we would immediately submit a revised proposal to the AEC for stockpile acquisition and moving of the material to our site. This application,together with our check or letter of credit for $126,500, and our revised license application to your office,will be filed on or before December 30,1965.

We have received the forms sent by Mr.Donald A. Nussbaumer and will file them this coming week.

Sincerely yours,

Clemons H.Roark,Director
Contemporary Metals Corp.
Continental Mining & Milling Co.

8606120234 24

cc:Mr.F.H.Belcher
Mr.D.Glen Ofsthun

GOVERNMENT PRINTING OFFICE: 1964 — 725-8

FROM: Contemporary Metals Corporation
Berkeley, Mo.

DATE OF DOCUMENT: 12/27/65 | DATE RECEIVED: 12/30/65 | NO: 4101

LTR: X | MEMO: | REPORT: | OTHER:

TO: Nussbaumer

ORIG: 1 | CC: 1 | OTHER:

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐ | CONCURRENCE ☐ | COMMENT ☐ | DATE ANSWERED: | BY:

CLASSIF: U | POST OFFICE: | REG. NO.: | FILE CODE: LO-6811

DESCRIPTION: (Must Be Unclassified)
Ltr. confirming telecon w/Mr. Layfield and hereby transmitting:

ENCLOSURES: (3 cys. rec'd)
AEC-2 dtd. 12-27-65 for renewal and amendment to SMB-654 in connection w/ XC residue stockpile project at 50 wn Road.....

REFERRED TO	DATE	RECEIVED BY	DATE
~~Nussbaumer~~ w/File cy. ~~1-compliance~~ cy.	1/3	(file already charged to your group)	

'bution:
cy.

ACKNOWLEDGED
4101

U. S. ATOMIC ENERGY COMMISSION **MAIL CONTROL FORM** FORM AEC-326S (8-60)

[illegible] 50 Brown Road, Hazelwood, Missouri.

We are also this week posting with the Area Manager at Weldon Springs an irrevocable letter of credit in the amount of $126,500.00 issued by The First National Bank of Chicago to cover the purchase price of the stockpile.

As soon as we have received our proceed order from the Atomic Energy Commission we plan to submit to your office an amendment providing for a new and closer location for our processing operation, as discussed with Mr. Layfield. Meanwhile, the renewal of our original license will be appreciated and will facilitate our ability to act promptly upon receipt of the AEC order to proceed.

Very truly yours,

Clemons M. Roark

Clemons M. Roark, Director
CONTEMPORARY METALS CORPORATION

Copy Provided Compliance KER 1/4/66

cc: Mr. F. H. Belcher

ACKNOWLEDGED

RECEIVED DEC 30 1965 U.S. ATOMIC ENERGY COMMISSION Region 3 Mail Section

E/54

CONTEMPORARY METALS CORPORATION
P O. Box 5936
Berkeley, Mo.
63134

December 27, 1965
from Chicago, Illinois

AIR MAIL

Mr. Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing
United States Atomic Energy Commission
Washington, D.C. 20545

Ref: 40-6811 File Copy
License No. SMB-654

Dear Mr. Nussbaumer:

Confirming my phone conversation today with Mr. Robert L. Layfield, of your office, we are enclosing herewith original and two copies of our application to renew the above license in connection with our AEC residues stockpile project at 50 Brown Road, Hazelwood, Missouri.

We are also this week posting with the Area Manager at Weldon Springs an irrevocable letter of credit in the amount of $126,500.00 issued by The First National Bank of Chicago to cover the purchase price of the stockpile.

As soon as we have received our proceed order from the Atomic Energy Commission we plan to submit to your office an amendment providing for a new and closer location for our processing operation, as discussed with Mr. Layfield. Meanwhile, the renewal of our original license will be appreciated and will facilitate our ability to act promptly upon receipt of the AEC order to proceed.

Very truly yours,

Clemons M. Roark

Clemons M. Roark, Director
CONTEMPORARY METALS CORPORATION

cc: Mr. F. H. Belcher