



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

January 17, 1996

LICENSEE MEETING NOTICE

Licensee: Dow Chemical Company
Midland, MI

Docket No.: 040-00017

License No.: STB-00527

Date and Time: Wednesday, February 7, 1996
10:00 a.m. (CST)

Location: U. S. Nuclear Regulatory Commission
Region III Office
801 Warrenville Road
Lisle, IL 60532

Purpose of Meeting: Presentation by Dow Chemical Company on Proposed
Magnesium and Thorium Remedial Project and Discussion
on Dow Chemical Company's License Amendment

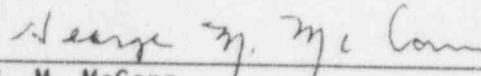
NRC Attendees:

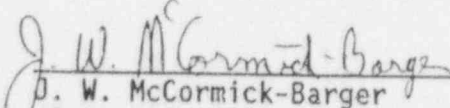
J. W. McCormick-Barger, Chief, Decommissioning Branch, DNMS
G. M. McCann, Senior Radiation Specialist, Decommissioning Branch, DNMS
J. Parrott, NMSS
Others as Designated

Other Attendees:

H. Schoen, Environmental Manager, Dow Chemical Company
R. Berlin, Consultant, Dow Chemical Company
K. Baker, RSO, Dow Chemical Company
L. Giebel, Project Manager, Dow Chemical Company
Others as Designated

Contact:


G. M. McCann
(708) 829-9856


J. W. McCormick-Barger
(708) 829-9872

DOW CHEMICAL / U. S. NRC MEETING

FEBRUARY 7, 1996

AGENDA

10:00 - 10:15	Introduction & Opening Remarks
10:15 - 11:30	Dow Briefing on Thorium Pile Remediation Project
11:30 - 12:30	Lunch
12:30 - 3:00	NRC and Dow Staff Discussion Regarding Comments on Dow's Remediation Plans

B/S

DOW CHEMICAL/NRC MEETING

FEBRUARY 7, 1996

REGION III

ATTENDEES

[illegible]

[illegible]

THE DOW CHEMICAL COMPANY

**THORIUM DECOMMISSIONING AT
BAY CITY & MIDLAND SITES**

NRC REGION III OVERVIEW

FEBRUARY 7, 1996

L. GIEBELHAUS

H. SCHOEN

B. BERLIN (DAMES & MOORE)

LPG 2/96

MATERIAL CHARACTERIZATION

- A MAGNESIUM SLAG CONTAMINATED WITH ~0.5-2% RESIDUAL THORIUM, MIXED WITH SAND, SOIL, SOME CONSTRUCTION DEBRIS (ROCKS, WOOD)
- RESIDUALS FROM DOW'S FOUNDRY PRODUCTION OF MAGNESIUM-THORIUM ALLOY IN 1940-1970 FOR ENGINE AND STRUCTURAL COMPONENTS FOR THE AIRCRAFT INDUSTRY
- ~12,000 CU. YDS. AT DOW'S MIDLAND, MI SITE, AND ~48,000 CU. YDS. AT DOW'S BAY CITY, MI "DOWBRANDS®" SITE
- STORED UNDER N.R.C. LICENSE STB-527 GRANTED IN 1973; LICENSE EXPIRED IN 1978 BUT REMAINS IN EFFECT UNDER TIMELY RENEWAL
- THORIUM CONCENTRATION:
 - 2 - 7,000 pCi/g AT BAY CITY
 - 2 - 2,000 pCi/g AT MIDLAND
 - APPROX. 9.7 Ci TOTAL Th-232
 - THRU-OUT 60,000 YDS. OF MAT'L
- MATERIAL IS LISTED IN N.R.C.'s S.D.M.P. PROGRAM

PROJECT IMPLEMENTATION

- \$19,000,000 PROJECT AUTHORIZED BY THE DOW CHEMICAL CO.

- GOALS:
 - 1) TOTAL COMPLETION IN 1996 (SCHEDULE ATTACHED)
 - 2) RELEASE SITES FOR UNRESTRICTED WORK;
TERMINATE STB-527 LICENSE

- PLANS:
 - 1) SET-UP BAY CITY FIELD OFFICES/LAB - FEBRUARY (SEE SKETCH)
 - 2) MOVE BAY CITY LOWLANDS MAT'L TO MAIN PILE - FEBRUARY THRU MAY (SEE SKETCH)
 - 3) TRUCK (~480 LOADS) MIDLAND MATERIAL TO BAY CITY - FEBRUARY THRU JULY
 - 4) SHIP RAILCARS (~600 LOADS) TO ENVIROCARE, INC. - MAY THRU OCTOBER

PROJECT STATUS

- 1) PROJECT ANNOUNCED TO MEDIA, NOVEMBER, 1995
- 2) PROJECT AUTHORIZED AT DOW, DECEMBER, 1995
- 3) CONTRACT WITH ENVIROCARE INC., DECEMBER, 1995
- 4) STATE WETLANDS/FLOODPLAN PERMIT OBTAINED,
JANUARY, 1996

FEDERAL WETLANDS PERMIT OBTAINED, JANUARY, 1996

- 5) MEETINGS WITH LOCAL FIRE RESCUE, MEDICAL SERVICES
ON EMERGENCY PROCEDURES, JANUARY, 1996
- 6) RADIAN UNDER CONTRACT AS "PRIME CONTRACTOR" OF
ALL EARTH WORK, JANUARY, 1996
- 7) SECURING RAIL TRANSPORTATION CONTRACT, JANUARY,
1996
- 8) ENVIRONMENTAL RESTORATION GROUP (KEN BAKER)
UNDER CONTRACT TO DOW TO PROVIDE RADIOLOGICAL
SAFETY OVERSIGHT AND TRAINING FOR FIELD
OPERATIONS, NOVEMBER, 1995
- 9) DAMES & MOORE UNDER CONTRACT TO DOW TO PROVIDE
CONSULTING SERVICES FOR HEALTH AND SAFETY PLAN,
DECOMMISSIONING PLAN, FINAL STATUS SURVEY, ETC.,
NOVEMBER, 1995

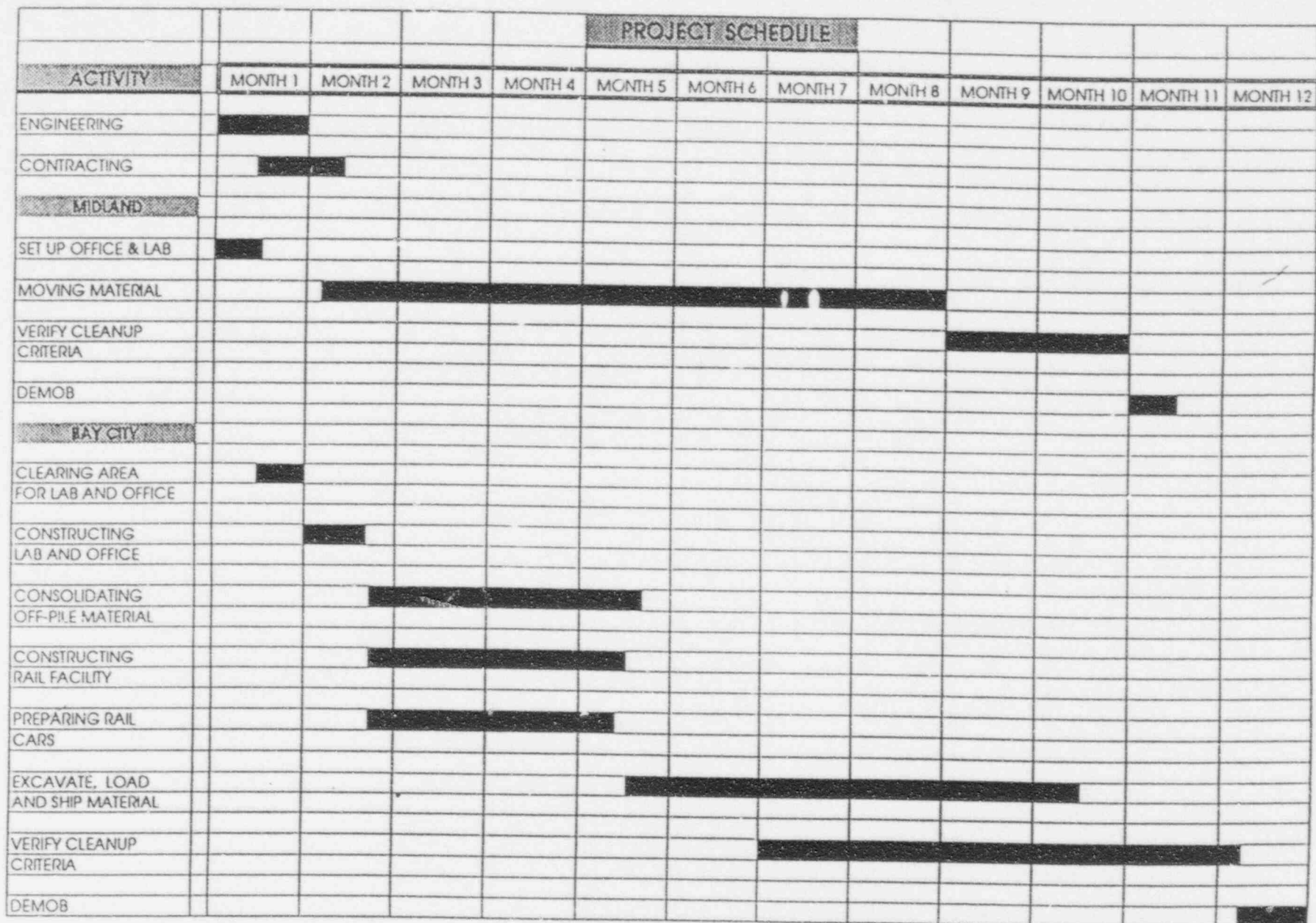
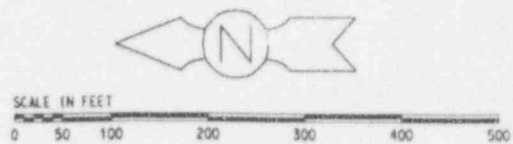
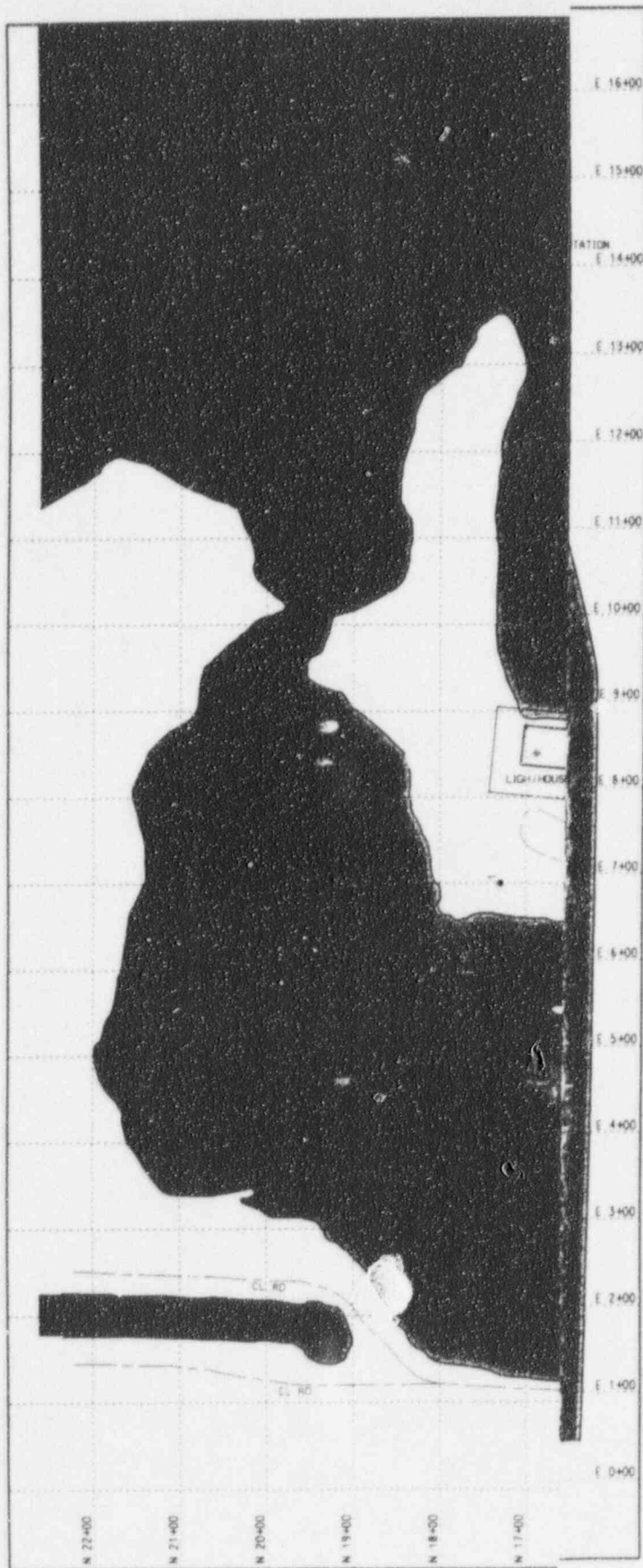


FIGURE 2-3



NOTES:

1. COORDINATE GRID SHOWN IS A LOCAL SITE GRID.

FILE: d:\alg\19012000\19012000.dgn DATE: 30 Jan 96 13:52

REV	REVISION	BY	CHK	APP	DATE	THE DOW CHEMICAL COMPANY			
						<p>Bay City</p> <p>SKETCH OF PROPOSED WORKING SITE</p>			
CHANGE NUMBER		SCALE		NOTED		82-0018-907800		REV	
907800		NOTED						0	
						PRINTED			

DOW CHEMICAL - MICHIGAN DIVISION
MAY 8, 1996

MIKE McCANN,

ATTACHED IS A COPY OF THE CORPORATE SELF-GUARANTEE PACKAGE THAT WAS TURNED IN FOR CERTIFICATION OF FINANCIAL ASSURANCE. SORRY FOR THE DELAY IN GETTING THIS OUT TO YOU. I WAS LOOKING FOR A FULL COPY OF THE ANNUAL REPORT AND THE FORM 10-K, BUT WASN'T CONVENIENT TO FIND, SO JUST ATTACHED A COPY OF THE FRONT PAGES THAT I HAD MADE EARLIER. LET ME KNOW IF YOU REALLY WOULD LIKE THE FULL REPORTS, AND I'LL PURSUE FURTHER.

HOPE THINGS ARE GOING WELL FOR YOU, AND LOOK FORWARD TO YOU VISITING/INSPECTING THE PROJECT SITE(S) SOON.

I'M SURE JACK HAS KEPT YOU ABREAST OF SOME OF THE ADMINISTRATIVE HURDLES WE ARE WORKING OUT. LIKE WE OFFERED JACK, LET ME KNOW IF BOB BERLIN OR MYSELF CAN DO ANYTHING WHATSOEVER TO ASSIST IN GETTING THE PROPER PRIORITY ON THE LICENSE AMENDMENT(S), OR GIVE YOU SUPPORT BY TALKING TO YOUR MANAGEMENT, SO THIS PROJECT IS NOT HELD UP. CONSTRUCTION IS PROGRESSING FAST, AND WE HAVE BUILT UP A TEAM OF 40-50 PEOPLE, AND ANY SIGNIFICANT DELAYS ARE GOING TO BE VERY DISRUPTIVE AND EXPENSIVE. I UNDERSTAND YOU AND JACK ARE GETTING TOGETHER NEXT WEEK TO WORK ON THIS.

RESPECTFULLY,

LARRY GIEBELHAUS

B/7

MAY 09 1996
MAY 02 1996



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 19, 1996

MEMORANDUM TO: Jack Parrott
Reactor Decommissioning Section
Low-Level Waste and Decommissioning
Projects Branch

FROM: Louis M. Bykoski *Louis M. Bykoski*
Materials Decommissioning Section
Low-Level Waste and Decommissioning
Projects Branch
Division of Waste Management, NMSS

SUBJECT: THE OFFICE OF THE GENERAL COUNSEL AND CONTRACTOR COMMENTS ON
NON-STANDARD FINANCIAL ASSURANCE SUBMITTAL

Our contractor, ICF Incorporated, and the Office of the General Counsel (OGC) have reviewed and provided comments on the Dow Chemical nonstandard financial assurance submittals sent to us for review.

The ICF comments are presented in two parts. The first part deals with specific recommendations to current deficiencies. The second part (Other Issues) provides a discussion of changes to the standard wording that are acceptable and are not considered to be deficiencies. The OGC comments may include additional deficiencies that need to be corrected by the licensee and comments for our internal use.

You should carefully review all the comments before preparing the deficiency letter. We have enclosed both the ICF and OGC comments to assist you in your review.

Attachments: As stated

CONTACT: Louis M. Bykoski, NMSS/DWM
415-6754
Stephen Lewis, OGC
415-1684

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B/E

LIST OF INSTRUCTIONS

Dow Chemical

In reviewing the comments the reviewer will note that there will be some overlap between ICF and OGC comments. The following comments should be included in the basis for the deficiency letter:

1. ICF comments 1 through 8 plus last paragraph.
2. All OGC comments.

All other comments and discussions are for reviewer information.



CONSULTING GROUP

ICF Incorporated
9300 Lee Highway
Fairfax, VA 22031-1207
703/934-3000 Fax 703-934-9740

May 28, 1996

To: Dr. Lou Bykoski, NMSS NRC

From: Mohammad Iqbal, Matt Borick, and John Collier, ICF Incorporated

Subject: Review of Decommissioning Funding Plan and Self-Guarantee/Financial Test Submitted by Dow Chemical Company

The Dow Chemical Company in Midland, Michigan, submitted a revised decommissioning cost estimate, along with a self-guarantee/financial test and supporting documentation.¹ The submission addresses financial assurance for decommissioning costs totalling \$20,655,000 for three licenses. The total decommissioning cost estimate of \$18,830,000 addresses only license STB-527 issued under 10 CFR Part 40. License 21-00265-06, issued under 10 CFR Part 30, is assured for \$825,000, which is equal to the sum of two certification amounts (\$750,000 for unsealed isotopes plus \$75,000 for sealed sources).² License R-108, which appears to have been issued under 10 CFR Part 50 (see Other Issue a), is assured for \$1,000,000.

Upon review of the submission, ICF recommends that NRC require the licensee to modify the submission in the following ways:

- (1) Submit additional detail to support the cost estimate (Regulatory Guide 3.66, Appendix F);
- (2) Revise or justify the salaries used in the cost estimate (NUREG/CR-1754, Addendum 1);
- (3) Describe the means to be used for adjusting cost estimates and associated funding levels over the life of the facility (10 CFR 40.36(d));
- (4) Clarify that no credit was taken for salvage value (Regulatory Guide 3.66, page 1-10);
- (5) If the cost estimate increases, increase the coverage provided by the self-guarantee (10 CFR 40.36);
- (6) Revise the CFO letter and self-guarantee to reference all applicable NRC regulations;

¹ ICF reviewed two previous submissions from the licensee and reported recommendations to NRC in memoranda dated November 6, 1990, and June 25, 1992.

² ICF assumes that NRC has verified that the certification amounts are accurate under 10 CFR 30.35. •

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- 2
- (7) Revise the CFO letter to address the self-guarantee financial test, (10 CFR Part 30, Appendix C); and
 - (8) Demonstrate the self-guarantor's ability to pass the financial test for all relevant costs (10 CFR Part 30, Appendix C).

These recommendations and other issues are discussed below.

X (1) **Submit Additional Detail to Support the Cost Estimate (Regulatory Guide 3.66, Appendix F)**

The four-page decommissioning cost estimate submitted by the licensee identifies cost subtotals for preparing documentation for regulatory agencies, submitting a decommissioning plan to NRC, developing work plans, procuring special equipment, training staff, characterizing facility radiation, decontaminating and excavating the site, purchasing equipment and supplies, and packaging and disposing of radioactive waste.³ The cost estimate does not include sufficient detail, however, to allow an adequate evaluation of these subtotals or of the total cost estimate. In particular, the submission does not include the following information:

- Descriptions of the facility, the activities that occur at the facility, and the levels of contamination that may be present;
- The number and dimensions of the laboratory and facility components, if any, (e.g., fume hoods, glove boxes, laboratory benches, ductwork) that need to be decontaminated;
- Description and dimensions of areas with contaminated soils; and
- A description of planned activities to restore contaminated areas on facility grounds.

To allow for an adequate evaluation of the estimated decommissioning costs, ICF recommend- that NRC require the licensee to revise its cost estimate to include the information listed above and to increase the level of detail, especially for decontamination and dismantling activities, to be consistent with the cost estimating tables in Appendix F of NRC's *Regulatory Guide 3.66 "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72,"* June 1990.

³ ICF assumes that the licensee will not need to perform long-term surveillance to properly decommission its facility because the licensee does not identify the need to conduct such activities in its decommissioning funding plan.

- (2) Revise or Justify the Salaries Used in the Cost Estimate (NUREG/CR-1754, Addendum 1)

The decommissioning cost estimate is based on salaries (including overhead of 38 percent) that appear low relative to those in Appendix D of NUREG/CR-1754, Addendum 1:⁴

	<u>Submitted Salaries</u>	<u>Salaries from NUREG/CR-1754⁵</u>
Technician	\$41,400	\$53,200
Laborer	\$37,300	\$53,200
Clerical	\$24,800	\$41,500

Using the salaries from NUREG/CR-1754, which include overhead of 50 percent, ICF estimates that total decommissioning costs would increase by nearly \$260,000. Thus, the decommissioning cost estimate may be substantially low. ICF recommends that NRC require the licensee to revise the salaries used in the cost estimate or provide justification for the salaries used (including the source of the data and whether the rates reflect licensee staff, including overhead, or contractor staff, including contractor profit).

- X (3) Describe the Means to be Used for Adjusting Cost Estimates and Associated Funding Levels Over the Life of the Facility (10 CFR 40.36(d))

10 CFR 40.36(d) requires licensees to describe the means they will use to adjust decommissioning cost estimates and associated funding levels over the lives of their facilities. The licensee does not provide such a description in its decommissioning funding plan. ICF recommends that the licensee use the method described in Regulatory Guide 3.66 for adjusting cost estimates. Regulatory Guide 3.66 suggests that cost estimates be updated with current prices for goods and services at the time of license renewal or when the amounts/types of material at the facility change. Adjustments should be made to account for inflation, for other changes in prices of goods and services, for changes in facility conditions, and for changes in expected decommissioning procedures.

⁴ NUREG/CR-1754, Addendum 1, Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities: Compendium of Current Information, Pacific Northwest Laboratory, October 1989.

⁵ Adjusted annual salaries for owner/operator's staff from NUREG/CR-1754, Addendum 1, Table D.1. Salaries have been adjusted from 1988 dollars to 1995 dollars using an inflation adjustment factor of approximately 1.25 (107.5/86.1, based on GDP implicit price deflators as reported in *Economic Indicators*, March 1996).

- 4
- (4) Clarify that No Credit Was Taken for Salvage Value (*Regulatory Guide 3.66, page 1-10*)

The cost estimate submitted by the licensee does not state whether credit has been taken for any salvage value that may be realized with the sale of potential assets during decommissioning. If estimated credits are taken for salvage value but are not fully realized at the time of decommissioning, the cost estimate may be significantly low. To ensure the adequacy of the cost estimate, *Regulatory Guide 3.66, page 1-10*, states that cost estimates should not incorporate any credit for salvage value. ICF recommends that NRC require the licensee to clarify that it has not included in its cost estimate credit for any salvage value that may be realized with the sale of potential assets at the time of decommissioning.

- (5) If the Cost Estimate Increases, Increase the Coverage Provided by the Self-Guarantee (10 CFR 40.36)

10 CFR 40.36 requires licensees to obtain financial assurance for the full cost of decommissioning their facilities. Although the submitted self-guarantee provides adequate financial assurance for the full amount of the licensee's current decommissioning cost estimate, the issues raised above (i.e., in Recommendations 1 through 4) suggest that the current cost estimate may be significantly low. Therefore, to ensure that the amount of financial assurance provided is adequate, ICF recommends that NRC require the licensee to increase the financial assurance coverage provided if the cost estimate increases.

- (6) Revise the CFO Letter and Self-Guarantee to Reference All Applicable NRC Regulations

The chief financial officer (CFO) letter and self-guarantee agreement submitted by the licensee each state that the self-guarantee is intended to provide financial assurance pursuant to 10 CFR Part 30. However, of the three licenses covered by the self-guarantee, only license 21-00265-06 was issued under 10 CFR Part 30. License STB-527 was issued under 10 CFR Part 40, and license R-108 appears to have been issued under 10 CFR Part 50. To clarify NRC's authority to draw on the guarantee pursuant to 10 CFR Parts 40 and 50, ICF recommends that NRC require the licensee to revise the CFO letter and the self-guarantee to reference all applicable NRC regulations. Specifically, the licensee should modify the guarantee so that it is issued pursuant to 10 CFR Parts 30, 40, and 50.

- (7) Revise the CFO Letter to Address the Self-Guarantee Financial Test (10 CFR Part 30, Appendix C)

Section II of Appendix C to 10 CFR Part 30 lists the financial test provisions for self-guarantees, including the specific financial test criteria that must be met by all licensees using the self-guarantee mechanism. Recital 3 of the submitted self-guarantee agreement appropriately states that the licensee must comply with these provisions (see Other Issue c). The financial test demonstration submitted with the CFO letter, however, demonstrates that

the licensee passes the less restrictive financial test for parent guarantees found in Appendix A to 10 CFR Part 30, rather than the self-guarantee test found in Appendix C. Although the financial test for parent guarantees is similar to the test for self-guarantees in several respects, the self-guarantee test is more restrictive in several ways:

- Tangible net worth must be at least 10 times the total current decommissioning cost estimate or certification amount (as opposed to six times in the parent guarantee test).
- If less than 90 percent of the company's total assets are located in the United States, assets in the United States must be at least 10 times the total current decommissioning cost estimate or certification amount (as opposed to six times in the parent guarantee test).
- The company's most recent bond issuance must be rated A or better by Standard and Poor's (S&P) or Moody's (as opposed to BBB by S&P or Baa by Moody's in the parent guarantee test).
- The company must have at least one class of equity securities registered under the Securities and Exchange Act of 1934. (The parent guarantee test has no similar requirement.)

ICF's independent analysis indicates that, at the present time, the licensee is likely to pass the financial test required for self-guarantees. However, because the licensee documented compliance with the wrong financial test this year, it could easily do so again in the future, even in years when it is unable to pass the more difficult self-guarantee test. This possibility could lead to a total lack of financial assurance for any of the three licenses. To ensure that the licensee remains in compliance with NRC's requirements for self-guarantees, ICF recommends that NRC require the licensee to revise the CFO letter to demonstrate its ability to pass the financial test from Section II of Appendix C to 10 CFR Part 30.

(8) Demonstrate the Self-Guarantor's Ability to Pass the Financial Test for All Relevant Costs (10 CFR Part 30, Appendix C)

Appendix C to 10 CFR Part 30 requires self-guarantors to pass the financial test for costs of "all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent guarantor" (emphasis added). The CFO letter submitted by the licensee indicates that the self-guarantee covers decommissioning costs for "facilities owned by Dow" (emphasis added). As a result, the submitted CFO letter and guarantee certify that the company passes the financial test only for the decommissioning costs covered by the self-guarantee, and not for the sum of all decommissioning costs being guaranteed by the company, including costs (if any) being guaranteed (1) for subsidiary companies through the use of parent company guarantees or (2) for facilities operated (but not owned) by the company.

Because the financial test becomes more difficult to pass as the costs covered by the test increase, failure to include all guaranteed costs in the test calculations could (1) make it appear that a company passes the test when it really does not, and (2) allow a company to double count the same limited financial strength to pass separate financial tests (e.g., one for costs covered by a self-guarantee, and one for costs covered by a parent company guarantee). To ensure that the licensee has sufficient financial strength to pass the test for all decommissioning costs being guaranteed, ICF recommends that NRC require the licensee to revise its submission to cover all decommissioning costs being guaranteed by the company, including those covered by parent company guarantees.

Other Issues

In addition to the issues raised above, the following issues are noteworthy:

- (a) A previous submission from the licensee included a November 11, 1991, letter from the licensee to NRC indicating that license R-108 was issued under 10 CFR Part 50. Although Part 50 licensees are required to decommission their facilities, the decommissioning requirements applicable to Part 50 licensees (including financial assurance requirements) are distinct from the requirements for licensees under Parts 30, 40, 70, and 72. ICF has not evaluated the licensee's compliance with the requirements of 10 CFR Part 50.
- (b) Regulatory Guide 3.66 recommends that a contingency factor be included in the decommissioning cost estimate. NUREG/CR-1754 uses a contingency factor of 25 percent in its cost estimates for each of six reference laboratories.⁶ The cost estimate submitted by the licensee, however, uses a contingency factor of approximately 13 percent. As justification for this contingency factor, the licensee states the following:

The approximately 11 (sic) percent contingency for this project is lower than normal due to Dow Chemical Company's experience and confidence from doing a very similar project in Madison, Illinois . . . The mobilization, excavation and decontamination, verification, and shipping and disposal operations for this project are basically the same as for the Madison project.

ICF has not evaluated the licensee's claim because the submission did not include any information on the Madison decommissioning project. NRC may wish to consider whether the decommissioning of the Madison facility is sufficiently similar to the decommissioning of the current facility to warrant the use of a 13 percent contingency factor instead of the

⁶ NUREG/CR-1754, Addendum 1, Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities: Compendium of Current Information, Pacific Northwest Laboratory, October 1989.

standard. If NRC needs additional information to make this determination, NRC could require the licensee to submit additional detail regarding the Madison facility (i.e., the final decommissioning plan and cost estimate for the Madison facility, including a description of the facility and activities conducted at the facility, number and dimensions of laboratory and facility components, etc.).

- (c) The self-guarantee agreement submitted by the licensee does not specifically list the financial test provisions from Section II ("Financial Test") of Appendix C to 10 CFR Part 30. Nonetheless, once Recommendation 7 has been implemented, Recital 3 of the agreement should bind the licensee to the appropriate financial test requirements because it states the following:

This Self-Guarantee and the financial test provisions set forth in Appendix C to Part 30 of 10 CFR shall remain in effect until the Commission has terminated the license or until another financial assurance method acceptable to the Commission has been put in effect by the Company. (emphasis added)

- (d) Section III.D of Appendix C to 10 CFR Part 30 states the following requirement for self-guarantees:

The licensee will promptly forward to the Commission and the licensee's independent auditor all reports covering the latest fiscal year filed by the licensee with the Securities and Exchange Commission pursuant to the requirements of section 13 of the Securities and Exchange Act of 1934. (emphasis added)

The self-guarantee agreement submitted by the licensee includes this provision (as Recital 4) but does not include the phrase (underlined above) "and the licensee's independent auditor." The omission of this phrase may place the self-guarantee in technical non-compliance with NRC regulations. However, the omission should not diminish the guarantee's protections to NRC because (1) the regulations do not require the independent auditor to review such reports even if they are submitted, and (2) the independent auditor must still, despite the omission, evaluate the licensee's annual CFO letter relative to the latest audited financial statements.

- (e) Although NRC has not published guidance on the standard form and content of self-guarantee submissions, ICF believes that much of NRC's existing guidance for parent company guarantees (as presented in Regulatory Guide 3.66) could appropriately be applied to self-guarantee submissions to significantly enhance NRC's certainty that self-guaranteeing licensees meet the criteria in the self-guarantee financial test. In order to improve the effectiveness of guarantee agreements, the recommended wording for parent company guarantees in Regulatory Guide 3.66 adds a number of provisions to those specifically called for in NRC regulations:

The guarantor agrees that within 30 days after it determines that it no longer meets the financial test criteria or it is disallowed from continuing as a guarantor for the facility under License No. [insert license number], it shall establish an alternative financial assurance as specified in 10 CFR Part 30.40, 70, or 72 as applicable. (Recital 11)

The guarantor as well as its successors and assigns agree to remain bound jointly and severally under this guarantee notwithstanding any or all of the following: amendment or modification of license or NRC-approved decommissioning funding plan for that facility, the extension or reduction of the time of performance of required activities, or any other modification or alteration of an obligation of the license pursuant to 10 CFR Part 30. (Recital 12)

The guarantor agrees that all bound parties shall be jointly and severally liable for all litigation costs incurred by the beneficiary [insert name] in any successful effort to enforce the agreement against the guarantor. (Recital 13)

The guarantor expressly waives notice of acceptance of this guarantee by [insert "NRC" or the name of the State agency]. The guarantor also expressly waives notice of amendments or modification of the decommissioning requirements and of amendments or modifications of the license. (Recital 16)

The licensee's submission does not include these provisions. Consequently, it is less protective of NRC's interests than it would be if it included the above provisions.

Finally, NRC should ensure that documents submitted by the licensee are originally signed duplicates, as recommended in Regulatory Guide 3.66. Unless the documents have been properly signed, NRC cannot be certain that the financial assurance mechanism is enforceable. Because ICF does not possess the required submissions, we cannot verify compliance with these requirements.

attachments

REVIEW OF DECOMMISSIONING FUNDING PLAN (DFP)

Name of company or institution:

Dow Chemical Co

Number of licenses and
applicable regulations:

_____	10 CFR Part 30	
<u>1</u>	10 CFR Part 40	(STB 527)
_____	10 CFR Part 70	
_____	10 CFR Part 72	

Isotopes handled and
possession limits
(specify units):

Thorium

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total cost estimate for
licenses listed above:

\$ 18,830,000

General comments on DFP:

DFP covers only 1 license, although licensee has 2 other licenses.

License 21-00265-06 (issued under 10 CFR Part 30) is covered using a
certification of financial assurance. License R-108 was issued
under 10 CFR Part 50.

CHECKLIST FOR REVIEWING DECOMMISSIONING FUNDING PLANS (DFF 1)

QUESTIONS

COMMENTS

<p>(1) Does the licensee provide supporting documentation for the cost estimates?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(2) Does the licensee use the Appendix F "Cost Estimating Tables?"</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(3) Does the cost estimate include the following major cost elements?</p>	
<p>(i) Planning and Preparation?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(ii) Decontamination and/or Dismantling of Radioactive Facility Components?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(iii) Packaging, Shipping, and Disposal of Radioactive Wastes?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(iv) Restoration of Contaminated Areas on Facility Grounds?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	<p>Licensee does not mention this</p>
<p>(v) Final Radiation Survey?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Includes costs for site characterization and verification</p>
<p>(vi) Site Stabilization, Long-Term Surveillance?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	<p>Licensee does not mention this</p>

CHECKLIST FOR REVIEWING DFP's (continued)

QUESTIONS

COMMENTS

<p>4) Is the total cost estimate reasonable for the type(s) and size(s) of facility licensed?</p> <p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Sure </p>	<p>Licensee does not provide enough information</p>
<p>(5) Are the cost estimates for individual facility activities and/or components reasonable?</p> <p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Sure </p>	<p>Licensee does not provide enough information</p>

CHECKLIST FOR REVIEWING DFP's (continued)

QUESTIONS

COMMENTS

<p>(6) Do the computations seem correct?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>(7) Does the licensee take credit for the potential salvage value of recovered materials or decommissioned equipment?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p><i>Licensee does not mention this.</i></p>
<p>(8) Does the licensee include a contingency factor in the cost estimate?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><i>Uses a factor of approximately 13% (although licensee states that factor is approximately 11%)</i></p>
<p>(9) Does the licensee provide a description of the methods that will be used to adjust the decommissioning cost estimate periodically over the life of the facility?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p><i>t</i></p>

APPENDIX A
CHECKLIST FOR DECOMMISSIONING FINANCIAL ASSURANCE

NAME OF LICENSEE OR APPLICANT

MAILING ADDRESS

Don Chaswell Company

Engineering Services, 1261 Building

P.O. Box 48607

A. Licensee Part (check one of the following):

- ☒ Part 30 Licensee or Applicant ☐ Part 70 Licensee or Applicant
☒ Part 40 Licensee or Applicant ☐ Part 72 Licensee or Applicant

B. Check appropriate item in each category (if applicable) *also Part 50

1. April 30, 1996 Date of Financial Assurance Submission Guarantee dated 4-12-96
2. ☐ Public Entity
☒ Private Entity
3. ☒ Certification of Financial Assurance Cert. stmt. in previous submission
☒ Decommissioning Funding Plan Cost estimate for 10 CFR 40 license included
4. (a) ☐ Prepayment Option (See Appendix B) \$18,830,000
 ☐ Trust Fund
 ☐ Escrow Account * Total decommissioning costs
 ☐ Certificate of Deposit are \$20,655,000
 ☐ Government Fund
 ☐ Deposit of Government Securities
(b) ☒ Surety/Insurance/Other Guarantee (See Appendix C)
 ☐ Surety bond
 ☐ Letter of Credit
 ☐ Line of Credit
 ☒ ~~Surety/Insurance~~ Guarantee/Financial Test* \$20,655,000
 SELF-
(c) ☐ External Sinking Fund, Sinking Account and Surety/
 Insurance (See Appendix D)
 ☐ Trust Fund
 ☐ Escrow Account
 ☐ Certificate of Deposit
 ☐ Government Fund
 ☐ Deposit of Government Securities
 ☐ Surety Bond
 ☐ Letter of Credit
 ☐ Line of Credit
(d) ☐ Statement of Intent (public entities only)

*May not be used in combination with any other instrument.

MEMO TO: Louis M. Bykoski, NMSS
FROM: OGC
RE: REVIEW OF NONSTANDARD SUBMITTALS

DOW CHEMICAL

No comments on the eight items. Under other issues, Item (D), the excluded wording should be added.

standard. If NRC needs additional information to make this determination, NRC could require the licensee to submit additional detail regarding the Madison facility (i.e., the final decommissioning plan and cost estimate for the Madison facility, including a description of the facility and activities conducted at the facility, number and dimensions of laboratory and facility components, etc.).

- (c) ✓ The self-guarantee agreement submitted by the licensee does not specifically list the financial test provisions from Section II ("Financial Test") of Appendix C to 10 CFR Part 30. Nonetheless, once Recommendation 7 has been implemented, Recital 3 of the agreement should bind the licensee to the appropriate financial test requirements because it states the following:

This Self-Guarantee and the financial test provisions set forth in Appendix C to Part 30 of 10 CFR shall remain in effect until the Commission has terminated the license or until another financial assurance method acceptable to the Commission has been put in effect by the Company. (emphasis added)

- (d) ✓ Section III.D of Appendix C to 10 CFR Part 30 states the following requirement for self-guarantees:

The licensee will promptly forward to the Commission and the licensee's independent auditor all reports covering the latest fiscal year filed by the licensee with the Securities and Exchange Commission pursuant to the requirements of section 13 of the Securities and Exchange Act of 1934. (emphasis added)

Since App. C establishes this requirement, as a licensee should require to amend the self-guarantee to add this wording.

The self-guarantee agreement submitted by the licensee includes this provision (as Recital 4) but does not include the phrase (underlined above) "and the licensee's independent auditor." The omission of this phrase may place the self-guarantee in technical non-compliance with NRC regulations. However, the omission should not diminish the guarantee's protections to NRC because (1) the regulations do not require the independent auditor to review such reports even if they are submitted, and (2) the independent auditor must still, despite the omission, evaluate the licensee's annual CPO letter relative to the latest audited financial statements.

- (e) ✓ Although NRC has not published guidance on the standard form and content of self-guarantee submissions, ICF believes that much of NRC's existing guidance for parent company guarantees (as presented in Regulatory Guide 3.66) could appropriately be applied to self-guarantee submissions to significantly enhance NRC's certainty that self-guaranteeing licensees meet the criteria in the self-guarantee financial test. In order to improve the effectiveness of guarantee agreements, the recommended wording for parent company guarantees in Regulatory Guide 3.66 adds a number of provisions to those specifically called for in NRC regulations: