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Texas Department of Health

William R. Archer III, M.D.
Commissioner

1100 West 49th Street
Austin, Texas 78756-3189
(512) 458-7111

Patti J. Patterson, M.D., M.P.H.
Executive Deputy Commissioner

Radiation Control
(512) 834-6688

June 18, 1999

UNITED STATES NUCLEAR REGULATORY COMMISSION
ATTN PAUL H LOHAUS DIRECTOR
OFFICE OF STATE PROGRAMS
MAIL STOP O3H20
WASHINGTON D C 20555

Dear Mr. Lohaus:

This letter is in response to your request for clarification of information sent to you regarding the request for concurrence of termination of the Westinghouse Uranium Projects, Radioactive Material Licence (RML) L02537. In the information sent there was an indication that the Texas Natural Resource Conservation Commission (TNRCC) had an action pending relating to the termination of the project. The pending action was the termination of the of the RML by the TNRCC. Since that report was written the authority to license uranium mining projects (and to terminate) was transferred to the Texas Department of Health (TDH). When the program was transferred to TDH the pending action was also transferred and has been sent to you for concurrence. I hope this clarifies this matter for you.

As maintaining this site places an undue economic burden and hardship on the licensee we request expeditious processing of this request. ^{Item 2}

If you have any questions, please call me at (512) 834-6688 extension 2208.

Sincerely,

Eugene (Gene) Forrer
Chief, Uranium Licensing Project
Division of Licensing,
Registration, and Standards
Bureau of Radiation Control

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OSP

SECTION III

Previous actions concerning TNRCC (TDH) license:

1. In the Closing Report, Part 4.0, WEC states that decontamination levels were based on TRCR 21.109 and Appendix 21-C. These levels are now found in TRCR 21.1303, Appendix 21-G. Soil criteria were based on TRCR 21.108 (now TRCR 21.1302). Part 5.0 of the Closing Report (Surface Reclamation Activities), states that procedures are set fourth in the Bruni Site decommissioning plan and decommissioning manual. TDH staff reviewed this plan and as a result, WEC clarified certain items (see TDH letter to WEC dated December 30, 1987 and WEC reply dated January 29, 1988). In reply to TDH staff WEC acknowledged specific NUREG guidelines dealing with decommissioning and clean up of uranium recovery sites (NUREG/CR-3082, NUREG/CR-4118, PNL-5361, and NUREG CR-2082) and stated that they did adapt them where applicable. Other sampling and protocol errors (such as criteria for release, instrumentation, soil sampling, and grid surveys) as noted by TDH were also addressed by WEC in their January 29, 1988 letter.

TDH confirmatory surveys (see memo of December 6, 1993) were conducted on a ten meter grid across surface production areas (WEC designated Cells A-H) and in the plant area using one-by-one sodium iodide probes. TDH sampling includes wipes for removable alpha particles (buildings, etc.) and soil samples to determine U-nat and Ra-226.

TDH well field survey readings were taken at least 10 to 20 meters outside five of the WEC designated Cell boundaries (B through F). This was done to determine if spills or runoff from the permitted area had contaminated soil outside of these boundaries. The TDH report (see memo of December 6, 1993) concludes that the well fields are "... within release limits." TDH surveys of Cells A, G, and H conform generally to the WEC Cell boundaries. After reviewing the survey data, TDH staff sampled soil in four areas (10 samples from each 10 X 10 meter grid) with five samples taken from the 0 to 15 cm depth and with another five samples taken from the 15 to 30 cm depth. In the center of the former plant pad area, one sample area was established in a 10 X 10 meter grid with five soil samples taken from the 0 - 15 cm depth and none from the 15 - 30 cm depth. Buildings were surveyed with one-by-one sodium iodide probes and wipe samples were taken from three of six remaining buildings (the product storage building, the old laboratory building, and the warehouse).

2. License Condition 31(B) requires the licensee to establish background radiation levels for soil which must be approved by the Executive Director. This license condition was necessary since background radiation levels were not determined (and were not required by regulation) before the mine was licensed to operate. The 1993 Closing Report, part 4.0 states that at the Bruni site, soil radiation background levels for U-nat and Ra-226 are both set at 1 pCi/g.

Discussion: On February 28, 1990 WEC submitted a letter to TDH concerning background levels. By letter of March 7, 1990 TDH authorized WEC to use the soil background levels of 1 pCi/g for both U-nat and Ra-226.

A review of background radiation levels in soil at nearby uranium mining sites and the document entitled "Wyoming Mineral Corporation Results of the Baseline Sampling and Operational Monitoring Programs For Bruni Site and Lamprecht Site" by Carla J. Fisher, Environmental Consultant (Fisher, Harden and Fisher, Environmental and Engineering Consultants) submitted by Fisher to the licensee on December 21, 1981 supports the TDH letter of March 7, 1990 that a background of 1 pCi/g for both U-Nat and Ra-226 is reasonable. WEC complied with License Condition 31(B).

3. 30 TAC §336, TRCR 43.32(d)(1)(iii) requires the licensee to submit radiation survey(s) of permanent location(s) of use and/or storage.

Six (6) production (holding) ponds were located on the site. After decontaminating the ponds, the company performed surveys and necessary sampling to ensure that the remaining soil was under regulatory limits. This information was then submitted to TDH for review, inclusion in the files, and confirmatory close out surveys by the Agency. TDH completed confirmatory close out surveys and as a result, issued letters releasing the ponds for backfilling. Listed are the WEC letters/surveys of the ponds and TDH release letters.

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|-------------------------|--|
| A. Pond #'s 1, 2, and 3 | - WEC letter/survey dated April 28, 1983
TDH letter dated May 23, 1983 |
| B. Pond # 4 | - WEC letter/survey dated June 14, 1991
TDH letter dated December 12, 1991 |
| D. Pond # 5 | - WEC letters(s)/survey(s) dated July 15, August 16, and November 23, 1988
TDH letter dated September 8, 1989 |
| D. Pond # 6 | - WEC letter/survey dated November 20, 1992
TDH letter dated March 4, 1993 |

Discussion: WEC surveys of ponds were submitted and are in the TNRCC WEC file. TDH did confirmatory surveys and released the ponds for backfilling.

4. The Licensee's well field radiation surveys of the surface of PA#5, Part 1 was submitted to TDH by a letter dated July 15, 1988 (with attachments). These surveys are in the TNRCC WEC file. TDH confirmatory close out surveys and sampling were then conducted. By TDH letter of July 31, 1989, most of PA#5 was released for unrestricted use; however, an area on the northwest end of PA#5 was not surveyed or released at that time.

The licensee submitted well field surface surveys for consolidated PA#3 (PA#3, PA#4, and PA#6), the plant pad area including the acid tank pad (but not the entire plant area), and the north part of PA#5 by a letter dated March 2, 1993 (with attachments). These surveys are in the TNRCC WEC file. TDH conducted confirmatory surveys and sampling of all well fields and much of the plant area. The results and summation's memo were

attached to a letter from TDH dated December 6, 1993 to TNRCC. The memo concludes that the well fields and plant area are within release limits for unrestricted use.

Discussion: WEC surveys for well fields and the "old plant pad" area were submitted. A survey of the entire plant area (from the "Bone Yard" to the "Bull Pen", to the old office building and then south to the warehouse and old laboratory building and then west to the old Graver Pad (now, the Reverse Osmosis Building area) and the West Soil Stock Pile #7, was not found in the TNRCC WEC files. Nine former byproduct storage sites were listed in WEC Closing Report section 5.13 (illustrated on Closing Report Map D), see attachment C of this report. The plant areas, pre-injection building, and the byproduct storage areas are found delineated in attachment C (yellow shading). WEC must submit their final surveys of the entire plant area, the pre-injection building area, and the byproduct storage areas.

TDH performed a confirmatory grid survey of the plant area; however, only areas (approximately, the area circled in red in attachment C) were included in the confirmatory close out survey. The TDH summary of plant area confirmatory surveys state that the surface areas appear to be within release limits.

However, only one 10 X 10 m grid area (in the center of the plant pad area) was sampled by TDH. The five soil samples taken at the 0-15 cm depth averaged 30 pCi/g (the release limit for U-nat). Additional samples from the plant pad area will more reasonably indicate if there are areas on the pad that are over regulatory limits. No confirmatory close out soil samples were taken from the plant pad area by from the 15-30 cm depths by TDH. Additional soil samples including 15-30 cm depths should be taken at the plant pad to assure that release compliance limits are met.

Final TDH confirmatory grid surveys were not found to document the following areas: the East Soil Stockpile (and product building), the West Soil Stockpile, the area of the former Graver Pad and Restoration Plant Pad (Reverse Osmosis Building Area), the Acid Tank Pad, the Bone Yard, and the area around the WDW-170 pre-injection building. TNRCC should document confirmatory close out surveys of all plant and byproduct storage areas in attachment C that are marked in yellow and are outside of the red circled area. Soil sampling may be warranted if areas are twice background or twice surrounding meter (or higher) readings.

According to the TDH confirmatory close out survey memo of December 6, 1993 (memo attachment #3), an area reading 10,000 cpm on a survey meter was located in the well field just south of the reverse osmosis building and the old laboratory building. Soil samples were not taken here even though this reading (if correct) was the highest taken in the well field. Instead, 10 samples were taken at the next highest area where a reading of 8,000 cpm occurred (area #3). Five readings surrounding the 10,000 cpm area range from a low of 1,200 cpm to a high of 4,500 cpm. The company close out survey does not indicate a "hot spot" in this area. During the routine inspection of WEC in November 1995, TNRCC inspectors tried to locate the possible hot spot; however, the ground was wet and no high readings were noted. A thorough survey of the area in question should be conducted to prove or disprove the possible hot spot. Soil samples from a possible hot spot would then provide confirmatory samples in the highest reading area. If the hot spot exists, TNRCC should assure that it is

below regulatory limits prior to release for unrestricted use and termination.

According to a TDH employee, the center of WEC Cell E (see December 6, 1993 memo, attachment 2) had pools standing water at the time of the confirmatory surveys and therefore was not surveyed.

5. According to the Closing Report, six buildings and the concrete acid tank pad remain on site. The Closing Report states that during the time the TDH was conducting confirmatory surveys of the buildings (August 1995) that, "WEC had survey data in our files to warrant a release of these buildings." WEC close out surveys on the product storage building were found in the TNRCC WEC files. WEC surveys of the other five buildings were not found in the files.

The TDH confirmatory survey memo of December 6, 1993 states that, "buildings and storage areas were surveyed . . . and no levels above background were indicated inside the buildings. Wipe samples were also collected from the buildings." However, wipes for removable alpha contamination levels were obtained for only three of the buildings, the warehouse, the laboratory and the product storage building. The product storage building was released for unrestricted use by TDH letter dated August 6, 1990; however, after approximately three years had elapsed re-survey and wipe samples on the product building were certainly warranted before termination could occur. Laboratory results show that the three buildings where wipes were taken are below release limits.

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|--------------------------------|--|
| A. Warehouse | - no WEC meter survey/wipe results in files
TDH memo of December 6, 1993 (wipes taken) |
| B. Laboratory building | - no WEC meter survey/wipe results in files
TDH memo of December 6, 1993 (wipes taken) |
| C. Product Storage Building | - WEC meter survey submitted (TNRCC WEC file
folder #9)
TDH memo of December 6, 1993 (wipes taken) |
| D. Reverse osmosis building | - no WEC survey/wipe results in files
needs TNRCC meter surveys and wipe samples |
| E. Office building | - no WEC survey/wipe results in files
needs TNRCC meter survey and wipe samples |
| F. WDW-170 pre-injection bldg. | - no WEC survey/wipe results in files
needs TNRCC meter survey and wipe samples |

A mobile home was released for unrestricted use by a TDH letter of February 8, 1990. The mobile home is no longer on site.

Discussion: WEC surveys of the product storage building and the plant pad (acid tank pad) were found in the TNRCC WEC files. WEC surveys on the five other permanent buildings were not found in the files. In order to comply with 30 TAC Chapter 336, TRCR 43.32(d)(1)(iii), WEC radiation surveys on all buildings (warehouse, laboratory building, reverse osmosis building, office building, and the pre-injection building) must be submitted prior to termination.

The TDH confirmatory survey memo of December 6, 1993 does not include radiation wipes on three permanent buildings (the (the reverse osmosis building, the office building, and the pre-injection building). The memo states that analyses (done on the product storage building, the laboratory building, and the warehouse), "indicated that the buildings meet the release requirements for unrestricted use." TNRCC confirmatory meter surveys, and specific laboratory analyses of wipes on the reverse osmosis building, the office building, and the pre-injection building will determine if there is compliance with regulations. The concrete acid tank pad and the concrete pad behind the warehouse were not referred to in the TDH December 6, 1993 memo and attached survey maps do not document surveys on the pads. Each permanent concrete pad should be surveyed by TNRCC and wipe samples taken in accordance with appropriate guidelines for surveys when releasing materials for unrestricted use.

Septic tanks are not mentioned in the Closing Report. 30 TAC §336.6(d) states that, "No licensee shall discharge radioactive material into a septic tank system except as specifically approved by the agency . . ."

The draft TNRCC inspection report of October 25, 1994 indicates that, ". . . the septic tank was pulled and shipped to American Nuclear Corporation . . ." and that afterwards, the area was surveyed by both licensee and agency. The inspector notes that the ground surface was surveyed with no unusually high readings; however, if the tank had been contaminated with radioactive material and then leaked, subsurface contamination could have occurred. The following information from WEC is required:

- A. the total number of septic systems installed by WEC;
- B. the number of septic systems that were removed for disposal by WEC;
- C. surveys and/or samples of surrounding soils if a septic tank has been removed;
- D. the number of septic systems remaining on site; and
- E. laboratory results from samples from any remaining septic tanks.

Potable water supplies (wells), pipelines, etc. are not mentioned in the Closing Report narration; however attachment C does indicate a potable water well in the plant area. WEC must report the number of potable water wells developed and the number left intact and on site. Other information should include depth, geological formation drilled into, site location(s) and location of water pipelines, sample results from the wells, and projected use of water from the wells.

If potable water wells remain on site, water samples from each well (or system) should be obtained by the TNRCC confirmatory close out survey team for laboratory analyses.

6. Six on site landfills (solid waste sites) were registered with TWC. License Condition 29(C) states that "Prior to closure of any on-site solid waste pit, the licensee shall perform surveys to confirm that materials in the pit do not have contamination which exceeds the limits specified by 30 TAC §336.6(f), TRCR 21.1302, and/or 30 TAC §336.1, TRCR 21.1303. Any on-site solid waste pit shall be surveyed by the Executive Director prior to closure." The WEC Closing Report states that non-contaminated material (1,258 cu. yds. of Class III waste such as concrete, plastics, steel, PVC pipe, etc.) was placed in Landfills #3 and #6. A brief history of each landfill is as follows:

Landfill #1 - "a small landfill" (.005 acres) used for disposal of nonhazardous waste prior to mining. "This landfill was closed in the summer of 1979."

Landfill #2 - used to dispose of nonhazardous waste. Radioactive contamination was noted in 1985 by a TDH inspector. For WEC cleanup activities see WEC letter of October 3, 1990 to TDH requesting confirmatory survey for release. See TDH letters of February 27, 1991 (TDH survey and follow up conditions) and a TDH letter dated March 18, 1991 allowing continued disposal of uncontaminated trash. Inspection reports of February 5, 1992 and October 22, 1992, show that WEC trash records were reviewed. An inspector performed a survey of the pit on February 16, 1993. The inspector states "No readings above background were noted." The draft inspection report of September 13, 1993 states, "All the waste pits except for #6 had been surveyed before they were backfilled."

Landfill #3 - was used to hold non-contaminated material. Landfill #3 was surveyed by the inspector during a regular, unannounced facility inspection on February 16, 1993. The inspector stated, "No readings above background were noted." As already included above, the draft inspection report of September 13, 1993 states "All the waste pits except for #6 had been surveyed before they were backfilled."

Landfill #4 - formerly Pond #4, was never used as a landfill. It was released for backfill by TDH letter of December 12, 1991.

Landfill #5 - formerly Pond #5, was never used as a landfill. It was released for backfill by TDH letter of September 8, 1989.

Landfill #6 - was used to dispose of non-contaminated material and common trash. This waste pit was surveyed by the inspector during the regular, unannounced facility inspection on February 16, 1993. The inspector stated, "No readings above background were noted."

The Closing Report states that, "Landfills 2, 3, and 6 remained open and in use until late 1993, when TDH/TWC representatives surveyed them during

a close out inspection of the Bruni site process area on 8-2-93, and gave approval for backfilling. On 8-3-93, arrangements were made and a contractor was on site for backfilling while the state representatives were on site." The TDH memo/report of confirmatory surveys and activities during August 3-4, 1993, does not mention the landfills used by WEC. Written releases of landfills #2, #3 or #6 were not located in the files.

According to the draft inspection report of September 13, 1993, "Waste pit #6 accepted trash through 6-21-93, which was mainly the last of the released concrete slabs. All the waste pits except for #6 had been surveyed before they were backfilled. Pit #6 was backfilled on August 4, 1993 without authorization of the agency."

Discussion: Although landfills were not mentioned in the TDH December 6, 1993 memo, landfills (including #2, #3, and #6) were surveyed by state employees (TDH & TNRCC) during the comprehensive confirmatory close out surveys (August 2-4, 1993). This reviewer particularly remembers surveying broken-up concrete in landfill #6. This reviewer did not detect readings more than twice background and did not hear any colleague indicate that they found "high readings" in any of the landfills at that time. Written permission to backfill pits #2, #3, and #6 was not found in the files; however, surveys satisfying License Condition 29(C) did take place.

Copies of the WEC survey logs of trash in the landfill should be submitted to TNRCC to assure compliance with submission of surveys for on site disposal (TRCR Part 43.32(d)(1)(iii)) and License Condition 30(A).

7. 30 TAC §336, TRCR 43.32(d)(1)(iii) requires the licensee to submit a record of disposal of radioactive material. There were four primary methods (or routes) used to handle byproduct materials produced at WEC:

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| <p>A. Byproduct material was surveyed and shipped for authorized disposal off site. The Closing Report states that this included items which were too bulky to handle or could not be decontaminated at the site such as soil, concrete, pump parts, sections of tanks, building construction material, spent ion exchange resin, zeolite, pond liner material, and electrical materials such as panel boxes and wire. <u>According to the report, all shipment records are in WEC files.</u></p> <p>B. Byproduct contaminated equipment or materials (tanks, pipe, etc.) were transferred to <u>an authorized recipient (such as another licensed uranium producer).</u></p> <p>C. Certain equipment or materials were decontaminated on the site, surveyed, and then released for unrestricted use. Some decontaminated material (such as concrete) was <u>buried in on-site landfills.</u></p> <p>D. License Condition 33 (A - D) authorizes contaminated soil to be cleaned by washing and the reapplication of the cleaned soil to its area of origin. Maps of soil piles and cleaning</p> | Item 4 |
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activities were submitted to TNRCC in the Closing Report.

Byproduct material was shipped to an authorized disposal site at Conoco Conquista (RW1634 - a tailings pit in Karnes County, Texas) until closure of this service early in 1988. A copy of the Conoco Conquista contract was not found in TNRCC's WEC files; however, WEC's letter of November 6, 1980 requesting disposal at Conoco was found. The requesting letter stated that appropriate records would be maintained.

The Closing Report states that 136 loads were shipped to Conoco Conquista for authorized disposal. Inspection reports of May 28, 1985, January 21, 1986, September 10, 1986, and January 27, 1987 document only 20 of the above shipments.

In June 1992 WEC signed a contract for authorized disposal with American Nuclear Corporation (ANC), a company operating a tailings pit in Wyoming. WEC disposed of contaminated materials at ANC during 1992 and 1993. A copy of the ANC contract is in the TNRCC WEC files. According to TDH inspection report (conducted on February 16, 1993) the last soil wash date was November 30, 1992. The eluant, 35 drums of resin, and 33 drums of zeolite (waste products from the soil washing), "... will be ..." sent to American Nuclear for authorized disposal. According to a list provided in a TNRCC inspection report (conducted on October 25, 1994) shipments containing materials that appear match the above description (except for eluant) were shipped to American Nuclear in the months of April, May, and June 1993.

The draft TNRCC inspection report of September 13 & 14, 1993, states that a total of 83 shipments were made to ANC and were transported by WPI Transportation Incorporated. The inspector records that the contract was reviewed at the time of inspection and appeared to be complete. The last shipment noted was August 5, 1993 [sic], (actually August 6, 1993, according to the inspection report). The inspector lists 46 of the shipments and gives a total weight shipped of 1,717,676 lbs. The inspector also detailed survey instruments used by the licensee. Subsequent inspections report no further shipments.

A brief history of disposal activities (or return of cleaned soil) by source was compiled from only the Closing Report as follows:

- A. Graver and Graver pad - steel tank, pad concrete, rubble, and soil underneath disposed of at Conoco (completed in January 1988).
- B. Dryer building and pad - equipment in the building, building supports and 20% of building siding panels, concrete pad, and rubble disposed of at Conoco (completed in November 1987). Eighty percent of building siding panels were sold to Malipai Resources Co. (RW2436).
- C. Main Plant Building & Pad - Some decommissioning work done in mid-1980s. Contaminated equipment went to storage on-sites for decontamination or to be disposed of at a later date. In 1990 equipment and 90% of the building went to storage sites for decontamination or to be disposed of at a later date. In 1992 the soil

washing equipment and the remainder of the building was removed and sent to the storage sites. Contaminated concrete from the pad was shipped to ANC in 1993. Uncontaminated concrete was buried in Landfill #6.

- D. PA#5, Part 1 - approximately 69 truck loads of contaminated soil were set to Conoco (completed in January & February of 1988).
- E. PA#5, Part 2 and PA#3 - 22,513 tons of contaminated soils were cleaned by washing (February 1992 through November 1992). The soil was redistributed on well fields by late December 1992.
- F. Pond #s 1, 2, and 3 - no disposal records for any contaminated soils, liners, etc. was found in TNRCC WEC files. Backfill was authorized by TDH May 23, 1983.
- G. Pond #4 - soil cleaned through soil washing.
- H. Pond #5 - contaminated soil & debris was sent to Conoco (1983). In January 1988 remaining contaminated soils were cleaned by soil washing.
- I. Pond #6 - During December 1990 and January 1991 a small amount of soils and liquids was drummed and the pond liner removed (solids and liner disposed of at American Nuclear in 1992). In August 1992 the remaining contaminated soils were cleaned through soil washing.

Discussion: In order to satisfy documentation requirements of TRCR 43.32(d)(1)(iii), a copy of the Conoco Conquista contract can be submitted by WEC along with a brief summation of disposal shipments to Conoco and ANC. Following receipt of the WEC summation lists for disposal, TNRCC verification can be accomplished at a final WEC file termination review in Round Rock, Texas. As liquids are not taken at some authorized byproduct disposal sites, the disposal of the eluant from the soil washing operation must be accounted for.

- 8. Materials were surveyed by WEC and then released for unrestricted use. Although WEC survey documentation was not found in the files, inspection reports indicate that this was an item for inspectors to check. The following inspection reports were reviewed and summarized as follows:

12/04/80	- no transfers detailed	
07/07/82	- "	"
01/25/83	- "	"
07/20/83	- "	"
01/28/84	- "	"
05/15/84	- "	"
05/28/85	- "	"
01/21/86	- "	"
09/10/86	- "	"
01/27/87	- "	"

08/06/87	- "	"
02/02/88	- "	"
08/24/88	- "	"
02/20/89	- "	"
08/08/89	- "	"
03/15/90	- "	"
04/03/91	- one tank shipped to Total West Cole, records seemed complete	
08/14/91	- fence from around pond #6 released	
02/05/92	- nothing released by WEC for inspection period	
10/22/92	- nothing released for unrestricted use	
02/16/93	- 6 surveys by WEC (release for unrestricted use) records reviewed	
09/13/93	- draft inspection report - 19 surveys by WEC (release for unrestricted use) records reviewed - records appeared complete	
06/17/94	- draft inspection report - one survey listed on 09/10/93 (backhoe) - last release and records appeared complete	

Discussion: Since the above list may be incomplete, all release for unrestricted use records can be reviewed during the final TNRCC termination review of WEC records for comparison with the inspection reports, to assure compliance with License Condition 19.

9. The TDH Radioactive Material License for Westinghouse Bruni No. LO2537 was terminated on December 28, 1994. This termination was necessary since the license (and regulatory authority) was transferred to and re-issued by TNRCC. Another TDH license for the WEC Bruni site (LO4610) was issued on June 15, 1992. This license authorized the field determination of uranium and thorium in soil using a pulsed neutron generator (accelerator with a tritium target) in conjunction with prompt gamma counting. This license was terminated on November 18, 1993.

Discussion: On January 3, 1996, the TDH, Bureau of Radiation Control, Custodian of Records stated that there were two licenses (LO2537 and LO4610) found for WEC Bruni and that all TDH licenses for WEC Bruni are now terminated.

SECTION IV

Surface Reclamation:

The following summary of surface reclamation activities by WEC is derived from the Closing Report (WEC letter of December 14, 1993):

1. Ponds #'s 1,2, and 3 - "The area where the ponds were located has since revegetated on its own with natural weeds, grasses, flowers, and brush."
2. Pond #4 - "... backfilled and contoured in August 1992 at the same time Pond 5 was backfilled."

3. Pond #5 - "Pond 5 was backfilled in August of 1992 and recontoured to match existing terrain."
4. Pond #6 - "... backfilled and contoured to match the existing terrain in July 1993."
5. PA 5, Part 1- "... was reseeded in the fall of 1989, and today there is a healthy stand of buffle grass which is increasingly augmented by natural weeds, flowers, and brush."

In the Closing Report, Part 6.0, WEC states, "Recontouring of land affected by the mining operations was limited to areas where ponds and landfills are located. These areas have been contoured to match the existing terrain. The rest of the areas affected by mining continue to exhibit their original contours."

WEC further states, "All of the surface areas released earlier by the TDH have experienced hardy natural revegetation of native grasses, weeds, cactus, and brush. The more recently disturbed areas have been reseeded with buffle grass to expedite the natural revegetation processes. It is anticipated that the permit area will revert back to agricultural rangeland."

The report states that remaining roads, pads, buildings, and fences will be left for the landowners "at their request." and that the two affected landowners have signed affidavits stating that they will accept the roads, pads, etc. upon release for unrestricted use.

Discussion: License Condition 30(A) requires the licensee to reclaim the site in accordance with certain letters to TDH. In Enclosure A, attached to a WEC letter dated September 12, 1989 to TDH, WEC states that pit surfaces "... shall be recontoured to provide slopes not less than two percent. [sic] Directing surface water away from the site of the landfill to ensure no ponding of water will occur." Restoration of surface vegetation is also discussed.

During a routine TNRCC inspection of the Bruni site on April 21, 1994 the inspector recommended in his draft report that additional soil (backfill) be placed in areas over former waste pits #3, #5, and #6 to reduce collection of water over the waste pits. A WEC letter to TNRCC dated November 29, 1994 states that additional soil was placed above "Landfill No. 6" and that this "resolved the issue of casual water remaining above landfill No. 6." Landfill #3 and #5 were not mentioned in the WEC letter.

During the final TNRCC site visit, photographs of recontoured and revegetated areas should be taken for inclusion in the TNRCC report. Inspectors should inspect all former landfills (particularly landfill #3 and #5) and ponds to verify recontouring of the pits and also to see if subsidence and/or "ponding" of water is (or could) occur.

SECTION V

Compliance and Inspections:

1. **Enforcement** - A TWC "memo to files" dated October 29, 1982 lists WEC's noncompliance

record from February 1976 through January 1982 and indicated a civil penalty of \$42,500.00 against the company. The memo lists a summary of violations which led to the civil penalty as follows:

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| 1. Excursions for over 90 days | - 9 violations |
| 2. Failure to construct monitor wells in accordance with permit | - 13 violations |
| 3. Corrective Action Reports not received | - 6 violations |
| 4. Reporting violations (24 hr., 48 hr.) | - 14 violations |
| 5. Self Reporting | - 167 violations |

Other file documentation states that the penalty (apparently assessed April 24, 1978) was an agreed judgement for the State of Texas vs. Wyoming Mineral Corporation (WMC) in which both parties agreed that WMC's settlement was not an admission of guilt. No subsequent enforcement actions by TWC were found in the file review. No record of enforcement action by TDH was found in the files. There are no pending enforcement actions against WEC by TNRCC.

2. TDH Incident File Investigation - One TDH Incident File Investigation (Number 5824) dated April 30, 1991 was found in the TNRCC WEC files. The investigator states on January 7, 1991 WEC, "reported by phone an elevated bioassay of 470 micrograms of uranium per liter" and that the licensee failed to submit a written report to TDH. This was considered a violation of (then) License Condition 17(A).

By letter of April 23, 1991 the WEC Radiation Safety Officer (RSO) stated that the individual in question underwent a whole body count for uranium on January 23, 1991 and the results showed that "no internal contamination due to uranium ever occurred" and that the RSO, "suspects sample contamination." Laboratory results were attached to the letter. A letter from WEC to TDH dated May 23, 1991 stated that, "the Agency has determined that all required information has been submitted."

3. Inspections - Fifteen (15) inspections were found in the TNRCC WEC files for the period of December 1980 through August 1989. No violations were issued to WEC during this period.

There were 10 inspections conducted by TDH and TNRCC from March 1990 through November 1995. Six (6) inspections found violations and notices of violations were sent to the company by TDH with resulting corrective actions, and then acknowledgments by the Agency. Violations found during inspections were managed by using routine administrative procedures (see TRCR 13.8 and 13.9). The findings and/or severity levels (see attachment D) of the 6 completed inspections are as follows:

- 3 inspections - no violations
- 1 inspection - one Severity Level IV violation
- 1 inspection - one Severity Level III, one Severity Level IV violations

1 inspection - two Severity Level III violations

Total = 6 inspections - 2 Severity Level IV and 3 Severity Level III violations

Four inspections reports are in draft. A total of four possible violations from two separate inspections were alleged by inspectors; the compliance process is verifying the alleged violations for further action and all issues will be resolved before termination. The last two draft inspections had no violations noted.

Discussion: Any remaining violations must be resolved through the Industrial and Hazardous Waste Division, UIC, Uranium, and Radioactive Waste Section, Compliance and Inspection Team prior to termination.

SECTION VI

Review of Regulations and License Conditions:

1. 30 TAC §336 referencing TRCR 43.32(b) (Licensing of Uranium Recovery Facilities) states that:

"This notification and request for termination of the license must include the reports and information specified in 43.32(d)(1)(iii) and (f). The license is subject to the provisions of 43.32(d) and (e), as applicable."

2. TRCR 43.32(d)(1)(iii) requires the licensee to:

"Submit a record of disposal of radioactive material and radiation survey(s) of licensee's permanent location(s) of use and/or storage."

The company has generally complied with the regulation excepting items requested in the SECTION VII, Recommendations; section or any (as yet) undiscovered items.

3. TRCR 43.32(d)(1)(iii) goes on to speak about levels of radiation. TNRCC regulatory limits for radiation can be found in 30 TAC §336.6(f) and 30 TAC §336.1, TRCR Part 21, Appendix 21-G.

4. TRCR 43.32(d)(4) states that:

". . . In addition to the information submitted under 43.32(d)(1)(iii), the licensee shall submit a plan, as appropriate, for decontaminating the location(s)."

The licensee did submit a "Facility Decommissioning Plan" to TDH dated November 20, 1987 (with follow up letters dated January 29, 1988, June 30, 1989 and September 12, 1989). The licensee has complied with this requirement.

5. 30 TAC Chapter 336, TRCR 43.32 (f) states that:

"Each licensee shall submit to the Agency all records required by 21.401(f) before the license is terminated." Section 21.401(f) required the terminating licensee to send "... all personnel monitoring records (including bioassays if required) ..." to the Agency upon termination.

TRCR Part 21 as adopted by the TNRCC December 29, 1993 does not include section 21.401(f) found in the earlier (April 1986) version of the TRCR. Current TRCR Part 21 regulations no longer require terminating entities to send individual monitoring records to the agency. The current TRCR as adopted by TNRCC, (TRCR 21.1107(e) - Records of Individual Monitoring Results) does require licensees to retain such records until the termination of each pertinent license. TRCR 43.32 (f) has not yet been amended to reflect the deletion of 21.401(f) from Part 21.

Individual monitoring records are items of review by both TDH and TNRCC inspectors. The inspection reports found in the WEC files do not document any exposures over limits except the elevated bioassay discussed earlier in this report (TDH Incident File Investigation Report Number 5824). The Closing Report states that, "Employee exposure records will be kept indefinitely."

WEC compliance with the current TNRCC regulations should be determined at the final termination review of WEC's files.

6. 30 TAC Chapter 336, TRCR 43.90(f) requires byproduct materials to be managed so as to conform to secondary groundwater protection requirements. By a letter dated December 6, 1990, WEC reported no byproduct material impoundments on site. By a TDH letter to WEC dated December 14, 1990, the Agency determined that, "Since there are no impoundments at the Bruni Mine Site used to manage byproduct material, and those impoundments that did exist have either been decommissioned or are in the process of being decommissioned, submission of a plan to demonstrate compliance with the secondary groundwater protection standards is not necessary."
7. TNRCC License RW2537, Amendment Number 1, License Condition 8(A) requires that WEC maintain certain records for inspection. These records include surveys, transfers and disposal of radioactive materials, and other records required by the license or 30 TAC Chapter 336. WEC compliance can be determined at the final termination review of WEC's files.
8. License Condition 8(B) states that records required under License Condition 8(A) be kept at a Westinghouse facility in Round Rock, Texas until termination since WEC has vacated the Bruni site. The last TNRCC inspection of June 1994 verified that the WEC records were at the appropriate WEC facility in Round Rock, Texas.
9. License Condition 19 states that WEC shall ensure that surface contamination on equipment to be released for unrestricted use does not exceed regulatory limits. WEC compliance can be determined at the final termination review of WEC's records at Round Rock, Texas.

10. License Condition 21 requires WEC financial security until closure and release for unrestricted use have been approved by TNRCC in writing. Financial security is still in place (see SECTION I, General; section of this summation).
11. License Condition 29(A) requires records of radiation surveys (in detail) when non-byproduct material (not associated with mining, and production, etc.) is disposed of. WEC compliance can be determined at the final termination review of WEC's records at Round Rock, Texas.
12. License Condition 29(B) requires TNRCC registration of on-site solid waste pits. WEC registered pits (1-6) by TWC notice dated January 31, 1990.
13. License Condition 29(C) requires registered pits (1-6) to be surveyed by the Executive Director before final closure. The required surveys occurred.
14. License Condition 30(A) states that decommissioning, decontamination, and reclamation must be in accordance with WEC letters dated November 20, 1987 (with follow up letters dated January 29, 1988, June 30, 1989 and September 12, 1989). Pending final Commission surveys, and inspections (see SECTION IV, Surface Reclamation; Discussion:) the licensee appears to have complied with this requirement.
15. License Condition 30(B) requires the licensee to provide documentation, including scaled maps, of all surveys, sampling, and decontamination activities. Except for the items requested in the SECTION VII, Recommendations; section, the licensee appears to have complied with the License Condition.
16. License Condition 30(C) requires a final report of termination activities when termination is requested. The WEC letter of December 14, 1993, and Closing Report comply with this condition.
17. License Condition 31(A) requires the licensee to reclaim the license area with soil not to exceed the limits set by 30 TAC §336.6(f), TRCR 21.1302 and to remove contaminated soil and dispose of it as byproduct material. Verification of this condition (item numbers 11, 13, 15, 16, and 17 in the SECTION VII, Recommendations; section) will be completed by final TNRCC surveys.
18. License Condition 31(B) requires background soil radiation levels to be determined. By letter of March 7, 1990, the Texas Department of Health (TDH) stated that WEC could use the soil background levels of 1 pCi/g for both U-nat and Ra-226. WEC complied with the requirement.
19. License Conditions 33(A, B, C, D) deal with soil washing authorized by TDH. Of special interest are the requirements in License Condition 33(B) requiring records of surveys of application areas, sampling, maps and locations. WEC has submitted the information requested. The WEC "Soil Washing Pilot Tests - Final Report NO. 12" was submitted to TDH with an enclosure (Bruni Soil Washing Project Overview Report). These reports were

submitted with a WEC cover letter dated April 12, 1993. TDH survey data indicate that the well field areas surveyed are within release limits for unrestricted use; however, item numbers 11, 16, and 17 in SECTION VII, Recommendations; must be resolved.

SECTION VII

Recommendations:

Further documentation or actions from WEC should include:

1. submission of required radiation grid surveys of the entire plant area, the pre-injection building area, and byproduct storage areas;
2. submission of required radiation surveys for all remaining buildings/structures left on site except for the product building, which is in the TNRCC WEC files;
3. the number of septic systems installed at the Bruni plant, septic tank radiological sampling results, designation of any septic systems that were removed for disposal by WEC, the number of septic systems remaining on site, and surveys of pits where septic tanks were removed;

TNRCC and WEC will need to split-sample any remaining septic systems;

4. the number of potable water wells left intact and on the site, depth, completion interval(s), site location(s) and location(s) of water pipelines, sample results from the wells(s), and anticipated use of water from the wells;
5. copies of WEC landfill trash records for Landfills #1, #2, #3, #6;
6. a copy of the contract for disposal of byproduct material at Conoco Conquista;
7. a brief summation of shipments to Conoco Conquista and American Nuclear Corporation for authorized disposal. A suggested format for the Conoco and ANC summations is:

<u>SHIP DATE</u>	<u>SHIPMENT TYPE</u>	<u>DESTINATION</u>	<u>WEIGHT</u>	<u>SURVEY RESULTS</u>
8-06-93	Broken Concrete	American Nuclear	24,826 lbs.	OK

8. summation and documentation concerning the disposal of the eluant used in the soil washing operations.

It is recognized that prior confirmatory close out surveys may have actually occurred in some of the items listed below. However, lack of regulatory documentation, especially in cases where soils are at or near regulatory limits, in plant processing areas, and around permanent structures such as buildings, pads, and septic systems (if still on site) should prompt close evaluation on the part of TNRCC. TNRCC teams conducting confirmatory close out surveys

may conclude that, based on readings, additional surveys and/or sampling are required.

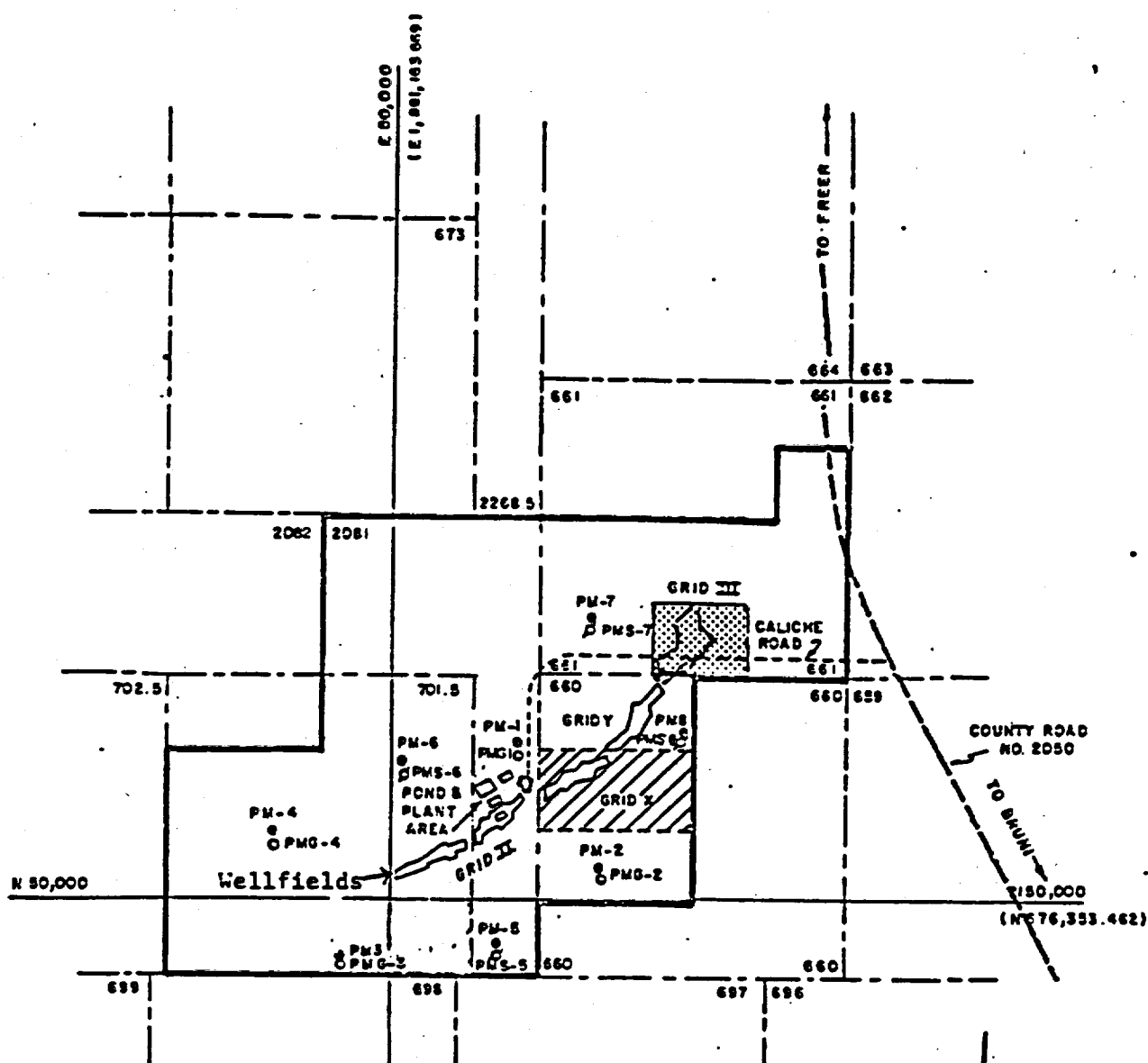
Further actions by TNRCC should include:

9. review additional documentation (see further WEC actions) supplied by the company;
10. a final site visit to catalog/verify and photograph all remaining structures left on site (buildings, concrete pads, etc.), photograph recontoured and revegetated areas, check former landfills and ponds for evidence of subsidence;
11. document confirmatory close out grid/area surveys of all plant and byproduct storage areas in attachment C (yellow area outside of the red circled area), soil sampling may be warranted if areas are twice background or twice surrounding meter readings;
12. conduct and document confirmatory close out meter surveys and take wipe samples on certain buildings/structures: the reverse osmosis building, the office building, the WDW-170 pre-injection building, and any other remaining concrete pads or other permanent structures not previously documented;
13. obtain samples from all remaining septic systems (in the past, WEC preferred to send certain samples (especially soil samples) to an authorized laboratory of their choosing. As long as the Commission can assure "chain-of-custody" of these samples, a similar WEC request in the future should be authorized);
14. if potable water wells remain on site, obtain sample(s) for laboratory analyses;
15. additional sampling from the plant pad area. Select at least 3 areas at the plant pad area following Commission guidelines for conducting confirmatory close out surveys. It is recommended that samples be taken at not only at depths of 0-15 cm, but also at the 15-30 cm depth;
16. at least one radiation survey transect (east to west) across the center of WEC Cell E, preferably in a low lying areas, soil sampling may be warranted if areas are twice background or twice surrounding meter readings;
17. a surface radiation survey for a possible "hot spot" area south of old laboratory building; and
18. final verification of WEC records at Round Rock, Texas including (but not limited to) all disposal documents, and radiation surveys/wipes taken for License Conditions 8(B), 19, and 29(A), and (C). Ensure that any/all TNRCC Compliance NOV's are resolved (see SECTION V, Compliance and Inspections, #3).

Upon WEC completion of all license termination requirements, termination of License RW2537 can be accomplished with U. S. Nuclear Regulatory Commission concurrence and a final license amendment from TNRCC. Termination of Permit UR01942 will be also be necessary, along with coordination with the Financial Assurance Section.

Map A

DETAIL OF BRUNI PERMIT AREA



LEGEND:



WMC-MOBIL JOINT VENTURE



PERMIT BOUNDARY



AREA 661, GRID III

PM - PRODUCTION ZONE
(DEEP) WELLSPMG - NON-PRODUCTION ZONE
(SHALLOW) WELLS

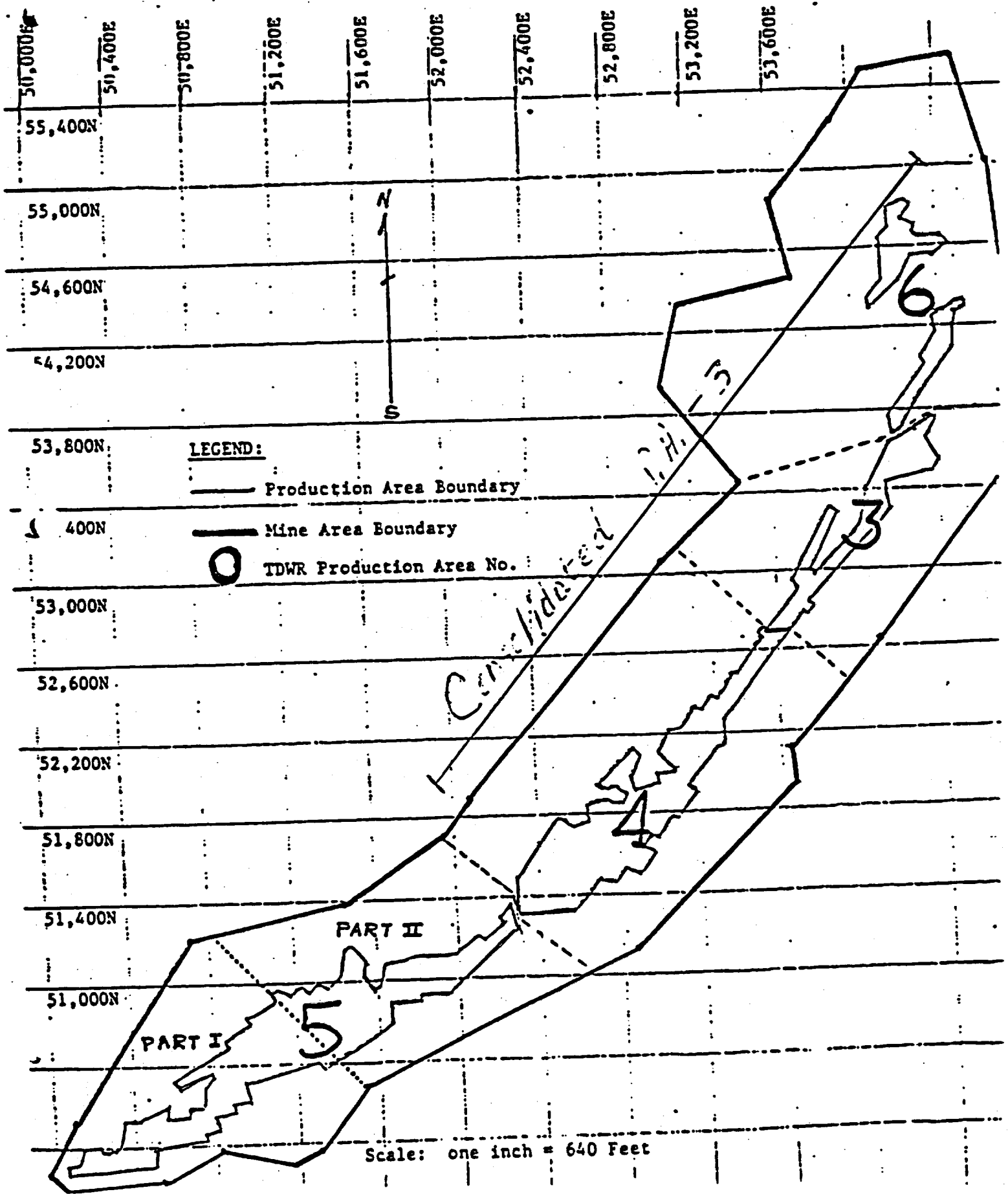
PMS - NON-PRODUCTION ZONE SHALLOW WELLS

NOTE: COORDINATES SHOWN ARE WMC

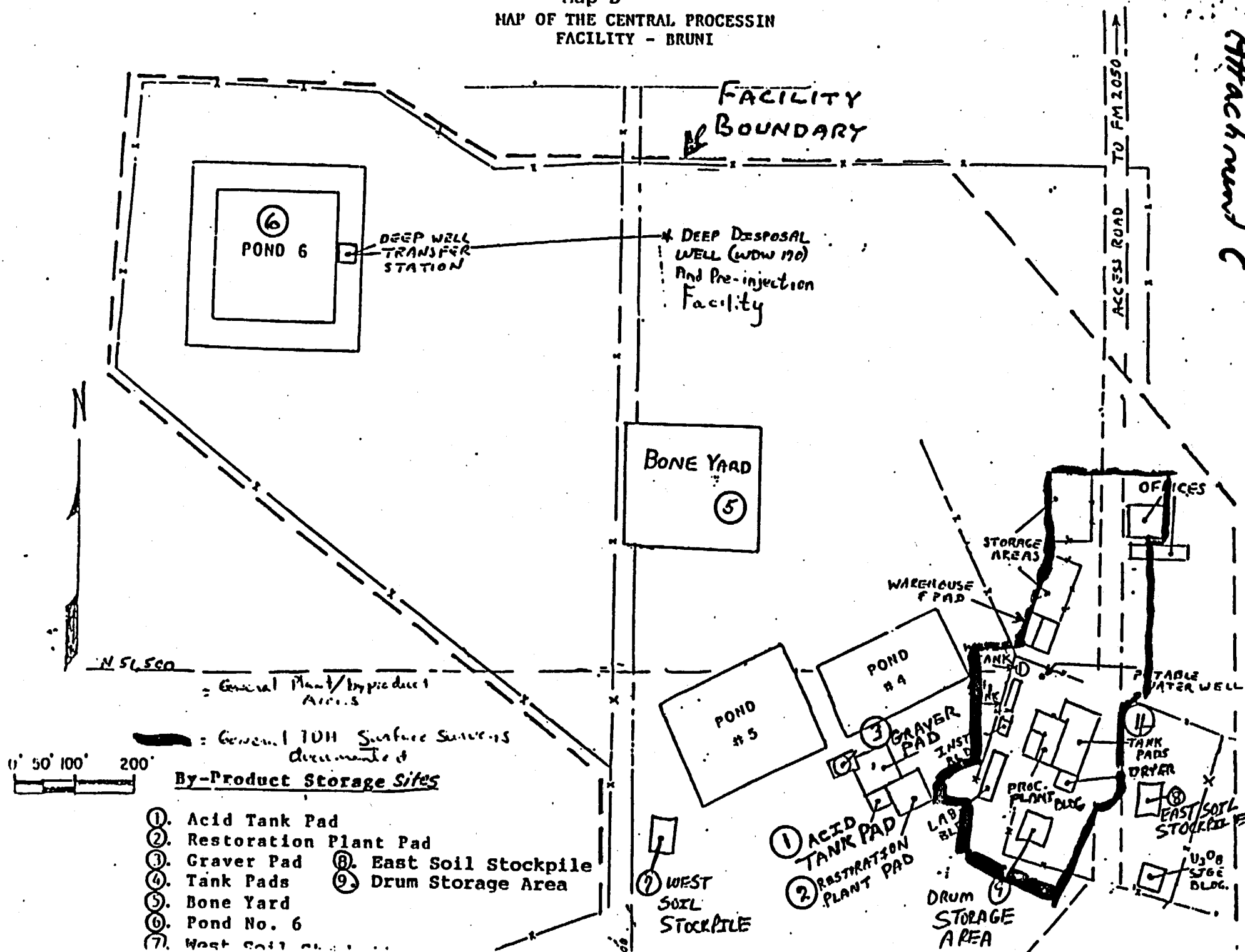
COORDINATES IN () ARE LAMBERT STATE PLANE

Map C

PRODUCTION AREAS AT BRUNI MINE SITE



Map D
MAP OF THE CENTRAL PROCESSING
FACILITY - BRUNI



INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF TEXAS AGREEMENT STATE PROGRAM

JUNE 16 - 27, 1997

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Texas radiation control program. The review was conducted during the period June 16-27, 1997 by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Georgia. Team members are identified in Appendix A. The review was conducted in accordance with the "Interim Implementation of the Integrated Materials Performance Evaluation Program Pending Final Commission Approval of the Statement of Principles and Policy for the Agreement State Program and the Policy Statement on Adequacy and Compatibility of Agreement State Programs," published in the Federal Register on October 25, 1995, and the September 12, 1995, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period March 11, 1994 to June 27, 1997 were discussed with Texas management on June 27, 1997.

The Texas Agreement State program is administered from two State agencies, the Texas Department of Health (TDH), and the Texas Natural Resource Conservation Commission (TNRCC). Organization charts for both agencies are included as Appendix B.

The TDH, Bureau of Radiation Control (BRC) regulates approximately 1,540 materials licenses, and received regulatory authority for the 11e(2) uranium recovery program as of July 21, 1997. In addition to the radioactive materials program, TDH administers a laboratory program for environmental sciences under the Bureau of Laboratories.

The TNRCC regulates low-level radioactive waste burial sites, and the decommissioning of former burial sites. TNRCC also regulated the uranium recovery program during the period of September 1993 to the time of the review. Authority for the uranium recovery program transferred to TDH on July 21, 1997.

The review focused on the regulatory program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Texas.

In preparation for the review, a questionnaire addressing the common and non-common indicators was sent to both agencies on April 18, 1997. Each agency provided a response to the questionnaire on May 22, 1997. A copy of each response is included in Appendix C to this report.

The review team's general approach for conduct of this review consisted of:

(1) examination of the responses to the questionnaire, (2) review of applicable Texas statutes and regulations, (3) analysis of quantitative information from the TDH and TNRCC licensing and inspection data bases, (4) technical review of selected licensing actions and inspections in each agency, (5) field accompaniments of nine materials inspectors, (6) a site visit of an uranium production facility, (7) the review of the low-level radioactive waste program, and (8) interviews with staff and management in both agencies to answer questions or clarify issues. The team evaluated the information that it gathered against the IMPEP performance criteria for each common and non-common indicator and made a preliminary assessment of the State's performance.

A draft of this report was issued to Texas for factual comment on July 25, 1997. The State of Texas responded in letters dated August 26, 1997 and August 29, 1997 (Attachment 1). The State's factual comments were considered by the team and accommodated in the report, except

for the requests to reconsider the findings for the two non-common indicators Sealed Source and Device Evaluation Program and Low-Level Radioactive Waste Disposal Program. The MRB met on September 22, 1997 to consider the proposed final report. Based on the need to conduct two independent reviews for each sealed source and device evaluation and the performance of the State in an isolated case, the review team recommended that Texas' performance with respect to the non-common performance indicator, Sealed Source and Device Evaluation Program, be found satisfactory with recommendations for improvement. The MRB considered Texas response to the isolated case and the scope of the technical quality audits performed by the State and revised the team's recommendation to satisfactory for this indicator. For the Low-Level Radioactive Waste Disposal Program, the MRB supported the review team's recommendation that Texas' performance be found satisfactory with recommendations for improvement. The MRB did direct the team to revise the final IMPEP report to reflect that the team's review is not intended as a review of applicant's assessment or acceptability of the proposed site. The MRB found the Texas radiation control program was adequate to protect public health and safety and compatible with NRC's program.

Due to significant revisions to Section 4.3, Low-Level Radioactive Waste Disposal Program, a proposed final version of this section was issued to State for factual comment on November 5, 1997. The State of Texas responded in letters dated November 14, 1997 and December 18, 1997 (Attachment 2). TNRCC's factual comments were considered by the team and a number, but not all, of the changes suggested were adopted into the final report.

Section 2 below discusses the State's actions in response to recommendations made following the previous review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common indicators, and Section 5 summarizes the review team's findings, recommendations and suggestions. Suggestions made by the review team are comments that the review team believes could enhance the States program. The State is requested to consider suggestions, but no response will be requested. Recommendations relate directly to program performance by the State. A response will be requested from the State to all recommendations in the final report.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

The previous routine review concluded on March 11, 1994, and the final combined results of the review were transmitted to both the Commissioner, TDH, and the Executive Director, TNRCC on December 28, 1994.

2.1 Status of Items Identified to TDH During the 1994 Routine Review

The 1994 review findings resulted in recommendations to TDH in three program indicators: (1) Status and Compatibility of Regulations; (2) Adequacy of Product Evaluations; and (3) Responses to Incidents and Alleged Incidents. TDH responded by letter dated February 8, 1995 and provided the Department's response and comments to the recommendations. On April 10, 1995, the Office of State Programs (OSP), notified the TDH that their responses would be evaluated during the next review. The status of these recommendations are as follows:

4.4. Uranium Recovery Regulatory Program

In the process of evaluating this performance indicator, the review team evaluated the State's responses to the questionnaire; reviewed information provided by the State regarding the status of licenses, status of the various sites, site inspection history, financial assurances, status of regulations; reviewed selected licensing and inspection files; evaluated the qualifications of the technical staff; and interviewed selected staff and managers working in the uranium recovery regulatory area.

Jurisdiction over uranium recovery activities was transferred from the TDH to TNRCC in September 1993, prior to the previous review. Since September 1993, TNRCC has been responsible for regulating the uranium recovery program which includes underground injection control, and decommissioning of uranium sites. During the 1997 legislative session of the Texas legislature, the regulatory responsibility for the uranium program was transferred (returned) to the TDH. The underground injection control program is an EPA-delegated program that will be retained by TNRCC. This transfer became effective on July 21, 1997. During the review, managers of TNRCC and TDH were in the process of working out the details of the transfer.

At the time of the review, Texas had 3 conventional mill licensees (3 sites) and 9 in-situ licenses (19 sites). All of the conventional mill licensed sites and all but 3 of the in-situ licensed sites are in various phases of closure. The active production facilities (in-situ) are Uranium Resources Incorporated (URI) sites identified as Kingsville Dome, and Rosita. The Vasquez facility has not yet been licensed.

4.4.1 Status of Uranium Recovery Program Inspection

The TNRCC program initially set the inspection priorities for mill sites at one year frequencies to be consistent with the inspection frequencies called for in IMC 2800 and IMC 2801. However, due to other programmatic priorities such as the Low-Level Waste Program, development of regulations, and licensing backlogs, the program established additional priorities for the uranium site inspections which were based upon potential health and safety issues, and environmental considerations. Program managers related that in order to address health and safety issues while managing the inspection backlog, emphasis is placed (in decreasing order) for response to incidents, the inspection of active operations and decommissioning activities, and finally to those sites that had been decommissioned but still requiring regulatory monitoring and observations. At the time of the review, 12 sites were on a one year inspection frequency. For 10 sites, TNRCC has established a two year frequency, and documented the justification for the frequency change for these facilities which are in restoration/reclamation mode since their activities did not warrant the same level of attention as facilities with a greater potential to adversely affect the health and safety of the workers and the public. The review team noted that the two year sites are not consistent with IMC 2800.

The State reported that four licenses were overdue for inspection (overdue by more than 25% of the NRC frequency). A review of the tracking system and the inspection files confirmed this information and noted that the four overdue sites had inspection frequencies of one year. The review team recommends that an action plan be developed and implemented by TDH to overcome the inspection backlog in the uranium recovery program.

At the time of the review, none of the operational production sites were due for inspection. Therefore, in lieu of inspector accompaniments, the reviewer accompanied the Section manager

to the URI, Kingsville Dome facility for a visit to a production site. This visit was conducted on June 4, 1997. TNRCC initially reported in the questionnaire that no annual supervisory accompaniments of inspectors had been performed; however, documentation was reviewed showing that the lead inspector was accompanied by the supervisor in March 1997. The other two inspectors work under the supervision of the lead inspector during team type inspections. The team considered the content of the report documenting the accompaniment, interviewed the supervisor and the inspector, and determined the accompaniment to be satisfactory.

All inspection reports are reviewed and signed by the supervisor prior to issuance. Notice of violations were confirmed to be transmitted to the licensee within the 30 days limit established by administrative procedures. The program has a tracking system for management of inspection reports, issuance of notices of violation, and escalated enforcement actions.

4.4.2 Technical Staffing and Training

The Manager (Registered Professional Engineer) of the UURW Section has the Section organized into three teams; the UIC Permitting Team, the Licensing Team, and the Inspections and Compliance Team. The Licensing Team handles the uranium, LLRW and buried sites for specific licensees, and consists of a Team Leader and eight other professionals. The team is made up of two engineers (PE's), one Ph.D. biologist, four health physicists, two geologists, and one vacant hydrologist position. The Team Leader also has many years experience in the uranium industry.

The Inspection and Compliance Team consists of a Team Leader and seven other professionals which includes two engineers (one PE), two geologists, and three health physicists. The Team Leader is also a geologist with several years experience. Two of the health physicists are still in training and are being scheduled for NRC training as the space becomes available.

The review team examined the training, education, and experience of the staff members and found that the qualifications of the technical staff are commensurate with the expertise identified as necessary to regulate uranium recovery and 11e(2) byproduct material.

Additional support is provided by the UIC Permitting Team and the Division staff in environmental surveillance, environmental monitoring, verification surveys, accounting and finance, systems analysis, legal staff, and sample analysis on an as needed basis. TDH Laboratory is under contract to provide sample analyses as needed, and was visited by the review team and found to be a state-of-the-art facility which participates in laboratory inter-comparison programs. Additional details of the laboratory can be found in Section 3.4.

4.4.3 Technical Quality of Licensing Actions

The evaluation of this area focused on a review of the licensing process and the evaluation of health physics type issues. Three recent licensing actions were evaluated as a sample of work performed by the Section's Licensing Team, and included licensing actions performed by each of the three project managers on the Licensing Team. This casework is identified as: (1) Chevron Resources, Panna Maria Project, (RW2602), which is a conventional mill tailings pond under reclamation/closure; (2) Everest Exploration, Inc., Hobson (RW 3626-000), McBryde (RW 3626-001), Tex-1 (RW 3626-003), and Mt. Lucas (RW 3626-005) sites, which are in-situ sites that are all under restoration/reclamation; and (3) Uranium Resources, Inc., Kingsville Dome (RW 3653-000), Rosita (RW 3653-001), and the Vasquez (RW 3700) sites.

The detailed licensing process includes a tracking system covering the administrative and technical review of all applications. Each phase and step of the process were found to have documentation relative to the issues under review, and reviewed and concurred upon by the appropriate technical disciplines and representatives of the licensing team, the inspection/compliance team, and management. The review team noted that the team approach is effective in getting peer review and the necessary expertise applied to the specific review.

In examining the license and selected background information in the file, the review team found that the licenses included appropriate license conditions for the reclamation/closure operations at the facility. Detailed procedures have been tied down by license conditions.

4.4.4 Technical Quality of Inspections

The review team examined the compliance summaries prepared for each licensee identified under the above Section (4.4.3), and the latest inspection report and enforcement action prepared for the licenses. The documentation for these activities show that inspections and audits adequately covered the scope, completeness, and technical accuracy necessary to determine compliance with regulations, license conditions, and available guidance. The reports were narrative type reports with good detail, and with well documented and referenced violations as appropriate. Appropriate enforcement actions were taken given the scope of the violations noted.

The inspection reports and enforcement actions are also tracked in the system, and the reports receive appropriate review and concurrence by other members of the inspection team, the licensing team, and managers. Any enforcement actions going beyond a notice of violation must also be reviewed by the Legal Section and be signed by the Commission.

4.4.5 Response to Incidents and Allegations

The State reported seven incidents (four sites listed in TNRCC's questionnaire response) but there were no allegations pertaining to the uranium recovery activities. The incidents were addressed in a timely manner and the documentation was complete and timely. The evaluations and actions taken by the States were determined to be satisfactory. The documentation was located in the license file and the lead inspector's incident file.

TNRCC has one staff person who has received training under the NMED system and the Section has received the software for implementation. TNRCC summarized incident information is provided on printed copy to the OSP and to INEEL for entry into the NMED system.

Item 7

Based on the IMPEP evaluation criteria for the above five performance areas, the review team recommends that Texas' performance with respect to the Indicator, Uranium Recovery Program, be found satisfactory with recommendations for improvement.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found the State's performance with respect to each of the common performance indicators and the non-common indicators, Legislation and Regulations and Sealed Source and Device Evaluation Program to be satisfactory. The review team found the State's performance with respect to the Low-Level Radioactive Waste Disposal Program and the Uranium Recovery Program to be satisfactory with recommendations for

improvement. Accordingly, the team recommended, and the MRB concurred in finding the Texas program to be adequate to protect public health and safety and compatible with NRC's program.

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Below is a summary list of recommendations and suggestions, as mentioned in earlier sections of the report, for consideration by the State.

1. The review team suggests that amendments and renewals be prioritized so that amendments which impact health and safety (i.e., new RSO because the previous one left the company; major proposed procedure changes which could effect radiation safety issues) are completed ahead of the amendments and renewals which are more routine (i.e., adding a source, or another user when ten sources or users are already on the license; renewal by letter). (Section 3.3)
2. The review team suggests the State consider standardizing their primary and supplementary field note forms. These could be modeled after the NRC forms as discussed with BRC. (Section 3.4)
3. The review team suggests documenting in reports summary discussions of inspection findings with management at the conclusion of inspections. (Section 3.4)
4. The review team recommends that the State adhere to the policy of annual supervisory accompaniments of all qualified inspectors. (Section 3.4)
5. The review team recommends that all radiation detection instruments used for confirmatory surveys (field measurements) be calibrated on for all ranges encountered by inspectors. (Section 3.4)
6. The review team suggests that the State initiate actions (through implementation of the procedures provided in the March 1995 Handbook on Nuclear Material Event Reporting in the Agreement States) to directly utilize the NMED system. (Section 3.5)
7. The team recommends that TNRCC vigorously pursue the changes necessary to make Texas law (statutes and regulations) compatible with those of NRC in the low-level waste area and, if necessary, raise this issue to higher levels in the State government. (Section 4.1)
8. The review team suggests that the State consider the comments in Appendix G, and take action as the State deems appropriate. (Section 4.2.1)
9. The review team recommends that the State perform an evaluation to determine the safety significance of the issues identified by the review team pertaining to registration certificate number TX-0246-D-103-S and to identify any other issues that may exist, and re-evaluate the application, as necessary, to ensure that all pertinent safety and regulatory issues are adequately addressed. (Section 4.2.1)
10. The review team recommends that the State evaluate an adequate sample of additional safety evaluations to ensure that the deficiencies identified in TX-0246-D-103-S are adequately addressed in the additional cases, and to demonstrate that this was an isolated occurrence. (Section 4.2.1)

- 11. The review team recommends that the State review the issue of concurrence reviews for SS&D safety evaluations and implement procedures that require an independent technical review for all future evaluations.(Section 4.2.1)**
- 12. The review team suggests that the State consider assigning safety evaluations to those staff members currently being trained to perform SS&D safety evaluations to enable them to gain enough experience and obtain registration certificate signature approval before the staff member currently performing the initial review retires. (Section 4.2.2)**
- 13. The review team suggests that the State take a more aggressive approach to forwarding information to the agency responsible for the product evaluation and registration certificate where there is a possibility that the failure or problem may be a generic issue. (Section 4.2.3)**
- 14. The review team suggests that, if warranted by the amount of data, the baseline data should be entered into a computer database to facilitate its review and use. (Section 4.3.1)**
- 15. The review team suggests that a consolidated training record be developed to enable assessment of training across the entire program. (Section 4.3.2)**
- 16. The review team suggests that TNRCC complete their efforts to document the bases for all staff findings. (Section 4.3.3)**
- 17. The review team recommends that TNRCC ensure that well documented technical bases exist for the performance assessment. Sensitivity analyses could be completed to ensure that key aspects of the performance assessment analysis have been reviewed. (Section 4.3.3)**
- 18. The review team recommends that an action plan be developed and implemented by TDH to overcome the inspection backlog in the uranium recovery program. (Section 4.4.1)**