INTRODUCTION

At the beginning of the 75th Legislature, the Honorable James E. "Pete" Laney, Speaker of the Texas House of Representatives, appointed nine members to the House Committee on Environmental Regulation: Warren Chisum, Chair; Ray Allen, Vice Chair; Edmund Kuempel; John Culberson; Robert Talton; Zeb Zbranek; Charlie Howard and Dawnna Dukes.

During the interim, the Speaker assigned charges to the committee. The Committee on Environmental Regulation has completed its hearings and investigations, and has adopted the following report.

The committee wishes to express appreciation to the following people for their invaluable assistance:
From the Bureau of Radiation Control, Texas Department of Health:

Richard Ratliff, Bureau Chief
Ruth McBurney, Director, Division of Licensing and Registration and Standards who wrote the bulk of "Department of Health Policies Related to Extremely Low-level Radioactive Waste" and generously allowed the Committee to edit her work for use in this report.
Art Tate, Director of Compliance and Inspection

From the Texas Natural Resource Conservation Commission:

Jeff Saitas, Executive Director
Alice Hamilton Rogers, P.E., Section Manager, Underground Injection Control and Radioactive Waste Section
Susan Jablonski, Low-Level Radioactive Waste Specialist
Brian Christian, Legislative Liaison, Intergovernmental Relations

We also offer special appreciation to Ambrose Gonzales, Information Specialist, Texas Legislative Council, for his unending good humor and patience in dealing with Committee computer issues.

Finally, the Committee wishes to express appreciation to the citizens and local government officials who participated in our hearings for their time and efforts on behalf of the Committee.

HOUSE COMMITTEE ON ENVIRONMENTAL REGULATION

INTERIM STUDY CHARGES

CHARGE ONE:
Identify program options in all areas of the state for achieving and maintaining compliance with federal air quality requirements while preserving the potential for economic growth. The review should consider the effects of projected population growth on transportation.

CHARGE TWO:
Determine the ramifications surrounding the handling, processing and disposal of low-level radioactive waste within the borders of the state as they relate to compact waste, non-compact waste generated by the federal government, mixed waste, and licensing of a private or state entity. Review policies of the Department of Health related to extremely low-level radioactive waste to determine consistency with other states' regulations.

CHARGE THREE:
Assess the merits of the current program transferring one-half of the solid waste tipping fee to councils of government to be dispersed for local solid waste projects.

CHARGE FOUR:
Conduct active oversight of the agencies under the committee's jurisdiction.

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AIR QUALITY COMPLIANCE

OVERVIEW[1]

The federal Clean Air Act Amendments of 1990[1] require air quality in the United States to meet certain ambient air quality standards[2] deemed acceptable to protect human health and welfare.[3] In shifting the burden to the states, Congress finds that, ". . . air pollution prevention (that is, the reduction or elimination . . . of pollutants produced or created at the source) . . . *is the primary responsibility of States and local governments . . .*"[emphasis added].[4] Congress directs the governor of each state to submit a list of regions in the state which fail to meet the federal air quality standards[5] promulgated by The Environmental Protection Agency (EPA).[6] The EPA may then formally designate these regions "nonattainment areas."[7] The state must then submit a State Implementation Plan (SIP)[8] which shall, ". . . include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance. . ." [9]

Based on the current levels of air contaminants in Texas, federal law requires a SIP for the Dallas-Fort Worth and Beaumont-Port Arthur regions by April 30, 2000 and a plan for the Houston-Galveston area by December 2000.[10] El Paso falls under the definition of a nonattainment area as well, but no upcoming deadline for updating its air quality strategy looms overhead.[11] New air quality standards could lead the EPA to add the counties surrounding San Antonio, Austin, Tyler, Marshall and Longview to the list of cities which fail to comply with the federal clean air standards.[12]

FAILURE TO COMPLY

If the EPA determines that a state fails to submit a SIP, the SIP fails to meet the long list of mandates or a state fails to follow the SIP, federal law expressly provides for the imposition of any or all of at least three types of sanctions:

1. **the EPA Administrator is specifically required to promulgate a federal implementation plan, in effect stripping all flexibility, control and enforcement away from the state;[13]**
2. **the EPA Administrator can prohibit the Secretary of Transportation from disbursing**

[1] **For further analysis and overview, see *Clean Air: Texas' Response to Federal Mandates* (House Research Organization, Texas House of Representatives), October 5, 2000.**

federal highway funds under Title 23 for any transportation project in a nonattainment area, except for safety projects or programs such as public transit, construction of bus lanes or highway projects which would improve air quality;[14] and

3. **the EPA Administrator may require new or modified sources to demonstrate a ratio of emissions reductions to increased emissions of at least 2 to 1, meaning any new business or expanded business which needs an air permit must reduce emissions twice as much as will be added by the permitted activity.[15]**

In addition, federal law may limit construction or expansion or federal airports, ports or other federal facilities, providing that, "*[no] department, agency, or instrumentality of the Federal Government* shall engage in, *support in any way* or provide financial assistance for, license or permit, or approve, *any activity which does not conform to [a SIP]* after it has been approved . . ."[emphasis added].[16]

STATE IMPLEMENTATION PLANS (SIPs)

Simply stated, a state's SIP submitted to the EPA for each nonattainment area must list in detail the regulations and enforcement mechanisms the state intends to use in order to achieve air quality compliance,[17] based on a strict timetable outlined in federal law.[18]

To date, the Texas Natural Resource Conservation Commission (TNRCC) has aimed two separate major rules packages directly at bringing Texas regulations into a form to ensure that regional SIPs will achieve compliance with the federal air quality requirements. Though provisions in each rules package focus on one region, other provisions apply to the central and east part of Texas east of Interstate 35 and Interstate 37, while still others apply statewide.

<u>December 31, 1999 TNRCC Rules</u>

Rules published by the TNRCC on December 31, 1999[19] which the agency later adopted[20] apply chiefly to the Dallas-Forth area or the Beaumont-Port Arthur area, and in general include the following provisions:

1. **establish basic criteria by which a local government can voluntarily establish a vehicle scrappage program (this proposal was requested by a steering committee representing Dallas-Fort Worth nonattainment counties);[21]**
2. **establish new vehicle emission inspection and maintenance (I/M) requirements utilizing ASM-2 (a treadmill type dynamometer) and OBD (On Board Diagnostic [a plug-in computer test]) technologies in an 8 county Dallas-Fort Worth area which are not currently subject to an I/M program (Ellis, Henderson, Hood, Hunt, Johnson, Kaufman, Parker, and Rockwall counties), provided the individual county commissioners courts and the most populous municipality in each county submit a resolution requesting an I/M**

program;[22]

3. **require 'remote sensing' of vehicles in an 8 county area near Houston-Galveston (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties);**[23]
4. **require 'Low Emission Diesel' to be used for both on-road and off-road applications in a 12 county Dallas-Fort Worth area at an additional cost of approximately $.04 per gallon (applies to Collin, Dallas, Denton, Ellis, Henderson, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties);**[24]
5. **require electric-powered instead of gasoline or diesel-powered ground support equipment at airports in the Dallas-Fort Worth area, at an estimated initial capital cost to the airports of $83.5 million to replace 3008 pieces of equipment, less trade-in or current equipment, though the capital cost may be offset by cheaper operating expenses and fuel and maintenance savings over time (includes equipment such as pushback tugs, air start units, air conditioning units, forklifts and ground power units);**[25]
6. **require 50% of 50 to 750 horsepower engines, and 100% of any 750 or more horsepower engines, in any private or government fleet of non-road diesel engines in the twelve county Dallas-Fort Worth area to meet more stringent emissions standards by 2007; this will likely result in a $97.8 million to $137.9 million cost to fleet owners to replace 52,297 pieces of equipment (includes agriculture equipment, backhoes, graders, bulldozers, forklifts, generators, cement mixers and the like);**[26]
7. **require off-road Large Spark-Ignition (LSI) engines 25 horsepower and larger in the 12 county Dallas-Fort-Worth area to meet California engine standards, beginning in 2002 and to be phased in, at a cost to owners of approximately $1 million to $5.1 million to replace 10,130 engines, less a 15% to 20% fuel savings (includes engines such as those used to power industrial equipment like forklifts, generators, compressors, pumps, sweepers or large lawn tractors);**[27]
8. **restrict operation of diesel construction equipment rated at 50 horsepower or more in the 12 county Dallas-Fort Worth area between the hours of 6:00 a.m. and 10:00 a.m., from June 1 through October 31;**[28]
9. **require nitrogen oxide emissions reductions in east and central Texas from industrial sources of 50% for electric utilities, and 30% to 40% from cement kilns (includes cement kilns, electric utility power boilers and stationary gas turbines located in Atascosa, Bastrop, Bexar, Brazos, Calhoun, Cherokee, Comal, Ellis, Fannin, Fayette, Freestone, Goliad, Gregg, Grimes, Harrison, Hayes, Henderson, Hood, Hunt, Lamar, Limestone, Marion, McLennan, Milam, Morris, Nueces, Parker, Red River, Robertson, Rusk, Titus, Travis, Victoria, and Wharton counties); the implementation will result in a total emissions reduction rate of 88% for electric utilities in Dallas, Denton, Collin, and Tarrant counties;**[29]
10. **require certain electric utility and industrial, commercial and institutional (IC) boilers in**

the Beaumont-Port Arthur area and the Dallas-Fort Worth area to meet new emission specifications and require certain process heaters in the Beaumont-Port Arthur area and lean-burn engines in the Dallas-Fort Worth area to meet new emission specifications, at an estimated cost of $39.5 million to $42 million (affects Hardin, Jefferson, and Orange counties as well as Collin, Dallas, Denton, and Tarrant counties);[30] and

11. prohibit the sale of new water heaters, small boilers and process heaters, unless the equipment meets certain emissions standards, at an additional cost of $0 to $20,000 per unit for larger facilities like an apartment complex, or $3 to $50 for residential water heater (*this rule would be effective statewide*).[31]

<u>August 25, 2000 TNRCC Rules</u>

On August 25, 2000, the TNRCC published rules which substantially apply to the Houston-Galveston SIP, and generally include the following provisions:

1. establish an emissions banking and trading program where the agency assigns an emissions cap in the Houston-Galveston area to allow an owner of an emissions source in the area to retire the source or reduce emissions and sell the reduction credit to another source;[32]

2. require that new air conditioner units in the certain areas of the state contain ozone reducing technology which directly reduces ozone at a cost of between $42 and $116 for typical residential units and $420 to $5,800 for large commercial units (affects Hardin, Jefferson and Orange counties, Collin, Dallas, Denton and Tarrant counties, and generally all of over 90 counties in east and central Texas east of Interstate 35 or Interstate 37;[33]

3. require low-emission diesel (LED), and for both *on-road* and *off-road* use in the Dallas-Fort Worth, Houston-Galveston, and Beaumont-Port Arthur areas as well as in over 90 additional central and eastern Texas counties east of Interstate 35 or Interstate 37, and require LED *statewide* for *on-road* use, at an increased production cost of between $.04 and $.08 per gallon;[34]

4. establish vehicle emission inspection and maintenance (I/M) requirements utilizing ASM-2 (a treadmill type dynamometer) and OBD (On Board Diagnostic [a plug-in computer test]) technologies in Harris County beginning May 1, 2002, and in Brazoria, Fort Bend, Galveston, and Montgomery counties beginning May 1, 2003, and in Chambers, Liberty and Waller counties beginning May 1, 2004; fees for emissions tests in Harris County will increase from $14 to $22.50 and upgrades of testing equipment per lane for testing stations will cost $25,000; and in the remaining counties where no current emissions testing program exists, the motorists will pay a new $22.50 testing fee and the capital investment for testing equipment will cost $40,000;[35]

5. require low-sulfur gasoline (LSG) for both on-road and off-road use in the counties located in the Dallas-Fort Worth, Houston-Galveston and Beaumont-Port Arthur areas as well as in over 90 counties in central and eastern Texas east of Interstate 35 or Interstate 37 at

an additional production cost of $.03 to $.07 per gallon, equating to an additional $20 to $47 per vehicle per year in fuel costs for motorists, and an undetermined multi-million investment for refineries;[36]

6. **require diesel emulsion fuel in the Houston-Galveston nonattainment area, which relies on a water-in-fuel mixture that can reduce nitrous oxide emissions by up to 30% at a cost of $.08 more per gallon and $400,000 for fuel distributors to purchase a blending unit;[37]**
7. **prohibit the sale of non-road Large-Spark-Ignition (LSI) engines with greater than 25 horsepower unless the engine meets California standards beginning in 2004, at an additional cost of approximately $500 per engine (includes engines such as those used to power industrial equipment like forklifts, generators, compressors, pumps, sweepers or large lawn tractors;[38] the TNRCC initially adopted this provision to apply only to the Dallas-Fort Worth area, but is now proposing a *statewide application* of the rule);[39]**
8. **require exhaust systems on all heavy-duty *on-road* or *off-road* vehicles manufactured prior to 1997 in the Houston-Galveston nonattainment area to use exhaust systems which will reduce nitrous oxides by 80% compared to emissions without the exhaust system, at a cost of $500 to $2,000 per vehicle affected;[40]**
9. **beginning on April 1, 2005, restrict the use of all spark-ignition lawn and garden service equipment from 6:00 a.m. until noon, from April 1 through October 1 in the 8 county Houston-Galveston nonattainment area;[41]**
10. **require 90% reductions in nitrous oxide emissions from ground-support equipment at airports in the Houston-Galveston nonattainment area by 2005 by any means available, including by purchasing emission reductions from another source in the area cap and trade program;[42]**
11. **require large compression engines above 50 horsepower to meet strict emissions requirements by 2007 in the Houston-Galveston nonattainment area;[43]**
12. **prohibit construction in the 8 county Houston-Galveston nonattainment area from April 1 through the last Sunday in October of each year, between the hours of 6:00 a.m. and noon;[44]**
13. **prohibit a heavy-duty engine from idling for more than 5 minutes in the Houston-Galveston nonattainment area between April 1 and October 31;[45]**
14. **require increased control of vented volatile organic compound emissions from facilities such as bakeries, print-shops and batch plants at an estimated cost of between $19,300 and $22,300 per vent; and[46]**
15. **require at least a 90% reduction in nitrous oxides from small and large industrial sources in the Houston-Galveston nonattainment area, including facilities such as boilers, stationary gas turbines, process heaters and furnaces, and fluid catalytic cracking units, at a total estimated capital cost for all known affected sources in the Houston-Galveston area of approximately $2.7 billion with an increased annual cost of approximately $597 million.[47]**

Other State Sip Rules

The Texas Transportation Commission adopted rules to allow the TNRCC to conduct studies at locations as needed to determine if lower speed limits would reduce auto emissions. The TNRCC could then propose an 'environmental speed limit' (ESL) for a certain area, to be adopted or rejected by the Transportation Commission. In effect, an ESL would be a reduction in the speed limit by 5, 10, or 15 miles per hour in and along designated highways in an effort to reduce air emissions from cars and trucks.[48]

The TNRCC withdrew rules proposing to implement California Low Emission Vehicle (LEV) standards or federal Tier II LEV standards for new vehicles purchased in Texas.[49] Instead, based on agreements with the EPA and auto manufacturers, the TNRCC will require LEV standards for new vehicles in Texas with a basis in federal LEV standards, with consideration and credit for the specific evaporative control systems.[50]

In response to TNRCC rules which would essentially require a 90% reduction in nitrous oxide emissions from ground-support equipment at airports,[51] The Air Transport Association sued in federal court, claiming that federal law regulates airlines and therefore preempts state regulation of ground-support equipment.[52] However, the TNRCC and the airlines expect to reach an agreement which the airlines or another party acting on their behalf will achieve the same 90% level of emissions reductions, but from other sources than ground-support equipment.[53] If the TNRCC and each individual airline involved reach an acceptable agreement in the form of an enforceable agency agreed order, the TNRCC will repeal and withdraw the corresponding rules.[54]

Lastly, because of concerns relating to water contamination from gasoline additives in reformulated gasoline (RFG), the TNRCC decided against adopting a proposed rule to extend RFG to the 8 outlying counties surrounding the Dallas-Fort Worth area.[55]

EPA Reaction to the TNRCC Rules And State SIPs

Congress clearly holds Texas responsible for meeting clean air mandates, but the federal government hinders the state's ability to comply. Federal law not only fails to regulate major sources of air pollution including aircraft and railroad engines, but federal law also prohibits the state from regulating those sources.[56]

Despite of the far-reaching TNRCC proposals and the nonexistent federal assistance with preempted sources, the EPA says the Dallas-Fort Worth plan could still fail to meet federal air quality standards, and the state might need to consider even further proposals in the near future.[57] However, the EPA did rule that Dallas-Fort Worth plan contains all the required elements, and the federal agency must now conduct a scientific review to determine whether the

requirements will meet federal air quality standards.[58]

Similarly, the EPA says the Houston-Galveston plan also may fall short of meeting the national ozone standard, though the federal agency applauds the TNRCC for the work.[59] The EPA says the plan represents a very serious effort, but whether the rules will meet federal requirements remains a question.[60]

CLEAN AIR AND TRANSPORTATION CONFORMITY

Former Texas Transportation Commission Chairman and now board member David Laney calls the stakes high, and says that, "barring something unforseen, air quality will be the crucial issue for transportation."[61] Federal law imposes 'transportation conformity' by prohibiting any metropolitan planning organization from approving any project unless the head of the organization proves the consistency of the project with the air requirements in the SIP for the region.[62] In the context of federal mandates, transportation conformity means that a transportation project may not create new air quality violations, make existing violations worse, nor delay attainment with air quality standards.[63] Failure in a nonattainment area to comply with an EPA approved SIP effectively results in the halt of highway expansion in the nonattainment area, that is unless the expansion will increase safety or reduce air emissions.[64]

Based on the federal Clean Air Act, a federal district court ruling in March of 1999, effectively suspended $700 million in proposed highway projects in Atlanta, Georgia because the city failed to comply with federal air standards.[65] Under the same ruling, Texas highway officials warn of the high potential that 18 projects worth $847 million in Austin and 46 projects in San Antonio worth $791 million will be lost or delayed if those areas are declared nonattainment areas.[66] EPA officials and environmental groups say the state agency overstates the threat, since highway projects will be allowed to continue if a state can prove the project will actually reduce emissions.[67] It should be noted, however, that Texas only receives 85 cents for every dollar sent to the federal government for transportation needs.[68]

THE ONE-HOUR VS. THE EIGHT-HOUR OZONE STANDARD[2]

The EPA established a one-hour ozone standard of 0.12 parts per million in 1979. Before

[2]**Information in this Section of this report is derived from *General Summary of the FCAA Ozone Standards, Prepared by TNRCC Staff, March 14, 2000*, in its entirety, on file with The TNRCC.**

Congress added the Clean Air Act Amendments of 1990, the Act provided states with flexibility in developing a SIP. The Act set basic requirements and then allowed states to focus necessary strategies to meet the standard and maintain it in a particular area. However, the 1990 Federal Clean Air Act Amendments provided a more prescriptive set of elements to be included in some ozone SIPs, including mandated industrial controls, gasoline vapor recovery controls, vehicle inspection and maintenance and reformulated gasoline. The Act also allows EPA to periodically review the ozone standards for protectiveness.

After passage of the 1990 amendments, the one-hour ozone standard remained at 0.12 parts per million (subsequent references to the standard use parts per *billion* rather than parts per *million*). The state ozone SIP activities focused on the attainment of that one-hour standard.

The EPA bases the one-hour standard on the average of readings taken over one-hour periods. Air quality monitors measure ozone in parts per billion (ppb). An area violates the standard when the highest one-hour reading of the day at any one monitor equals or exceeds 125 ppb more than three times during any consecutive three year period. Areas in nonattainment of the one-hour standard are Houston-Galveston, Dallas-Fort Worth, Beaumont-Port Arthur and El Paso.

However, in July 1997, the EPA issued new air quality standards for ozone and particulate matter, known as the eight-hour standard. The EPA intends the eight-hour standard to provide a more representative view of pollution than the one-hour standard. The EPA bases the new standard on the average value of readings taken over eight-hour periods. An area violates this standard when the three-year average of the fourth-highest daily maximum eight-hour ozone concentration equals or exceeds 85 ppb, as opposed to 125 ppb for the one-hour standard.

Example of nonattainment of 8-hour ozone standard

Daily High Readings	Year			3-Year Average
	1997	1998	1999	
Highest	96	91	103	NA
2nd highest	91	85	97	NA
3rd highest	90	82	97	NA
4th highest	87	81	96	88

In attempting to create the new eight-hour standard, the EPA imposes a less prescriptive manner for how states reach attainment. Mandated control measures will be equivalent to pre-1990 mandates, and states will again enjoy a certain amount of flexibility for attainment.

Areas in Texas in violation of the eight-hour standard include the same areas in violation of the one-hour standard (Houston-Galveston, Dallas-Fort Worth and Beaumont-Port Arthur), excluding

El Paso. In part because of a higher eight-hour ozone standard of 85 ppb, as opposed to 125 ppb for the one-hour standard, areas in violation of the eight-hour standard also include Tyler-Longview-Marshall, Austin and San Antonio and the surrounding regions.

Certain industry groups and The American Trucking Association challenged the new eight-hour standard in a lawsuit filed in December 1998. In response, a three judge panel of the Court of Appeals for the District of Columbia issued an order on May 14, 1999. The Court ruled that the standard setting provisions of the Federal Clean Air Act, under which the EPA set the eight-hour standard, may be an unconstitutional delegation of authority from Congress to the EPA. However, the Court determined that the EPA does have the authority to designate areas as attainment, nonattainment, or unclassifiable under the new standard. In summary, the Court left the eight-hour standard in place but determined that the EPA may not enforce it. The EPA appealed, and the U.S. Supreme Court will hear the case on November 10, 2000.[69]

Even with an established standard and an unenforceable standard, guidance issued by the EPA in March 2000 nevertheless requires states to provide recommendations regarding which areas to designate nonattainment. The TNRCC suggests that even though the Austin, San Antonio and Tyler-Longview-Marshall regions may violate the new eight-hour standard, in light of the legal controversy surrounding the new standard, these regions should not fall under the definition of nonattainment.[70] On June 26, 2000, Texas Governor George Bush requested the EPA to declare these questionable areas as 'unclassifiable' rather than nonattainment areas.[71]

AUTO EMISSIONS

EPA officials say unless reductions in auto emissions occur, nonattainment and near-nonattainment areas will never meet federal air standards.[72] Editorial writers blame the air crisis in large part on cars, trucks and sport utility vehicles and call for increased auto emissions testing and other controls on mobile emissions.[73] The EPA says in order to comply with federal air standards, the state must obtain commitments from the counties surrounding the Dallas-Fort Worth metroplex to join in the clean air program, especially the expanded auto emissions program, or find an alternative.[74]

In part because of the unpopularity of auto emissions testing, the TNRCC will not expand tailpipe tests unless asked to do so by local officials.[75] Despite the unpopularity of the car testing program, regional officials in the Dallas-Fort Worth area,[76] Houston[77] and San Antonio[78] realize that they must address auto emissions to address the air problems. Unlike supporting the cancellation of the testing program in 1995, local leaders now seem to support the idea of an increased car testing and repair program.[79] TNRCC officials say the public will accept the newer,

stricter car testing chiefly because of increased testing locations and allowing repairs by the same business that conduct the tests.[80]

Some of the newer tests under consideration will measure nitrogen oxides, which the current test cannot measure.[81] The newer test requires that the wheels of the car turn with a load on the engine, so the car must be on a dynamometer which resembles a treadmill.[82] In any event, federal rules require the vehicle computer to be tested to measure emissions by use of an "on-board diagnostic" test for models 1996 or newer.[83]

Federal regulations will soon require light trucks, including sports utility vehicles, minivans, vans and pickups to meet the same emissions standards as cars.[84] Nearly half the vehicles sold today include light trucks, which account for three to five times the amount of pollution as the average passenger car.[85] The EPA estimates the price of a light truck to increase by about $200.[86] Despite the adoption of new federal standards requiring the sale of only cleaner, less polluting new vehicles in Texas by 2004, environmental groups say the TNRCC should adopt even tighter restrictions with even cleaner cars.[87]

Lastly, some experts claim lower sulfur gasoline will reduce the same emissions as removing 54 million cars nationally from the highways, at a cost of 6 cents per gallon more.[88] Phillips Petroleum in Borger, Texas already started preliminary construction of a 6,000 barrel per day gasoline refinery unit to produce reduced sulphur fuel at an estimated extra cost of $.02 cents per gallon.[89] The committee would like to note that the TNRCC should be applauded for the agency's policy to expedite permitting decisions which will result in cleaner air across the state; in the case of the permitting of the Phillips, Borger facility, the agency issued the permit in approximately 60 days.

REFORMULATED GASOLINE AND OXYGENATED FUEL

The Clean Air Act Amendments of 1990[90] established the Federal Reformulated Gasoline (RFG) Program in an effort to reduce the emissions of pollutants from motor vehicles. Under the program, RFG must contain 2% oxygen by weight.[91] To date, this goal has previously been achieved through the use of the oxygenate methyl tertiary butyl ether (MTBE) or ethanol (a fuel-blending stock made from grain). Over 85% of RFG contains MTBE while about 8% percent contains ethanol.[92]

In the past 10 years, refiners along the Texas Gulf Coast built facilities to produce MTBE based on EPA regulations, which now accounts for about 74% of the MTBE produced in the United States, and representing $2 billion in economic activity, with 25,000 direct and indirect jobs.[93]

The EPA classifies MTBE as a possible carcinogen,[94] but some scientists say it has never been proved a health hazard.[95] Because of MTBE's water solubility, the substance can more easily migrate into and be detected in groundwater and surface water than other components of gasoline. Concerns surrounding MTBE prompted the EPA to appoint a blue ribbon panel, consisting of leading experts from the scientific, government, automotive, and water communities, to investigate the costs and benefits associated with the use of oxygenates in gasoline. The report issued by the panel concludes in part that:

> **A major source of groundwater contamination appears to be releases from underground gasoline storage systems. These systems have been upgraded over the last decade, likely resulting in reduced risk of leaks. However, approximately 20% of the storage systems have not yet been upgraded, and there continue to be reports of releases from some upgraded systems, due to inadequate design, installation, maintenance, and/or operation.[96]**

Further, a recent half-million-gallon gasoline pipeline leak near Lake Tawakoni in the Dallas area brought further scrutiny to the MTBE issue because the substance caused water to taste and smell strange, though TNRCC officials say the MTBE in the water never posed a health threat.[97] One editorial writer notes the irony in that, "[An] additive that is supposed to clean the air contaminated the water," and calls for an outright ban on MTBE.[98]

Although the EPA approved MTBE to mitigate air pollution, the agency recently asked Congress to phase out MTBE and instead require the use of ethanol.[99] The Blue Ribbon Panel observes, "[it] is difficult to make a comparative assessment of MTBE versus ethanol gasoline releases, as there is relatively little field data characterizing the behavior of ethanol gasoline releases."[100]

Without authority to ban MTBE, the EPA alternatively plans to utilize the little-used Toxic Substances Control Act to regulate MTBE out of the fuel supply based on an expected determination that the additive poses an unreasonable risk to the public or the environment.[101] EPA leaders acknowledge that regulating MTBE as a toxic substance raises a number of legal problems, such as meeting the Act's burden of proof.[102] Nevertheless, on March 20, 2000, the EPA formally began regulatory action.[103] In Texas, the TNRCC responded by changing rules to prevent increases in the use of MTBE in order to meet lower Reid Vapor Pressure in certain areas of the state.[104]

COSTS OF COMPLIANCE

Houston Mayor Lee Brown's office released information that air pollution costs the city $3 billion in health care costs and more than 400 premature deaths.[105] Matt Fraser, an environmental

engineer at Rice University says business and industry will spend several hundred million dollars in the Houston area to comply with federal law; but representatives of the area chamber of commerce believe the cost will be higher.[106]

Mayor Brown estimates that Houston industry will pay $6 to $8 billion price tag for compliance, with motorists paying another $2 billion.[107] Similarly, The Business Coalition for Clean Air formed by the greater Houston Partnership estimates a $5 to $7 billion capital cost of compliance.[108] The Business Coalition says new regulations in the 8 county Houston area will increase costs for electricity, fuel and construction and will create disincentives for business growth.[109]

In any event, Houston business leaders prefer for the state rather than the federal government to implement any new air regulations, reasoning that business will maintain more input and control.[110] The new air regulations will effectively push technology to it's limits.[111]

As recently as October of 1999, the EPA granted the states request to extend the deadline for compliance for the Dallas-Fort Worth area from 2005 to 2007, noting that air pollution from Houston drifts to Dallas-Fort Worth.[112] Editorials nevertheless criticize the Dallas-Fort Worth area for repeatedly missing the deadlines for bringing itself into compliance without much regard for the consequences.[113] The EPA and the TNRCC both contend that there will be no further postponements of meeting the federal standards.[114] Further, Houston area Congressional members Tom Delay and Gene Green expect no changes in federal law, and both say that cleaner air remains a priority, but any steps taken should be reasonable and respect the economy.[115] As stated by one editorial writer, ". . . cleaning up the air isn't going to be easy or free of discomfort. The treatment is likely to be more painful because we put it off so long."[116]

LOCAL RECOGNITION OF THE ISSUE AND EFFORTS FOR SOLUTIONS

Business leaders and locally elected officials recognize the dire consequences which can result in an area which fails to comply with the federal Clean Air Act. In June of 1999, local officials in the Dallas-Fort Worth nonattainment area organized under the North Central Texas Council of Governments to develop anti-pollution measures,[117] and made recommendations for SIP proposals.[118] The Fort Worth Chamber of Commerce recognizes the costs of clean air for both individuals and business, but says compliance will measurably benefit public health and the business climate.[119]

A task force similar to the group in the Dallas-Fort Worth area involved with the Houston-Galveston Council of Governments works towards the same goal of reaching national ambient

air quality standards in the Houston area.[120] Houston Mayor Lee Brown issued an executive order in early February 2000 requiring city agencies to inventory and reduce their own sources of air emissions in ways such as purchasing more energy-efficient office equipment and increasing reliance on employees working from home on computers and telephones.[121]

San Antonio city leaders recognize the dire ramifications attached to a nonattainment area, and one city councilperson suggests implementing measures locally, such as auto emissions testing, to avoid the problems that can come with noncompliance.[122] The Alamo Area Council of Governments' Air Improvement Resources executive committee, composed of leaders from Bexar, Comal, Guadalupe and Wilson counties also finds itself considering whether to pursue an accelerated air quality plan.[123]

On a statewide level, The Texas Clean Air Working Group which formed to address the air issue includes county judges from Collin, Harris, Dallas, Bexar and Travis counties as well as business leaders from the same areas.[124] Business leaders now clearly recognize that unless air quality meets federal standards, local economies will suffer dramatically.[125] One county judge who fought clean air restrictions in 1995 now participates in and urges implementing emissions controls to comply with federal clean air requirements.[126]

At least one local leader says that because of visibly poor air quality every summer, residents will accept additional restrictions.[127] Costs and flexibility with new air regulations worry Galveston County officials, but they accept the challenge, asserting they need both clean air and a thriving economy.[128]

In contrast to some other areas of the state working to find reasonable solutions, local leaders in Brazoria County balk at any clean air regulations, arguing that activity in Brazoria County does not affect Houston; they say they will fight any new mandates, maybe even in court.[129]

PUBLIC REACTION

The media reports that nobody argues about less-than-outstanding air quality in some regions of the state, but how to clean the air presents a highly contentious question.[130] Dr. Stephen Klineberg, a Rice University sociologist says the Houston public wants to maintain the industry in the area, but increasingly want a cleaner environment, representing a fundamental cultural shift in public opinion.[131] The public frowns on any regulations directly impacting their personal lives and personal habits. Los Angeles officials, who achieved significant smog reductions in recent years, warn that mandated lifestyle changes do not work and alienate the public.[132] For example, people seem to want cleaner air without hindering the convenience which comes from

driving their own cars.[133]

Klineberg conducted a survey of Houston area residents in February and March of 2000, with interesting results:[134]

1) **87% expressed concerns about the effect of air pollution on their family's health (56% said they remain "very concerned" and 31% are "somewhat concerned");**
2) **64% of respondents say they favor "requiring more stringent emissions tests on all vehicles in Houston" while 33% oppose stricter car testing (this compares to 38% support in 1995); and**
3) **51% say they favor efforts to reduce air pollution in Houston by lowering all speed limits to 55 miles per hour.**

As one Houston business and industry representative points out, however, "The question is, when something does affect [the public], will they continue to support it?"[135]

Across the state, proposals for a construction time shift, a lawn mowing time shift, speed limit reductions, air conditioner requirements, and restrictions aimed at Texans' cars (such as stricter inspections and cleaner burning fuels) draw the most contention with the public.[136] Almost all of the TNRCC proposals to meet federal requirements stirred ire in some segment of the population, either with labor, commuters or factory owners.[137] Citizens from parts of the state that do meet air quality standards maintain that they do not want restrictions imposed on them in an effort to clean up the air in nonattainment areas.[138]

TNRCC staff estimates that the agency received over 2,000 comments on the rules package published on December 31, 1999.[139] Both regulated industry representatives and environmental groups immediately predicted that the plan would result in a backlash, arguing that the plan applies too much pressure to consumers and individuals.[140] While some critics question the practicality and ability to enforce the TNRCC's emissions-cutting measures and allege that the effect of the proposed rules will chill the economy, others want the plan to reduce industrial emissions even more.[141]

In addition, The Public Utility Commission of Texas (PUC) warns that the proposed rules could potentially shut-down 25 to 50% of the local electricity generation in the Dallas-Fort Worth area, commenting that, "the new rules could compromise the ability of the Texas electric power industry to meet the electric needs of the [Dallas-Fort Worth] customers reliably over the next 5 to 10 years," though the PUC says flexibility in the SIP rules will make this scenario far less likely.[142] To reduce an emissions reduction burden on electric utilities and their customers or any other person affected, the state must necessarily shift the emission reduction burden to someone or somewhere else.[143]

Environmentalists say they will keep pressure on the state to adopt even stricter measures, arguing that the underlying assumptions will prove to be overly optimistic about emission reductions.[144] An estimated 600 people overflowed each of several TNRCC hearings in Houston and the Dallas-Fort Worth area over clean air proposals, with about 250 carrying signs of protest at one Houston meeting.[145] Even so, The Texas Department of Transportation contends that the threat of sanctions which could delay highway projects for 5 years may not be high in the public consciousness.[146]

Likewise, local residents and representatives of business and industry evenly divided the crowds of between 150 and 800 people attending the TNRCC public hearings regarding the August 25, 2000 rules package, some expressing loud and angry resistance.[147] Many residents who harbor concerns about the effect of air quality on public health point to the industrial complex as the culprit.[148] Some citizens say the rules impose unfairness by reducing personal freedoms of individuals and assert that the state should require more of industry.[149]

Various industry groups to date have filed 6 separate lawsuits scattered through state and federal courts attacking the TNRCC air rules. The plaintiffs attack TNRCC rules requiring emissions reductions from ground-support equipment at airports, electric utility plants, cement kilns and other rules to implement an ozone-season ban on heavy construction equipment and the accelerated retirement of diesel equipment. The TNRCC expects to prevail in each suit, but cautions that any court ruling barring any one provision could jeopardize the ability of the state to comply with federal law.[150]

THE CHARGES TO THE LEGISLATIVE COMMITTEES

Ultimately, decisions regarding compliance with the federal Clean Air Act rests with the Texas Legislature. On December 20, 1999, House Speaker James E. "Pete" Laney directed the House Committee on Environmental Regulation to:

> **Identify program options in all areas of the state for achieving and maintaining compliance with federal air quality requirements while preserving the potential for economic growth. The review should consider the effects of projected population growth on transportation requirements.[151]**

Similarly, Lieutenant Governor Rick Perry charged the Senate Committee on Natural Resources to:

> **Study the challenges Texas faces in meeting federal air quality standards under the Clean Air Act, and the implications of non-attainment on future economic growth. The Committee shall assess the impact that federal vehicle, fuel, engine,**

aircraft and other standards have on the state's ability to meet the Clean Air Act requirements. The Committee shall also study the connection between air quality and such related issues such as transportation conformity and funding.[152]

FINDINGS AND RECOMMENDATIONS

Finding No. 1:

If Texas fails to comply with the federal Clean Air Act, federal law expressly requires the EPA to directly implement a federal program in Texas, with the addition of severe sanctions.

Recommendation No. 1:

The State of Texas should make every effort to comply with the federal Clean Air Act.

Finding no 2:

TNRCC rules and regulations intended to meet federal air quality requirements impose substantial burdens on both the general public and the business climate. However, steps already taken by the TNRCC represent a good faith effort to meet federal air quality standards with the least amount of interference possible. The agency bases the rules on a great deal of public input, stakeholder involvement, and not least of all, the best scientific data and scientific analysis currently available. Texas has an opportunity to adjust each clean air plan at a 'mid-course correction' to avoid unnecessary and expensive investments by businesses and to avoid unduly burdensome lifestyle changes required of individuals.

Recommendation No. 2:

Texas should move forward with a clean air plan, but dutifully continue to search for better and more efficient methods to reduce air pollution. The TNRCC should take advantage of a mid-course correction to improve the clean air plans at the appropriate time. Any changes should be based on the latest sound science available. The legislative removal of any current statue or administrative regulation which reduces air emissions should be replaced with a control strategy which reduces emissions by the same amount.

Finding No. 3:

Though compliance with federal clean air standards will provide notable public health benefits, compliance will impose substantial financial investment by the private sector.

Recommendation No. 3:

The legislature should balance the option of providing reasonable financial and tax incentives to individuals and businesses in order to encourage voluntary steps toward air emissions reductions and to mitigate the direct cost of compliance.

ENDNOTES

1. **Publ.L. 101-549, Nov. 15, 1990, 104 Stat. 2399, is popularly known as the "Clean Air Act Amendments of 1990."**

2. **42 U.S.C.A. §7409(b) (West 1995).**

3. **42 U.S.C.A. §7401(b)(1) (West 1995).**

4. **42 U.S.C.A. §7401(a)(3) (West 1995).**

5. **42 U.S.C.A. §7407(d)(1)(A)(i) (West 1995).**

6. **42 U.S.C.A. §7409(a) (West 1995).**

7. **42 U.S.C.A. §7407(d)(1)(B) (West 1995).**

8. **See generally 42 U.S.C.A. §7410 (West 1995).**

9. **42 U.S.C.A. §7410(a)(2)(A) (West 1995).**

10. ***Regional Air Quality Plans Taking Shape, Public comments will be used to update plans due to EPA*, NATURAL OUTLOOK MONTHLY UPDATE (Texas Natural Resource Conservation Commission), February 2000 at 1.**

11. **Id.**

12. **Christopher Anderson, *EPA Official affirms Alamo City likely to make dirty air list*, SAN ANTONIO EXPRESS NEWS, December 15, 1999.**

13. **42 U.S.C.A. §7410(c)(1) (West 1995).**

14. **42 U.S.C.A. §7509(b)(1) (West 1995).**

15. **42 U.S.C.A. §7509(b)(2) (West 1995).**

16. **42 U.S.C.A. §7506(c)(1) (West 1995).**

17. **42 U.S.C.A. §7410(a) (West 1995); See generally 40 C.F.R. Part 51 for more detailed requirements for SIP submittals.**

18. **42 U.S.C.A. §7410(a)(1) (West 1995); See generally 42 U.S.C.A. §7502 (West 1995).**

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20. **See generally Tex. Reg. Vol. 25, No. 18 at 4005 - 4184 (May 5, 1999).**

21. **TEX. ADMIN CODE tit. 30, §§114.1, 114.4, 114.211 - 217, and 114.219 (2000); Tex. Reg. Vol. 24, No. 53 at 11897 and generally 11897 - 11905 (December 31, 1999).**

22. **TEX. ADMIN CODE tit. 30, §§114.2, 114.50, 114.51 and 114.53 (2000); Tex. Reg. Vol. 24, No. 53 at 11905 and generally 11905 - 11916 (December 31, 1999).**

23. **TEX. ADMIN CODE tit. 30, §§114.2 (2000); Tex. Reg. Vol. 24, No. 53 at 11912 (December 31, 1999).**

24. **TEX. ADMIN CODE tit. 30 §§114.6 and 114.312 - 317 and 114.319 (2000); Tex. Reg. Vol. 24, No. 53 at 11917, 11919, and generally 11916 - 11924 (December 31, 1999).**

25. **TEX. ADMIN CODE tit. 30, §§114.400, 114.402, 114.406 and 114.409 (2000); Tex. Reg. Vol. 24, No. 53 at 11938, 11940 and generally 11938 - 11943 (December 31, 1999).**

26. **TEX. ADMIN CODE tit. 30, §§114.410, 114.412, 114.416, 114.417 and 114.419 (2000); Tex. Reg. Vol. 24, No. 53 at 11943, 11947 and generally 11943 - 11950 (December 31, 1999).**

27. **TEX. ADMIN CODE tit. 30, §§114.420 - 114.422, 114.427 and 114.429 (2000); Tex. Reg. Vol. 24, No. 53 at 11950, 11952 and generally 11950 - 11955 (December 31, 1999).**

28. **TEX. ADMIN CODE tit 30, §§114.432, 114.436, 114.437 and 114.439 (2000); Tex. Reg. Vol. 24, No. 53 at 11955 and generally 11955 - 11959 (December 31, 1999).**

29. **TEX. ADMIN CODE, tit 30, §§117.10 et. seq. (2000); Tex. Reg. Vol. 24, No. 53 at 11959, 11960, 11961 and generally 11959 - 11977 (December 31, 1999); Bill Jordan, SIP Team Leader, TNRCC Strategic Analysis and Assessment Office of Environmental Policy Analysis and Assessment.**

30. **TEX. ADMIN CODE tit. 30, §§117.101 et. seq. (2000); Tex. Reg. Vol. 24, No. 53 at 11977, 11979, 11989 and generally 11977 - 12006 (December 31, 1999).**

31. **TEX. ADMIN CODE, tit. 30, §§117.460, 117.461, 117.463, 117.465, 117.467 and 117.469 (2000); Tex. Reg. Vol. 24, No. 53 at 12007, 12008, 12010 and generally 12007 - 12013 (December 31, 1999).**

32. **Tex. Reg., Vol. 25, No. 34 at 8139 and generally 8137 - 8164 (August 25, 2000)(to be codified at TEX. ADMIN. CODE tit. 30, §101.300 et. al.).**

33. **Tex. Reg., Vol. 25, No. 34 at 8164, 8166 and 8169 and generally 8164 - 8169 (August 25, 2000)(to be codified at TEX. ADMIN. CODE tit. 30, §101.300 et. al.).**

34. **Tex. Reg., Vol. 25, No. 34 at 8171 and 8172 and generally 8169 - 8180 (August 25, 2000)(to be codified at TEX. ADMIN. CODE tit. 30, §114.312 et. al.).**

35. **Tex. Reg., Vol. 25, No. 34 at 8182, 8183 and 8185 and generally 8180 - 8188 (August 25, 2000)(to be codified at TEX. ADMIN. CODE tit. 30, §114.50 - 114.53).**

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41. **Tex. Reg., Vol. 25, No. 34 at 8218 and generally 8216 - 8222 (August 25, 2000)(to be codified at TEX. ADMIN. CODE tit. 30, §114.452 and §114.459).**

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51. **TEX. ADMIN CODE tit. 30, §§114.400, 114.402, 114.406 and 114.409 (2000); Tex. Reg. Vol. 24, No. 53 at 11938, 11940 and generally 11938 - 11943 (December 31, 1999); Tex. Reg., Vol. 25, No. 34 at 8224 and generally 8222 - 8230 (August 25, 2000).**

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145. **Jeffrey Ball, *In Texas, a War Over Big Cars And Dirty Air,* WALL STREET JOURNAL, February 7, 2000; Strassman, supra note 136.**

146. **Barta, supra note 65.**

147. **Mike Glenn, *Smog plan worries leaders*, HOUSTON CHRONICLE, September 22, 2000; Bill Dawson, *Smog hearings sparsely attended*, HOUSTON CHRONICLE, September 20, 2000.**

148. **Juan A. Lozano, *Houston residents sick of smog, ready for area to clean up its act*, DALLAS MORNING NEWS, September 24, 2000.**

149. **Alicia Gooden, *Crowd shows for clean air rules forum*, THE GALVESTON COUNTY DAILY NEWS, September 22, 2000.**

150. ***Lawsuits Threaten Clean Air Plans*, NATURAL OUTLOOK MONTHLY UPDATE, TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, September 2000.**

151. **75TH LEGISLATURE, INTERIM CHARGES, TEXAS HOUSE OF REPRESENTATIVES (December 20, 1999).**

152. **75TH LEGISLATURE, INTERIM CHARGES, TEXAS SENATE (September 2, 1999).**

LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT ISSUES

LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT ISSUES

On December 20, 1999, House Speaker James E. "Pete" Laney directed the House Committee on Environmental Regulation to, "Determine the ramifications surrounding the handling, processing and disposal of low-level radioactive waste within the borders of the state as they relate to compact waste, non-compact waste generated by the federal government, mixed waste, and licensing of a private or state entity. Review policies of the Department of Health related to extremely low-level radioactive waste to determine consistency with other states' regulations."[1]

BACKGROUND

What is Radioactive Waste?

Radioactive waste results from the use of radioactive materials. Atoms of most substances are internally balanced, or stable, but some complex atoms are unstable. They regain stability by expelling particles, or bursts of energy, a process known as radioactivity.[2] Radioactivity either is naturally occurring or produced by man.

Naturally occurring radioactive material (NORM) comes from normal decay of unstable elements in rock, soil, and from space. Examples of naturally occurring radioactive materials (NORM) include a wide variety of materials from uranium to Brazil nuts and ingredients in salt substitutes.

Radioactivity produced by man is the product of two types of nuclear reactions in uranium: fission (breaking or splitting apart a heavy atom) and neutron-absorption (a nuclear reaction in which uranium atoms absorb neutrons and change them into heavier elements).[3]

"Of the total amount of radiation that the average person living in the United States is exposed to every year, 82 percent comes from natural sources and 18 percent comes from non-natural sources. Medical diagnosis and therapy account for more than 90 percent of the dose from non-natural sources."[4]

Medical uses for radiation include diagnostic procedures and life saving therapies such as radiation to remove cancer. Other exposure to radiation can come from home smoke detectors, cloisonné jewelry and glow-in-the-dark watches. Lifestyles can vary the amount of NORM exposure. For example, people who live in Denver receive additional annual average exposure compared to people who live at sea level, and people who live in brick homes receive more exposure than people who live in houses made of wood.[5]

Radioactive Waste Regulation in Texas Today

Responsibility for regulation of radioactive waste in Texas today is divided between the federal government and three states agencies, depending on the type of waste involved.

High-level wastes (HLW) are the radioactive wastes generated by the reprocessing of nuclear fuel, or the used nuclear fuel itself. In the United States, high-level waste is generated at nuclear reactor sites (energy production) and by federal activity. This waste is regulated by the Department of Energy.

Transuranic waste (TRU) is waste containing alpha-emitting radionuclides of an atomic number greater than 92 (uranium). It is produced primarily from reprocessing spent fuel and from use of plutonium in fabrication of nuclear weapons. The regulation of this waste depends on the concentration of transuranics in it. The Nuclear Regulatory Commission (NRC) regulates most of the higher level material, while within Texas the Texasn Natural Resource Conservation Commission (TNRCC) regulates the disposal of this waste, and Texas Department of Health (TDH) regulates the processing.

Low-level radioactive waste (LLW) includes all radioactive wastes that are not high level, concentrated transuranic uranium tailings, naturally occurring, or oil and gas NORM waste. These wastes are often confused with nuclear wastes; sometimes the terms are incorrectly interchanged. However, nuclear wastes and low-level radioactive wastes are two separate categories. Disposal of this waste is regulated by the TNRCC. TDH regulates the processing of this waste.

NORM waste is radioactive waste that spontaneously emits radiation in its natural physical state. In Texas, the disposal of Oil and Gas NORM wastes is regulated by the Railroad Commission of Texas (RRC). Disposal of other NORM waste is regulated by TNRCC.

State Agencies Regulating Activities Involving Radiation and Radioactive Waste

Texas Natural Resource Conservation Commission

The TNRCC was created by the Legislature on September 1, 1993. The mission of the TNRCC is to protect human health, environmental quality and natural resources consistent with economic and employment growth. TNRCC responsibilities regarding radiation include regulating the disposal of radioactive substances (except oil and gas NORM waste which is regulated by RRC).

Texas Department of Health

TDH has the regulatory responsibility for possession, and use of sources of radiation, other than disposal of low-level radioactive waste and NORM waste, but including source material recovery and processing and disposal of source material byproduct waste.

Through its Bureau of Radiation Control, the TDH has regulatory and oversight responsibility for the safe use of radiation in industry, medicine and research. The Bureau accomplishes its mission through two divisions: Licensing, Registration and Standards; and Compliance and Inspection.

An integral part of the work of the agencies, the Texas Radiation Advisory Board (TRAB) makes recommendations to the TDH, TNRCC and RRC and furnishes technical advice on matters relating to the development, use and regulation of sources of radiation. In addition, TRAB is charged with recommending changes in proposed or existing rules and guidelines relating to these matters.

TRAB is composed of 18 members appointed by the governor. These members are uniquely qualified from specialized fields such as nuclear physics, radiology, pathology and nuclear medicine.

Railroad Commission of Texas

The Railroad Commission of Texas has regulatory responsibility for the disposal of Oil and Gas NORM through its Oil and Gas Division.

Texas Low-Level Radioactive Waste Disposal Authority (TLLRWDA)

This authority was abolished in 1999 by HB 2954, and its functions were transferred to the TNRCC.[6]

Texas Low-Level Radioactive Waste Disposal Compact Commission

Created by the 73rd Legislature, the Compact Commission is a regulatory authority that will consist of 6 voting members from Texas and one voting member each from Maine and Vermont. Among other things, the commission will have the authority to manage the import and export of low-level waste to and from Texas. Commission members will be appointed by the party state governors, with the Governor of Texas designating the chair and vice chair.

LOW-LEVEL RADIOACTIVE WASTE HANDLING, PROCESSING AND DISPOSAL

Compact Waste

Texas Has a Responsibility

A Compact between Texas, Maine and Vermont for disposal of low-level radioactive was ratified by the U.S. Congress in 1998. This Compact was established by the states pursuant to the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985.[7] By enacting this legislation, the U. S. Congress authorized and encouraged states to enter Compacts for the efficient management and disposal of low-level radioactive waste.

The Texas Low-Level Radioactive Waste Disposal Compact (Compact) provides that Texas, as host state, will "cause a facility to be developed in a timely manner and operated and maintained through the institutional control period."[8] The Compact stipulates that "shipments of low-level radioactive waste from all non-host party states shall not exceed 20 percent of the volume estimated to be disposed of by the host state during the 50-year period." Additionally, the maximum disposal space allowed to non-host states is 20,000 cubic feet.[9]

The Texas Legislature created the Texas Low-Level Radioactive Waste Disposal Authority in 1981 to site, develop, operate, decommission, and close a low-level radioactive waste disposal facility for Texas-generated waste. With the passage of the Compact bill in the 73rd Texas Legislature,[10] the facility that the TLLRWDA was to site would include waste generated from our Compact states as well.

Sunset Commission

After 18 years of attempts to license a site, the TLLRWDA was abolished in 1999 by HB 2954,[11] and its functions were transferred to the TNRCC. The Sunset Commission found that the resulting regulatory structure for low-level radioactive waste disposal creates a conflict of interest and that in order for Texas to fulfill its obligations under the Texas Low-Level Radioactive Waste Disposal Compact the state must develop and have full administrative control over the development, management, and operation of a facility for the disposal of low-level radioactive waste generated within the party states.[12] The Committee agrees with the findings of the Sunset Commission.

Barnwell

In May, 2000 the South Carolina Legislature adopted the Atlantic Compact Bill which melded South Carolina into a Compact with Connecticut and New Jersey.[13] The legislation also set yearly limits on the volume of waste the South Carolina low-level radioactive waste disposal facility (Barnwell) would accept until 2008 when it would no longer accept waste from states outside their compact. Because of the rapid decline in the amount of waste the facility will accept

from year to year until 2008, Texas generators of low-level radioactive waste estimate that they will not have access to Barnwell after 2004.[14]

A possible alternative to Barnwell may be in the making. Envirocare of Utah has applied for a license amendment allowing disposal of Class B and Class C low-level radioactive wastes at their Utah facility. "If the license amendment is approved, Envirocare will become the only generally available site in the nation accepting and disposing of Class B and Class C wastes."[15] However, Utah's Department of Environmental Quality has to make a recommendation on the application to the state legislature, which will have to pass a concurrent resolution approving the recommendation. If passed, the resolution must be signed by the governor. The recommendation is not expected to be to the state legislature until March, 2001.[16]

Additionally, "Utah officials are proposing the imposition of a surcharge on all radioactive waste entering the state for disposal at Envirocare's Clive, Utah facility as part of [the] amendment."[17] At this time the cost of disposal at this facility, should the license be successfully amended, is unknown.

Maine Yankee

Recently Maine Yankee began decommissioning its power plant and now needs a disposal facility. Given the fact that Texas does not have a disposal facility licensed and the Texas Compact commissioners have not yet been appointed, the TNRCC does not object to Maine Yankee shipping waste to an available facility in a state other than Texas. [18]

Non-Compact Waste Generated by the Federal Government

High-Level Radioactive Waste

The Department of Energy (DOE) has operational responsibility for developing a high-level waste repository while the NRC retains regulatory responsibility for the transportation, storage, and ultimate geologic disposal of high-level waste.[19]

Low-Level Radioactive Waste

Commercial low-level waste disposal facilities must be licensed by either the NRC or Agreement States in accordance with health and safety requirements. In Texas, an agreement state, the TNRCC is responsible for licensing low-level radioactive waste disposal facilities. However, current law restricts issuing a license for a low-level radioactive waste disposal facility to a private entity.[20] According to current DOE policy, in order for the DOE to dispose of low-level radioactive waste in Texas, the state law would have to be changed to allow private entities to hold a low-level radioactive waste disposal license.

Additionally, in a Record of Decision released on December 10, 1999, the DOE named specific, existing federal sites as being the preferred sites for disposal of federal low-level radioactive waste. However, the Record of Decision also included a disclaimer, "This decision also does not preclude DOE's use of commercial disposal facilities, consistent with current DOE orders and policy."[21]

To summarize, federal low-level radioactive waste will most likely be sent to the federal sites designated as preferred locations by the DOE. Should the DOE exercise its option to dispose of low-level radioactive waste at a commercial facility, it would used a privately held site that has been licensed by either the NRC or an Agreement State.

Mixed Waste

Mixed waste is a combination of hazardous waste and low-level radioactive waste.[22] A facility for disposal of mixed waste would have to be licensed for low-level radioactive waste and hazardous waste, unless the low-level aspect of the waste is exempt. Low-level radioactive waste which qualifies for an exemption is not considered radioactive and, when mixed with hazardous waste, can be disposed of as hazardous waste.

Licensing of a Private or State Entity

Current Texas law requires a low-level radioactive waste disposal license to be issued only to a public entity.[23] Those who support the continuance of this requirement believe that since the state is legally responsible for Compact waste, the state should hold the license for, and therefore the control of, a license to dispose of low-level radioactive waste in Texas. Some supporters agree that the State may not be the best manager of a site, but it will be around much longer than a private entity is expected to be. While the management of a site can be contracted out, the long-term responsibility for the site cannot.

Supporters of a private license believe that it would benefit the private entity as well as the state. A private facility licensed by the state would be able to accept non-compact waste for disposal which will possibly lower disposal costs for all generators. Licensing a private facility would also avoid the current conflict of interest with the TNRCC being both the facility operator and enforcement agency.

Other topics debated in relation to this issue include costs, financial assurance, and public perception. These and others can be debated for a long time with no clear resolution. The Committee believes that the state should hold the license for the Compact waste disposal facility.

If others want licensing for a private entity, it should be pursued as a separate issue from the Compact waste facility.

DEPARTMENT OF HEALTH POLICIES RELATED TO EXTREMELY LOW-LEVEL RADIOACTIVE WASTE

Background

The regulations of the NRC and those of Agreement States[24] provide for exemptions of radioactive material in specific concentrations or contained in specific products. The rules of the NRC and Agreement States may also provide for alternate means of disposal of certain waste streams upon approval by the regulatory agency. Materials regulated by the NRC and Agreement States are limited to source,[25] special nuclear,[26] and byproduct material, whereas state programs have the responsibility for regulating discrete naturally occurring and accelerator-produced radioactive material (NARM) and diffuse naturally-occurring radioactive material (NORM).

Types of Exemptions

The following is a summary of the types of exemptions of radioactive material made by Agreement States' radiation control programs and the NRC and a comparison of variations in the regulations for those exemptions.

Source Material

The NRC exempts from licensure persons who possess, use and transfer source material[27] in any chemical mixture in which source material is less than 0.05% by weight of the mixture. A 1999 ruling by the NRC Commissioners on this rule determined that the exemption included disposal of material at that concentration. This rule is a matter of compatibility in Agreement States; therefore, all Agreement States (including Texas) have identical, or almost identical, provisions in their regulations. The TDH has followed the NRC policy and interpretation in allowing the exemption to include disposal. A few states, including New York and South Carolina, have refused to allow source material at this concentration to be disposed of in conventional landfills, for sanitary and hazardous waste landfills. The permits issued by the TNRCC for sanitary and hazardous waste landfills specify that no radioactive material may be disposed of in those facilities that would require a radioactive material license to possess such materials. Therefore, material that has been exempted from regulation under a license is permissible at those sites.

Certain items containing source material are also exempted from licensure by the NRC and all Agreement States. These include such items as glazed ceramic tableware, gas lantern mantles, welding rods, photographic film, optical lenses and shielding material containing certain concentrations of source material. These items may be disposed of as non-radioactive material.

FUSRAP

DOE began the Formerly Utilized Sites Remedial Action Program (FUSRAP) program in 1974 to locate, control, and clean up sites where radioactive contamination remains from the early years of the U.S. atomic energy program. More than 45 sites in 14 states have been identified as needing remediation under the FUSRAP program. In 1997 the FUSRAP program was transferred to the U.S. Army Corps of Engineers. Any FUSRAP waste that is disposed of in Texas is exempt under the source material exemption. If FUSRAP waste does not qualify for this exemption it is not allowed to be disposed of in Texas.

Items Containing Radioactive Material

The NRC and Agreement States have adopted regulations that exempt specific items and concentrations containing radioactive material. The items must be evaluated for safety and distributed by a manufacturer that is authorized to distribute the items to exempt persons. Examples of the items include smoke detectors, watches with tritium[28] or radium[29] dials, electron tubes and lock illuminators. These items may be disposed of as non-radioactive material.

Exempt Waste from Licensed Facilities

Liquid Scintillation

The NRC and all Agreement States have provisions in their regulations that allow licensees to dispose of low concentrations (0.05 microcurie per gram) of tritium (H-3) and carbon-14 in liquid scintillation fluid and animal carcases without regard to the radioactivity in the items. These rules were based on a risk analysis that showed that, at those concentrations, the risk from the radioactive material is minimal. This allows research facilities to dispose of this material safely without having to pay high low-level waste costs. Some states, including Texas, have also added another isotope, iodine-125,[30] to this regulation, using the same risk analysis.

Short-Lived Isotopes

In 1986, the TDH adopted a rule that allows licensees, upon approval by license condition and review of their procedures, to discard certain concentrations of short-lived isotopes in Type I sanitary landfills, or if the material is hazardous waste, in a permitted hazardous waste facility. The rule was based on a risk analysis performed for the TLLWDA that demonstrated that, at the limited concentrations in the rule, the maximum annual radiation exposure to an individual would be one millirem, which is about equal to the amount of exposure a traveler receives on a flight

from Austin to Dallas.

This rulemaking was coordinated with the Texas Water Commission, the Solid Waste Program (which was, at that time, within the TDH), and members of the Sierra Club. No comments were made in opposition to the rule. This particular exemption is unique to Texas and saves Texas universities and medical facilities hundreds of thousands of dollars annually in disposal costs.

Cesium-137

The NRC and other Agreement States have implemented regulations that will allow licensees to apply for alternate means of disposal of some radioactive material if it can be shown that the risk from the alternate disposal gives an equal or better protection than sending it to a low-level waste disposal facility. The NRC evaluated certain concentrations of cesium-137[31] in emission control dust from the inadvertent smelting of a gauge at a scrap recycling facility and found that the K061 waste in the emission control dust containing very low concentrations of cesium-137 could be safely disposed of in a hazardous waste facility. This policy and analysis were presented by the NRC as an optional disposal method that the agency would approve on a case-by-case basis. Since the TDH does not have jurisdiction over disposal in this state, the agency does not have regulations governing alternate disposal means, such as the NRC and other Agreement States have. However, the TDH responded to a petition for rulemaking to implement the provisions of the NRC policy through a rule. The rule, which was adopted in 1998, allows, upon agency approval, emission control dust and other material from electric arc furnaces or foundries, contaminated as a result of inadvertent melting to be transferred to a hazardous waste facility for disposal. The rule includes concentration limits, packaging requirements, and total activity limits for the waste facility receiving the material. Although this rule is unique to Texas, other Agreement States and the NRC may allow similar activity through other regulations.

Diffuse NORM

Several states, including Texas, have adopted regulations for NORM. This material is not regulated by the NRC. Table A gives a comparison of the exemption levels and cleanup standards for radium,[32] the primary NORM material of concern, as well as exemptions for pipe and equipment among the state radiation control programs that have NORM standards, and the proposed model state regulations developed by the Conference of Radiation Control Program Directors, a national organization made up of state radiation control program directors and their staffs. It is obvious that there is inconsistency among state requirements. This is due in part to the lack of federal regulatory requirements for NORM.

Texas was among the first states to develop NORM regulations, having first implemented the rules in 1993. Since the rules were promulgated, agency staff have worked with stakeholders to

make improvements to the rules. One rule change was adopted in 1999. The TDH Bureau of Radiation Control is considering another change that addresses the intent of the NORM exemption criteria and procedures for entering NORM-contaminated vessels. This rule change will involve coordination with the TNRCC, and the RRC, affected entities and other interested persons.

PUBLIC TESTIMONY

The Committee met in the Capitol Extension on May 3, 2000 to hear public testimony regarding low-level radioactive waste.

Jeff Saitas, Executive Director of the TNRCC testified that the TNRCC posted a Request for Proposal to do a study on a number of issues with respect to managing low-level radioactive waste in this state. The URS Corporation was awarded the contract for the report[33] and Rogers and Associates Engineering, a unit within URS, would do the actual work. The contract was done under the Qualified Scientist Procurement Process and was for $300,000.

Richard Ratliff, P.E., L.M.P., Chief, Texas Department of Health, Bureau of Radiation Control (BRC)

Mr. Ratliff reported on the accomplishments of the BRC including the decontamination of abandoned Hastings Radiochemical sites through a joint effort of the BRC, the TNRCC, the Texas Department of Transportation, and the U.S. Environmental Protection Agency (EPA). In addition, the BRC has posted enforcement trends, disciplinary actions and the most common violations on their web site:
<http://www.tdh.state.tx.us/ech/rad/pages/brc.htm>.

Mr. Ratliff then gave the following status of the BRC:

The BRC regulates all sources of radiation in Texas except disposal sites for low-level radioactive waste and disposal of NORM and oil and gas NORM. The sources of radiation include radioactive material, x-ray machines, accelerators, lasers and other non-ionizing radiation sources.

The BRC currently licenses and inspects the use of radioactive materials at over 2,400 sites in the state and registers and inspects machine sources of radiation at over 15,500 sites. The BRC also certifies and inspects over 570 mammography systems and has registered over 950 sites using lasers.

The Texas Radiation Regulatory Program (TDH/BRC and TNRCC) has been found compatible with the NRC and adequate to protect health and safety of the public from the use of radioactive materials.

Mr. Ratliff explained regulatory trends and concerns related to them:

The use of radiation has continued to increase as the Texas economy has grown. Virtually every industry, medical facility, and educational institution in Texas makes use of radiation sources for the safety and benefit of Texas citizens. The regulation of source use is necessary to prevent unnecessary radiation exposure and harm from accidental or intentional misuse of the sources.

Currently BRC is not able to keep up with the inspection workload for x-ray and laser registrants. The x-ray inspection program has decreased the scope of inspections to the minimal level that will still assure safe use and reduce unnecessary exposure to patients and workers. The backlog of overdue inspections is still near 4,000 and the number of inspectors has not increased to meet this demand. Caps on the number of full time employees (FTEs) and the amount of travel the BRC is allowed further limits the x-ray inspection program.

The BRC does not have any FTEs for laser inspections. To inspect laser light shows (usually performed at gatherings of large numbers of people) the BRC must pull staff from the x-ray or radioactive material program. The same must be done to respond for complaints regarding lasers.

Through a benchmarking process, the BRC was able to compare its current regulatory program in two different categories. The first was looking at staffing compared to recommended staffing methodologies[34] for an adequate radiation program for all sources of radiation. The results revealed that the BRC falls far short of what is needed for a comprehensive radiation regulatory program. Illinois, Florida and California meet the recommended staffing requirements; several other states met the criteria for radioactive material and x-ray programs, but not for the non-ionizing radiation program.

The second benchmark was with other Agreement States, comparing the expenditure per capita on radiation control activities. Of the twenty-six states reporting, Texas ranks seventeenth. Texas spends $0.33 per capita; the average is $0.47 per capita. Illinois was the highest at $2.06 per capita and New Mexico the lowest at $0.19 per capita. Neither of these outlyers were used to calculate the average cost.

Mr. Ratliff commented that there are additional complications to the lack of FTEs. The NRC discontinued funding for specialized training courses, and the BRC is unable to fund this training. Combined with noncompetitive salaries this training shortage means an inability to hire new staff that are already trained, or provide training to new, untrained staff. The problem is further compounded by the fact that nearly half of the technical staff will be eligible for retirement within five years. This will result in the loss of more than 650 years of radiation health physics experience.

Arthur C. Tate, Director of Compliance and Inspection, Texas Department of Health, Bureau of Radiation Control

Mr. Tate testified regarding the following legislative changes that the Committee may want to consider supporting:

- **Changing the definition of radiation to include non-ionizing radiation. There are devices being used that look and act like lasers, but the way they emit light is different. They are used for cosmetic purposes and in laser light shows. People can sustain serious burns or even be blinded by the use of these devices. Being fairly new technology they do not fit the definition of lasers that should be regulated; changing the definition would allow the BRC to regulate and inspect them.**
- **Authorize the use of administrative penalties to pay for the disposal of the abandoned sources the BRC collects. Recently the widow of a doctor called to report a source she had in her garage. Her husband had used it in his practice and she wanted someone to know where is was before she died. This isn't unusual. If a change in the statute were made to allow the penalties collected for severe violations of the Radiation Control Act to be placed in the radiation and perpetual care fund, this could provide funding for disposal of these sources.**
- **Authorize assessment of administrative penalties against individual violators and non-licensed entities. Unless an individual is registered with us or licensed by the BRC, even if they commit a severe violation the BRC can't assess penalties.**
- **Remove inspection interval for mammography to allow the TDH to change the interval by rule as the federal interval is changed.**
- **Delete statutory requirement for the TDH to review the qualifications for all radioactive material applicants' financial capability. The BRC collects financial assurance from high risk applicants. Things like moisture density gauges used by the State Highway Department are not high risk and the BRC would like the flexibility to not use the BRC's resources to review financial qualifications.**
- **Clarify the administrative penalty provisions in Chapter 401. All the administrative penalties are listed in the civil penalty section; consequently all the references are wrong.**

Jimmy Barker, Secretary, Texas Radiation Advisory Board Member and Chair of the TRAB Waste and Industry Committee

The BRC asked the Texas Radiation Advisory Board (TRAB) for guidance on the length of time a license should be granted for the storage of low-level radioactive waste. After some consideration by the Waste and Industry Committee, the TRAB recommended that the BRC use a term of 160 years for the design life of a facility with appropriate specifications for continuing compliance inspections and license renewals.

Mr. Barker testified that the TRAB made additional recommendations including:

- **The state should hold the license for the low-level radioactive waste facility.**
- **The facility should be operated by a private company.**

- **The state should pursue Assured Isolation as one of the options for addressing the needs of the State of Texas and for the Texas, Maine, and Vermont Low-Level Radioactive Waste Compact.**
- **The state should consider a site where the local public is supportive.**

Dr. Margaret N. Maxey, Professor of Bioethics, Biomedical Engineering Program, University of Texas, Austin

Dr. Maxey testified that, "Citizens of Texas must cease using unjustified moral claims as a way to escape their ethical responsibilities for radwaste disposal. All wastes -- chemical or radioactive or whatever -- are an inescapable byproduct of the society in which we live and thrive and enjoy countless benefits. Ethical judgments, based on the preponderance of valid scientific evidence, remain our safeguard against impossible utopian demands for safety."

Dr. Jack Krohmer, Chair, Texas Radiation Advisory Board

Dr. Krohmer stated that the State of Texas has an obligation to handle low-level radioactive waste. We license thousands of installations to beneficially use radioactive materials, and having done that we have an obligation that we must provide some means of getting rid of the waste.

Dr. Krohmer also testified about the staffing shortage that the BRC is facing (see testimony of Richard Ratliff for more on this subject).

Ken Kramer, Director, Lone Star Chapter of the Sierra Club and The Public Interest Sunset Working Group

Mr. Kramer testified that the Public Interest Sunset Working Group is a loose coalition of environmental organizations, and they recognized that the State of Texas has a responsibility to deal with low-level radioactive waste in this state. He then shared some of the Working Group's principles for dealing with low-level radioactive waste:

- **There seems to be a consensus among most groups that Assured Isolation is the best option currently being pursued.**
- **Production of radioactive waste should be reduced or eliminated whenever possible.**
- **Waste should not be buried. Above-ground, fully-monitored storage is preferable.**
- **Low-level radioactive waste should be reclassified so that waste with a half-life of less than 100 years is separated out from waste with a half-life greater than 100 years.**
- **Radioactive waste management should never be privatized.**
- **On-site assured isolation should be a priority, and classified for legal and regulatory purposes as "disposal."**
- **Any management system has to be designed to isolate the waste for as long as it remains radioactive and use the best available detection technologies to monitor the waste.**
- **Transportation of waste should be minimized.**

- **The Compact should be changed to eliminate the importation loophole.**
- **All decisions should be made with full and effective public participation.**

Ruth McBurney, Director, Division of Licensing and Registration and Standards, Texas Department of Health, Bureau of Radiation Control

Ms. McBurney explained comparisons of exemption practices in radiation control programs. The information she gave is included in this report, beginning on page 2.7.

Dr. Robert Bernstein, Former Commissioner of the Texas Department of Health

Dr. Bernstein testified that it is absolutely essential that Texas have a system of its own to dispose of its low-level radioactive waste. It should be licensed and regulated by a state agency. The use of radioisotopes is vital in medical practice and research.

Edward Selig, General Manager, Advocates for Responsible Disposal in Texas (ARDT)

Mr. Selig testified that there are over 900 licensees in Texas that generate low-level radioactive waste; more than 50 of these store low-level radioactive waste on site. He also expressed concern that disposal optios are dwindling rapidly. ARDT's position is that the State of Texas should hold title to the waste, but that private parties should be able to provide all aspects of permanent disposal.

Wesley M. Dunn Director, Department of Environmental Health and Safety and Corporate Radiation Safety Officer, International Isotopes, Inc.

Mr Dunn testified that his company does two things:

- **produces radioactive materials using accelerators; and**
- **takes radioactive material and acts as a contract manufacturer to make radiopharmaceuticals used for diagnosis or therapeutic purposes.**

Mr. Dunn explained that the manufacturing process creates waste, and without disposal options they cannot continue to produce life-saving products.

Tim Powell, Manager of Health Physics, South Texas Nuclear Operating Company

Mr. Powell testified the low-level radioactive waste disposal is a problem in Texas with two feasible options: below ground disposal and assured isolation. He also stated that they believe that privatization of the responsibility of obtaining a license for, and the operation of, the low-level radioactive waste disposal facility would be beneficial.

Douglas C. Kay, Radiation Protection Supervisor, Commanche Peak, TXU

Mr. Kay testified that his position is very similar to that of Mr. Powell, the previous speaker.

Ian Scott Hamilton, Certified Health Physicist, Assistant Professor and Health Physics Program Director, Texas A&M University's Nuclear Engineering Department

Mr. Hamilton testified that the South Texas Chapter, Health Physics Society is available to extend any service to the Committee that may be needed in resolving this issue. He said, "Health physicists are specialists in radiation safety; there are 200 in the South Texas Chapter. We are not 'pro' or 'anti' anything nuclear. We are pro safety."

Laura Burnett, Friends of Ward County

Ms. Burnet testified that not all of the local public is supportive of a low-level radioactive waste disposal facility in Ward County.

Donald L. Darling

Mr. Darling gave an article to the committee: *Improvements in local infant health after nuclear power reactor closing.* He also testified that the problem of nuclear waste is too big to write a law that would be all-encompassing.

Bill Clayton

Mr. Clayton testified that while the state could hold the license, it should be able to contract the management of the facility to a private company. He also expressed that Envirocare seeks legislative guidance as to whether there will be changes to the laws to either prohibit or considerably limit the market to accept FUSRAP waste in the near term.

Kathy Fausett, County Commissioner, Precinct 2, Ward County

Commissioner Fausett testified that she intends to ask her state legislators to file a bill to allowa local community to have a local referendum before a radioactive waste facility can be built in their county.

Susan Lee Solar, Grandmothers and Mothers Alliance for the Future

Ms. Solar testified that Texas is a target for the nuclear waste industries because we allow Class C waste to be brought into the state. She also commented that there are socio-economic issues that need to be considered.

Clark Lindley on behalf of Reeves County Judge Jimmy Galindo

Mr. Lindley requested that the Committee consider the interest of the people in the counties surrounding a county that is being considered as the site of a low-level radioactive waste facility.

SUNSET FINDINGS

The Committee agrees with the findings of the Sunset Advisory Commission Staff:

- **The current regulatory structure for low-level radioactive waste disposal creates a conflict of interest.[36]**
- **In order for the State to fulfill its obligations under the Texas Low-Level Radioactive Waste Disposal Compact the State must "develop and have full administrative control over the development, management, and operation of a facility for the disposal of low-level radioactive waste generated within the party states."[37]**
- **Assured Isolation is a viable option for low-level radioactive waste management.**

COMMITTEE FINDINGS AND RECOMMENDATIONS:

Finding No. 1:

- **The State bears ultimate responsibility for Compact low-level radioactive waste disposed of in Texas.**

Recommendation No. 1:

- **The state should hold the license and/or permit for the Compact disposal facility.**

Finding No. 2:

- **While the policies of the TDH related to extremely low-level waste are not consistent with other states, they are appropriately protective of the health and safety of humans and the environment.**

Recommendation No. 2:

- **The Committee does not recommend any changes to the policies of the TDH related to extremely low-level waste.**

Finding No. 3:

- **Unless a person is registered with or licensed by the BRC, even if a severe violation is committed, the BRC can't assess penalties.**

Recommendation No. 3:

- **Authorize assessment of administrative penalties against individual violators and non-**

licensed entities.

Finding No. 4:

- **The BRC has no jurisdiction over the bankruptcy courts or their trustees. Contingency funds, if they exist, are tied up in court proceedings and not available to the State to use for proper mitigation. If no contingency fund exists, the agency has no legal access to assets involved in court proceedings. Human and environmental health and safety can be threatened by abandoned sources or waste.**

Recommendation No. 4:

- **The legislature of Texas should memorialize the U. S. Congress to pass legislation necessary to protect public health and safety regarding low-level radioactive waste and other hazardous waste that may be involved in bankruptcy proceedings.**

Finding No. 5:

- **The BRC is facing the loss of approximately fifty percent of its staff to retirement over the next five years.**

Recommendation No. 5:

- **The state should carefully consider the loss of staff at the BRC. Losing 50 % to retirement is far more serious that a general 50% workforce reduction. The loss to retirement will be a loss of knowledge and expertise which will not be easily replaced.**

Table A

Comparison of NORM Rules by State

	Radium Exemption Concentration		Radium Cleanup Standards
AR	**5pCi/g**	**AR**	**5/15 pCi/g[3]**
CO (proposed)	**5 pCi/g**	**CO (proposed)**	**5 pCi/g**
GA	**5 pCi/g with high radon factor [1] 30 pCi/g with low radon factor [2]**	**GA**	**5/15 pCi/g with high radon factor 30/15 pCi/g[4] with low radon factor**
LA	**5 pCi/g above background**	**LA**	**5/15 pCi/g, or 30 pCi/g if the effective dose equivalent to members of the public does not exceed 100 millirem per year**
MI (proposed)	**5 pcCi/g**	**MI (proposed)**	**5/15 pCi/g**
MS	**5 pCi/g with high radon factor 30 pCi/g with low radon factor**	**MS**	**5/15 pCi/g with high radon factor 30 pCi/g with low radon factor**
NM	**30 pCi/g**	**NM**	**30/15 pCi/g**

ND	**5 pCi/g**	**ND**	**5 pCi/g**
NJ	**Variable- depending on concentrations and volumes- annual dose less than 15 mrem/yr.**	**NJ**	**Annual dose less than 15 mrem/yr**
OK (proposed)	**30 pCi/g**	**OK (proposed)**	**30/15 pCi/g**
OR	**5/15 pCi/g**	**OR**	**5 pCi/g**
SC	**5 pCi/g with high radon factor 30 pCi/g with low radon factor**	**SC**	**5 pCi/g with high radon factor 30 pCi/g with low radon factor**
TX	**5 pCi/g with high radon factor 30 pCi/g with low radon factor**	**TX**	**5 pCi/g with high radon factor 30 pCi/g with low radon factor**
CRCPD (proposed)	**5 pCi/g**	**CRCPD (proposed)**	**5/15 pCi/g**

NOTES

(1) High radon factory is a radon emanation rate greater than 20 pCi per square meter per second

(2) Low radon factory is a radon emanation rate less than 20 pCi per square meter per second.

(3) 5 pCi/g of radium of in soil, averaged over any 100 square meters and averaged over the first 15 centimeters (cm) of soil below the surface, 15 pCi/g in each 15 cm depth below the first.

(4)30/15 pCi/g is 30 pCi/g of radium in soil, average over any 100 square meters and averaged the first 15 centimeters of soil below the surface, 15 pCi/g in each 15 cm depth below the first.

Comparison of NORM Rules by State (continued)

Exemption for Contaminated Equipment

AR	**Concentration limit only (5 pCi/g)**
CO (Proposed)	**Concentration limit only (5 pCi/g)**
GA	**50 µR/hr including background**
LA	**50 µR/hr including background**
MS	**25 µR/hr above background**
	100 cpm above background
NM	**50 µR/hr including background**
OK	**50 µR/hr including background**

OR	**5 pCi/g**
SC	**50 µR/hr including background**
TX	**50 µR/hr including background**
CRCPD (Proposed)	**Concentration in dpm**

NOTE: Before release for unrestricted use, equipment contaminated with NORM should not exceed specified contamination limits in dpm/100 sq. cm.

The Committee is grateful to the Bureau of Radiation Control, TDH for providing this table.

ENDNOTES

1. **75TH LEGISLATURE, INTERIM CHARGES, TEXAS HOUSE OF REPRESENTATIVES (December 20, 1999).**

2. ***Radioactive Waste: Issues and Answers*** **(Colorado: American Institute of Professional Geologists, 1984), p. 2.**

3. **Id.**

4. ***The Nuclear Waste Primer: A Handbook for Citizens*** **(New York: The League of Women Voters, 1993), pp. 11-12.**

5. ***Below Regulatory Concern: A Guide to the Nuclear Regulatory Commission's Policy on the Exemption of Very Low-Level Radioactive Materials, Wastes and Practices*** **(Washington D.C.:U.S. Nuclear Regulatory Commission), pp. 7-10.**

6. **1999 TEX. SESS. LAW SER. 1449 (West)**

7. **42 U.S.C. §2021b - 2021j**

8. **TEX. HEALTH & Safety Code Ann. §403.006 (West Supp. 2000)**

9. **Id.**

10. **Acts 1993, 73rd Leg., ch. 460, § 1, eff. Aug. 30, 1993.**

11. **1999 TEX. SESS. LAW SER. 1449 (West)**

12. **Sunset Commission Decision Material, Texas Natural Resource Conservation Commission, p. 67 (September 2000).**

13. **"Nationwide Access to Barnwell to End; S. Carolina Legislature Adopts Atlantic Compact Bill,"** ***The International Radioactive Exchange*****, Vol.** 19, No. 12, May 26, 2000.

14. **Telephone conversation with Edward Selig, General Manager, Advocates for Responsible Disposal in Texas, July 2000.**

15. **"Utah Proposes Surcharge for Expanded Envirocare License,"** ***The International Radioactive Exchange*****, August 9, 2000, p. 2.**

16. **Id.**

17. **Id.**

18. **Letter from Jeffrey A. Saitas, Executive Director, Texas Natural Resource Conservation Commission, to Mr. Ken Alkema, Envirocare of Utah (December 6, 1999) (on file with the TNRCC).**

19. **Nuclear Regulatory Commission, *NRC's High Level Waste Program* <http://www.nrc.gov/NMSS/DWM/hlw.htm>, October 6, 2000**

20. **TEX. HEALTH & SAFETY CODE ANN. § 401.203 (West 2000).**

21. **Record of Decision for the Department of Energy's Waste Management Program: Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste [6540-01-P]**

22. **Id.**

23. **TEX. HEALTH & SAFETY CODE ANN. § 401.203 (West 2000).**

24. **An agreement state is a state that has entered into an agreement with the U.S. Nuclear Regulatory Commission to assume regulatory responsibility for radioactive material under Section 274 of the Atomic Energy Act of 1954 as amended Definition from: The Nuclear Waste Primer, The League of Women Voters Education Fund, 1993.**
Note: Texas is an Agreement State

25. **Source Material means:**

(1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of:

(i) Uranium,

(ii) thorium or

(iii) any combination thereof.

Source material does not include special nuclear material. 10 CFR 40.4

26. **Special nuclear material means:**

(1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material; or

(2) any material artificially enriched by any of the foregoing. 10 CFR 40.4

27. **See endnote 25.**

28.**Tritium is a radioactive form, isotope, of hydrogen. Its nucleus, consisting of one proton and two neutrons, has triple the mass of the nucleus of ordinary hydrogen. Tritium is present in natural water, probably produced by the action of cosmic rays on atmospheric nitrogen. Definition from: Encyclopedia Britannica <http://www.britannica.com/bcom/eb/article/4/0,5716,75354+1+73439,00.html> 8/24/00**

29.**Radium is a ubiquitous naturally occurring radioactive element produced from the decay of uranium or thorium. Definition from: Radiological Health Handbook, U.S. Department of Health, Education and Welfare, 1970.**

30.**Iodine-125 is a radioactive isotope with a half-life of 57 days used in diagnostic and therapeutic nuclear medicine and in basic biomedical research. Definition from: Basic Nuclear Medicine, S. Baum and R. Bramlet, 1975.**

31.**Cesium-137 is a radionuclide with a half-life of 30 years produced as a byproduct of a fission reaction. Definition from: Radiological Health Handbook, U.S. Department of Health, Education and Welfare, 1970.**

32. **See endnote #29.**

33.**The report was completed and released on September 1, 2000 under the title *Texas Compact Low-Level Radioactive Waste Generation Trends and Management Alternatives Study* with an accompanying report from TNRCC staff attorneys: *Legal Considerations Related to Low-Level Radioactive Waste Management Techniques in Texas*. Both volumes are available on-line at: <http://www.tnrcc.state.tx.us/>**

34.**Recommended staffing methodologies were developed by the Conference of Radiation Control Program Directors in conjunction with the federal regulatory agencies (NRC, FDA, and EPA).**

36. **Sunset Commission Decision Material, Texas Natural Resource Conservation Commission, p. 67 (September 2000).**

37. **TEX. HEALTH & SAFETY CODE ANN. § 403.006 (West 1999).**

SOLID WASTE TIPPING FEES

OVERVIEW

In order to fund the management, permitting and enforcement of solid waste programs, The State of Texas charges a "tipping fee" on solid waste disposed of within the borders of the state.[1] By statute, the legislature dedicates one-half of the tipping fee revenue to General Revenue Account 0549--Waste Management,[2] for use by the Texas Natural Resource Conservation Commission (TNRCC) in administering and operating solid waste management programs.[3] Statutes earmark the other one-half of the tipping fee revenue to General Revenue Account 5000--Solid Waste Disposal Fee,[4] for use in local and regional solid waste planning and other solid waste projects and for grants administered through the regional planning commissions,[5] generally referred to as Councils of Governments (COGs).[6]

Statutes dictate that each of the 24 COGs receive tipping fee revenues based on population, area, solid waste fee generation, and public health needs.[7] The TNRCC bases the current allocation factors for funding to COGs on 33% population, 33% fee generation, 15% geographic area, 10% number of cities and counties, and 9% number of persons in poverty, but no COG will receive less than $150,000 per year.[8] The legislature typically chooses not to appropriate the full amount of monies in the solid waste revenue stream to the TNRCC or the COGs.[9] For example, as estimated by the COGs, of approximately $28 million generated in 1996 and 1997, the legislature chose to appropriate $21 million.[10]

The TNRCC contracts with each COG on a biennial basis, and the contracts state that the COGs will return any unspent monies to the TNRCC.[11] The TNRCC oversees the COG's use of grant funds, and may suspend payments or require reimbursements if the TNRCC determines that substandard performance exists in a COG's grant program.[12]

HISTORY OF MUNICIPAL SOLID WASTE FUNDS

In the face of a potential budget shortfall in 1991, the legislature cut the amount of General Revenue funding for municipal solid waste programs. In order to ensure adequate funding for administering the state's solid waste programs, legislation allowed the almost tripling of tipping fees.[13]

Before 1995, financial assistance to local governments from tipping fees came through direct grants from the state to COGs or to local governments.[14] However, in 1995, the legislature

allocated one-half of the tipping fee revenue to the COGs to be used for local and regional solid waste projects consistent with local and regional solid waste plans.[15] Legislative intent indicates that the transfer occurred because landfill operators and local governments believed the state would use one-half of solid waste fees for local projects when the legislature established the fee, but the local share steadily decreased from 45.7% to 27.9%.[16] Further, the legislature intended the transfer to decentralize solid waste planning.[17] Critics warned that the transfer would hinder the ability of the TNRCC to monitor, inspect and take enforcement actions regarding landfills since the transfer would reduce funding to solid waste programs.[18] Opponents further argued that the transfer provided too little oversight of how the COGs could use the monies, especially amid criticisms that COGs historically spend too much of their grant money for administrative costs and duplicative studies or that COGs may use the funds to compete with the private sector.[19]

At the time of the transfer, the state estimated that fees would raise approximately $24 to $25 million annually.[20] A 1999 State Comptroller estimate indicates that in each of fiscal years 2000 through 2004, one-half of the tipping fees will raise, $15,876,000;[21] the entire tipping fee will then raise a total of $31,752,000 each fiscal year until 2004.

In a 1996 interim study of closed landfills, based on an estimated $24 million in revenue per year from tipping fees, the Committee determined that, ". . . tipping fees generate sufficient revenue to cope with program needs as well as the remediation of emergency sites . . . ."[22] Interestingly, the Committee also underscored the need for increased enforcement to prevent illegal dumping and unpermitted disposal with current revenue.[23]

Finally, legislation introduced but not approved in 1999 proposed that, " . . . at least half . . .," of the tipping fee revenue be dedicated to the state's municipal solid waste permitting and enforcement programs, rather than sending one-half of the revenue to the COGs by statute.[24] In lieu of voting on the legislation, the Committee chose to study the issue during the interim.[25]

USE OF TIPPING FEES BY THE COGS

In 1983 the legislature first authorized the COGs to develop regional solid waste plans,[26] but current law requires each COG to develop and maintain these plans.[27] By the end of 1992, the COGs completed the regional plans, which made solid waste revenues available to actively implement the goals of the plans.[28]

Although local governments and COGs received solid waste grants beginning in 1993, the decentralized regional structure for both allocating funds and awarding grants began in 1996.[29] Statutes specifically authorize COGs to act on behalf of local governments to receive funding,

provide technical assistance to local governments, and to implement local and regional projects which frequently involves grants to local governments based on a competitive process.[30] Typical grants include projects for recycling, composting, local enforcement, household hazardous waste management, assistance with local studies, establishing citizens collection stations, and purchasing scales at landfills as well as education and training.[31] In addition, the COGs monitor solid waste projects and play a key role in conducting a landfill inventory of active and closed landfills.[32] In order to protect the interjection of state funds competing with private industry, the legislature requires that, "A project or service funded (through solid waste COG grants) must promote cooperation between public and private entities and may not be otherwise readily available or create a competitive advantage over a private industry that provides recycling or solid waste services."[33] Solid waste industry representatives often argue that the legislature did not provide an enforcement mechanism for the prohibition against competition, but the COGs answer by pointing out that, "The program includes a deliberate process for assuring that these activities enhance private sector participation and do not compete with private sector business."[34]

Statutes currently require that the COGs submit a biennial report to the legislature detailing how each planning region spends the tipping fee revenue allocated to each region.[35] The Texas Association of Regional Councils issued the first report on January 29, 1999.[36] The COG report concludes that during the first two year period since COGs began receiving one-half of the tipping fee revenues in 1996 and 1997, local governments received $15.2 million for 574 solid waste projects with substantial results.[37] Though the COGs continue analyzing data for 1998 and 1999, they estimate that the legislative report for those two years will show:

- **an expenditure of $21.41 million appropriated for local and regional solid waste activities, including $16.03 million, or 75% directly on grants;**
- **expenditures of $5.38 million, or 25%, to carry out activities at the regional level which the state assigns to COGs;**
- **COGs spent 97.24% of the funds appropriated, and returned the remainder to the state treasury; and**
- **a total of 531 successful local grant projects including:**
  - **105 law enforcement projects (19.8% of total projects);**
  - **142 recycling projects (26.7% of total projects);**
  - **114 organic waste projects (21.5% of total projects);**
  - **105 education and training projects (19.8% of total projects); and**
  - **other projects such as 28 for household hazardous waste management, 11 for citizen collection stations, 8 for plans and studies, 7 for landfill scales, five for river and lake cleanpus, and 6 miscellaneous projects.[38]**

THE CHARGE TO THE COMMITTEE

On December 20, 1999, House Speaker James E. "Pete" Laney directed The House Committee on Environmental Regulation to:

> **assess the merits of the current program transferring one-half of the solid waste tipping fee to councils of government to be dispersed for local solid waste projects.[39]**

PUBLIC TESTIMONY

The Committee met in the Capitol Extension on May 3, 2000 to hear public testimony regarding solid waste tipping fees.

- **Jeff Saitas, Executive Director of the TNRCC testified that in the 1998-99 biennium, solid waste tipping fees raised approximately $44 million, of which the state allocated $24 million to the COGs. Saitas explained that the TNRCC must approve each individual grant awarded by the COGs and periodically conduct audits to ensure the proper use of the grants. If COGs improperly use the grant funds, the TNRCC can suspend the funds or require the COGs to refund the funds to the state. The COGs must return any funds not used but can keep the interest earned for use in solid waste projects.**
- **Jim Ray, Executive Director of the Texas Association of Regional Councils, testified that the legislature charges COGs with primary responsibility for coordinating regional solid waste activities, including regional planning and providing technical assistance as well as education and training. He stated that the COGs have no enforcement authority but do contact local authorities if an illegal site is identified. Ray testified about other accomplishments in fiscal years 1998-99, including COGs identifying 283,273 illegal litter or dump sites, removing 19,375 tons of waste from illegal sites, collecting 622,357 tons of illegal waste for recycling, collecting 904 tons of household waste for disposal, and hosting 158 educational and training events.**
- **Gary Pitner, representing The Panhandle Regional Planning Commission, said the state closely regulates the solid waste grants program to ensure the proper expenditure of funds. He explained the extensive TNRCC contracting process with COGs to operate the program, including detailed limitations on how COGs will use funds and involving public and private sector input at several stages with strict audit reports and performance requirements.**
- **Burl Buchanan, Mayor of Spearman, testified that the recycling program in Spearman would**

not exist without the regional solid waste program and that the state can never meet its own 40% recycling goal without the program. However, Mayor Buchanan said one-half of the tipping fees collected by his city which are sent to the state to fund the program is less on a dollar-for- dollar basis than the amount the city receives back from the program.

- **W.A. "Andy" Meyers, with the Houston-Galveston Area Council of Governments and Fort Bend County Precinct 3 Commissioner, testified that the regional solid waste program benefits his home county. He stated that his county hired local enforcement officers to prevent and prosecute illegal dumping. Commissioner Meyers explained that unless an operator of a disposal site holds a permit, license or registration from the TNRCC, the agency cannot easily enforce against illegal dumping sites. He said that operators of three illegal sites in the precinct he represents avoid regulation or enforcement by identifying the site as a 'recycling facility' or a "transfer station.' In doing so the site can accept waste without much scrutiny under state policies designed to encourage recycling, but the operator rarely if ever transfers waste off-site.**
- **W.W. "Buddy" Irby, representing Chambers County and The Houston-Galveston Council of Governments, testified that the solid waste grants program works to help Chambers County, and with more to accomplish, he asked that the program continue. He also noted that the local sheriff's office watches for illegal dumps while on patrol and issues citations for illegal dumping when they can find a violator.**
- **Ed Janecka, Fayette County Judge, testified that he favors the solid waste grants program, citing the success of the recycling program which his county initiated before the state grant program. Judge Janecka said the county later received a COG grant. He said COGs provide local law enforcement training and education to assist in recognizing illegal dumping.**
- **Jack Steele, Executive Director of the Houston-Galveston Area Council of Governments and representing Houston City Council member Carol Robinson, testified the solid waste grant program provides significant benefits and works very well.**
- **Carole Lenz, representing Harris County Commissioner Steve Radack and the Harris County Resource Management Program, testified that COGs successfully overcome an identity crisis in local areas and can shift priorities as needed in a region, most recently to the area of enforcement. She stated that through 1998 Harris County received over $4 million in solid waste grants, which represents about the same amount of tipping fee revenue the county sent to the state to fund the grant program.**
- **Mary Nix, representing The City of Irving, Department of Public Health and Environmental Services, said the entities she represents support the program allowing the COGs to oversee state solid waste rules and regulations and helping local governments. She noted several projects which benefit the city. Nix stated that Irving has remitted about $600,000 to the state to fund the grant program and has received $180,000 in grant funds. She stated that if the legislature continues collecting the fee, the COG program should continue so that local governments can continue receiving a portion of their money back.**

- **Chaz Miller, representing the National Solid Wastes Management Association, testified that his group perceived that the legislature intended the grant program to primarily focus on local enforcement of solid waste regulations, such as targeting problems like litter, illegal dumping and closing illegal sites. He further expressed the concerns of the solid waste management companies in the association he represents, including:**
  - **insufficient grant funds used for anti-litter campaigns, illegal dumping and the remediation of unauthorized sites;**
  - **the short-term nature of the grant program which requires that a recipient continue requesting funds for long-term projects;**
  - **the use of grant funds to compete with private industry, suggesting that the legislature disallow the purchase of capital equipment or facilities; and**
  - **the inability to measure benefits of the program.**

FINDINGS & RECOMMENDATIONS

Based on the background of the issue and in substantial part on the public testimony and public input received, The Committee makes the following findings and recommendations to the 77th Texas Legislature:

Finding No. 1:

The legislature never intended the regional solid waste grants program to continue forever. Rather, the legislature intends the program to 'jump-start' recycling and establish a regional view of solid waste management. Beginning at its creation in fiscal year 1996, the state has already or will spend between $10 million and $15 million per fiscal year for the program. Given the success of the program and the substantial expenditures, the legislative intent behind the program will be fulfilled in the near future.

Recommendation No. 1:

The legislature should closely monitor the regional solid waste grants program and be prepared to determine when the intent of the program has been fulfilled and the cost of the program outweighs the benefits.

Finding No. 2:

In general, local governments collect funds for the solid waste grant program but must request the COGs to return the monies in the form of a grant. COGs use a portion of the revenues for other solid waste services to assist local governments. Testimony taken reveals that if a local government receives grant funds through the solid waste grant program, the amount received represents less than, or in some instances roughly the same amount of, revenues collected by the local governmental entity and remitted to the state to fund the grant program. No example of a local government receiving more grant funding in dollars than the local government sent to the state to fund the program was specifically brought to the attention of The Committee.

Recommendation No. 2:

The legislature should consider eliminating the solid waste grant program and the corresponding half of the solid waste tipping fee. Alternatively, the legislature should consider allowing a local government to directly collect and retain an entirely optional local solid waste tipping fee for local solid waste projects, with appropriate restrictions similar to the restrictions which currently apply to the COGs. A local fee should not exceed the amount of any tipping fee collected by the state for other state purposes.

Finding No. 3:

Preventing and prosecuting against illegal dumping is a paramount public policy priority. However, overwhelming testimony indicates that ambiguity surrounds the authority and

ability of the TNRCC and local governments to enforce against illegal disposal and illegal dumps. Improvements can be made.

Recommendation No. 3:

The legislature should clarify the authority of the TNRCC and local governments to enforce against illegal solid waste disposal and illegal dumping and should provide adequate resources and tools. In addition, since a state waste tire recycling subsidy program no longer exists, enforcement of illegally discarded waste tires should be included in any increased enforcement initiatives. State and local agencies responsible for enforcing solid waste laws should increase enforcement. The solid waste grants program and the COGs should play a more active role in direct enforcement efforts.

Finding No. 4:

Testimony reveals that public policy to encourage recycling allows unscrupulous actors to easily obtain a recycling authorization from the TNRCC, receive large quantities of waste material under the guise of recycling, but either very slowly or never recycle the material. This policy creates a loophole allowing unauthorized dumps to be called recycling facilities.

Recommendation No. 4:

The legislature should clarify and clearly distinguish between different types of solid waste facility authorizations including a recycling facility, a transfer facility, a solid waste disposal facility and any other solid waste facility classification which may open the door for illegal dumping. However, clarification should not jeopardize the state policy to encourage recycling.

Finding No. 5:

Input from the public, and especially from local governments, provides invaluable information to the legislature. In response to this interim study, the COGs instituted a statewide effort to influence the outcome of this study. To date, The Committee has received over 40 letters or copies of resolutions from cities and over 13 from counties, which were requested of the local governments by the COGs. In addition, 6 letters have been received from COG groups. Though state law allows a state agency or a private entity which receives state funds to provide information to the legislature, the law prohibits one of these entities from lobbying the legislature[40]-- this avoids the situation where 'the tail wags the dog.' Promulgating a draft resolution for local governments constitutes substantially more than providing information.

Recommendation No. 5:

Since COGs are essentially governmental entities and receive state funds, the same prohibitions against lobbying the legislature which apply to other state agencies and entities which receive state funds should also apply to COGs.

ENDNOTES

1. **See TEX. HEALTH & SAFETY CODE ANN. §361.013 (West Supp. 2000) and TEX. HEALTH & SAFETY CODE ANN. §361.014 (West Supp. 2000).**

2. **COMPTROLLER OF PUBLIC ACCOUNTS, FISCAL NOTE ESTIMATE, H.B. 3119, 76th Tex. Leg., (1999).**

3. **TEX. HEALTH & SAFETY CODE ANN. §361.014(a) (West Supp. 2000).**

4. **COMPTROLLER, supra note 2.**

5. **TEX. HEALTH & SAFETY CODE ANN. §361.014(b) (West Supp. 2000).**

6. **See generally TEX. LOCAL GOV'T CODE ANN. §391 (West 1999 & Supp 2000); HOUSE RESEARCH ORGANIZATION, C.S.H.B. 3072 Bill Analysis, 74th Tex. Leg., April 28, 1995, at 2.**

7. **Supra, note 5.**

8. **TEX. ADMIN. CODE tit. 30, §330.569(c) (1998); TEX. NATURAL RESOURCE CONSERVATION COMMISSION, CONTRACTS TO COUNCIL OF GOVERNMENTS, SUMMARY OF TNRCC OVERSIGHT AND MONITORING, (March 2000).**

9. ***Regional Councils of Governments and the Municipal Solid Waste Grants Program, Report to the 76th Legislature*, January 29, 1999, at 8, 9.**

10. **Id.**

11. **TEX. NATURAL RESOURCE CONSERVATION COMMISSION, supra, note 8.**

12. **Id.**

13. **INTERIM REPORT TO THE 75TH LEGISLATURE, HOUSE COMMITTEE ON ENVIRONMENTAL REGULATION (December 1996), at 16.**

14. **HOUSE RESEARCH ORGANIZATION, Supra, note 6.**

15. **H.B. 3072, 74th Tex. Leg., R.S., 1995; Acts 1995, 74th Leg., ch. 838, §1, eff. June 16, 1995; supra, note 5.**

16. **SENATE COMMITTEE REPORT, H.B. 3072, 74th Tex. Leg., R.S., 1995.**

17. **HOUSE RESEARCH ORGANIZATION, Supra, note 6, at 3.**

18. **Id., at 4.**

19. **Id., at 5, 6.**

20. **Id., at 1.**

21. **COMPTROLLER, supra note 2.**

22. **Supra, note 13, at 16, 18.**

23. **Id., at 18, 19.**

24. **H.B. 3119, 76th Tex. Leg., R.S., 1999**.

25. ***Hearings on H.B. 3119, House Committee on Environmental Regulation*, 76th Tex. Leg., R.S., 1999, April 12, 1999.**

26. **HOUSE RESEARCH ORGANIZATION, Supra, note 6, at 2.**

27. **TEX. HEALTH & SAFETY CODE ANN. §363.061 et. al. (West Supp. 2000).**

28. ***Regional Councils of Governments*, supra note 9, at 8.**

29. **Id., at 4.**

30. **Id., at 9.**

31. **Id., at 10, 11.**

32. **See generally, Supra note 9, pp. 8-13.**

33. **Supra, note 5.**

34. **Letter from Jim Ray, Executive Director, Texas Association of Regional Councils, to Warren Chisum, Chair, House Committee on Environmental Regulation (October 2, 2000)(on file with the House Committee on Environmental Regulation).**

35. **Supra, note 5.**

36. **Supra, note 9.**

37. **Id., at 4.**

38. **Supra, note 34.**

39. **76TH LEGISLATURE, INTERIM CHARGES, TEX. HOUSE OF REPS. (December 20, 1999).**

40. **TEX. GOV'T CODE ANN. §556 et al (West Supp. 2000).**

OVERSIGHT

OVERVIEW

On December 20, 1999, House Speaker James E. "Pete" Laney directed the House Committee on Environmental Regulation to, "Conduct active oversight of the agencies under the committee's jurisdiction."[1] House Rules charge the committee with jurisdiction over:

(1) air, land, and water pollution, including the environmental regulation of industrial development;

(2) the regulation of waste disposal;

(3) environmental matters that are regulated by the Department of Health or the Texas Natural Resource Conservation Commission [TNRCC];

(4) oversight of the TNRCC as it relates to environmental regulation; and

(5) the following state agencies: the Texas Agriculture Resources Protection Authority, the Texas Low-Level Radioactive Waste Disposal Compact Commission, and the Texas Low-Level Radioactive Waste Disposal Authority.[2]

Without question, the three most substantial issues under The Committee's jurisdiction focus on the Sunset of the TNRCC, management of low-level radioactive waste and compliance with federal air quality standards. This Oversight Committee Report does not address low-level radioactive waste or federal air quality standards since independent committee charges address those issues.

SUNSET REVIEW OF THE TNRCC

Unless the legislature chooses to reenact the statutes governing the TNRCC, the agency will expire after the 77th Legislative Session in 2001[3] in accordance with The Texas Sunset Act.[4] Current Sunset Chairman Fred Bosse notes that the review of most state agencies involve about 20 issues, but the review of the TNRCC involves at 140.[5]

In the thorough review of the TNRCC, Sunset Commission staff met with TNRCC leadership or agency staff at least 25 times, participated in 14 site visits in the field, attended at least 10 TNRCC board meetings, sent one-hundred-seventy-two (172) interest group letters, received at least 44 responses from interest groups, and held at least 31 interest group meetings.[6]

The Sunset Commission heard over 20 hours of testimony from the TNRCC and the public on June 20 and 21 regarding the TNRCC Sunset Review.[7] On September 20, 2000, The Sunset Commission adopted the recommendations[8] which will serve as the foundation for the TNRCC

Sunset bill. In general, the broad, major recommendations include:

- **establishing tiers of regulation based on the compliance history of regulated entities, with the goal in mind of allowing the agency to begin focusing more resources on those entities with poor compliance histories, and less resources on entities with a favorable compliance histories;[9]**
- **expanding participation in innovative environmental programs such as flexible permitting for entities with favorable compliance histories, and limiting participation in regard to entities with poor compliance histories;[10]**
- **allowing the TNRCC to conduct announced inspections only for facilities with favorable compliance histories;[11]**
- **requiring accreditation of environmental laboratories which perform environmental testing to ensure credible information on which to base enforcement actions and establish compliance histories;[12]**
- **increasing research on which TNRCC plans and bases long-range environmental policies and decisions;[13]**
- **requiring balanced representation on advisory committees and increasing the type and amount of information available to the public on the TNRCC website;[14]**
- **allowing, rather than requiring, the TNRCC executive director to enter into contested case permit hearings, and only for limited purposes such as completing the record;[15]**
- **allowing for more involved public participation at the TNRCC by increasing the weight and attention given to complaints made by the public;[16]**
- **removing the limitations on fees which fund TNRCC programs to create flexibility for the legislature to determine each biennium whether to allow the agency to transfer a portion of fee revenues among programs; the Sunset Commission referred all other funding issues to the appropriate substantive legislative committees for consideration;[17]**
- **requiring timely payment and collection of fees and penalties;[18] and**
- **continuing the TNRCC for 12 years.[19]**

IMPLEMENTATION OF ENVIRONMENTAL LEGISLATION ENACTED BY THE 76TH LEGISLATURE

The following chart summarizes the committee workload from the 76th Legislative Session:[1]

	House Bills	Senate Bills	Total
Bills Referred	49	13	62
Considered in Public Hearing	42	2	44
Left Pending	22	0	22
Reported Out	20	12	32
Reported engrossed	n/a	13	13
Reported enrolled	8	n/a	8
Sent to and Signed by the Governor	8	8	16

The following list comprises the bills approved by the committee which now exist as current law:[2]

- **HB 801 Uher/et al. - Sponsor: Armbrister (Relating to public participation in certain environmental permitting procedures of the TNRCC).**
  Status: All rules implementing HB 801 have been adopted, except for rules implementing new Section 26.0286 of the Texas Water Code relating to Procedures Applicable to Permits for Certain Concentrated Animal Feeding Operations.

- **HB 1159 Ellis, Dan/et al. - Sponsor: Cain (Relating to county regulation of public nuisances by deleting the population limit in order for any unincorporated area to be included in this public nuisance statute).**
  Status: no action by TNRCC required.

- **HB 1172 Chisum - Sponsor: Brown, J. E. "Buster" (Relating to low-level radioactive waste).**

[1] **The information in the committee workload chart is provided by committee staff.**

[2] **The section of this report relating to specific bills enacted by the 76th Legislature is provided by the TNRCC, Intergovernmental Relations Division.**

Status: The draft rule package was presented to the Texas Radiation Advisory Board (TRAB) on January 29, 2000 and the Nuclear Regulatory Commission (NRC) reviewed the proposed rules by February 21, 2000. The NRC stated that if the proposed regulations are adopted without significant change, the rules will meet the required compatibility and health and safety criteria. The TNRCC adopted the change to the changes to the definition of low-level radioactive waste on August 23, 2000. The rules took effect September 14, 2000. The rule definition maintains compatibility between sate and NRC requirements. Other changed include adding an exemption-from-rule process, adding an exemption from radioactive material licensing requirements for Superfund and Voluntary Clean-up projects and allowing for continuing authorizations for existing on-site low-level radioactive material disposal.

- **HB 1838 Smith - Sponsor: Moncrief (Relating to the regulation of the practice of professional sanitarians; providing a penalty).**
  Status: no action by TNRCC required.

- **HB 2597 McReynolds - Sponsor: Armbrister (Relating to emissions from certain hospital or medical disinfectants).**
  Status: no action by TNRCC required.

- **HB 2619 Ramsay - Sponsor: Ratliff (Relating to the collection and management of used oil filters; providing civil and administrative penalties).**
  Status: Rules have been adopted by the TNRCC which reduce registration and reporting requirements from annual to biennial for transporter/transfer facilities, storage facilities, and processors; authorize increased storage time at a storage facility from 90 to 120 days; and authorize TNRCC to grant two-year variances on storage volume limits and storage time limits. The Office of Permitting, Remediation and Registration made the changes to implement the rules upon the effective date of December 23, 1999 and drafted a guidance document for publication.

- **HB 3288 Greenberg - Sponsor: Barrientos (Relating to the exclusion of certain sewage sludge from solid waste disposal fees).**
  Status: Rules were adopted by the TNRCC on July 26, 2000. The rules took effect on August 17, 2000.

- **HB 3561 Luna, Vilma - Sponsor: Truan (Relating to grant-making authority of the TNRCC).**
  Status: The TNRCC adopted implementation rules July 26, 2000. The rules took effect August 20, 2000.

- **SB 486 Brown, J. E. "Buster" - Sponsor: Lewis, Ron (Relating to the processing or**

disposing of solid waste).

Status: The rule to implement SB 486 was adopted on June 29, 2000 and took effect on July 20, 2000.

- **SB 766 Brown, J. E. "Buster" - Sponsor: Allen/et al. (Relating to the issuance of certain permits for the emission of air contaminants).**

  Status: SB 766 was divided into two phases for completion. The first phase implemented, among other provisions, the Voluntary Emission Reduction Permit program. The second completed the implementation of the bill, by establishing the multiple plant permits program, the fee for grandfathered facilities, de minimus standards, and permits-by-rule, and was adopted by the TNRCC on August 9, 2000 and took effect September 4, 2000.

- **SB 828 Shapleigh - Sponsor: Haggerty (Relating to supplemental environmental projects undertaken in lieu of certain penalties).**

  Status: The bill was considered implemented by June 16, 1999. The TNRCC developed criteria for international SEPs in coordination with interested entities.

- **SB 1238 Nelson - Sponsor: Capelo (Relating to accreditation of environmental testing laboratories).**

  Status: no action by the TNRCC required.

- **SB 1298 Brown, J. E. "Buster" - Sponsor: Chisum (Relating to a prohibition on a requirement for air dispersion modeling before beginning construction of a concrete plant).**

  Status: The TNRCC adopted changes to its procedural rules concerning evidence that is admissible on July 26, 2000. The rules took effect on August 20, 2000. The new standard permit was issued by the TNRCC on August 11, 2000 after the agency received appropriate stakeholder input.

- **SB 1447 Barrientos - Sponsor: Dukes (Relating to the requirements for identifying former municipal landfills and notifying the owners of the overlaying property).**

  Status: Rules implementing the bill were adopted by the TNRCC on July 12, 2000, and took effect on August 2, 2000. The 24 Councils of Governments were required to work on completing the regional inventories under their FY 2000/2001 regional solid waste grant work programs.

- **SB 1594 Brown, J. E. "Buster" - Sponsor: Cook (Relating to assistance to small businesses regulated by the TNRCC through its regulatory flexibility programs).**

  Status: Staff has completed the regulatory flexibility marketing plan. A survey was mailed out to small businesses during October 1999. The TNRCC continues to conduct outreach and

build upon the survey results.

- **SB 1746 Jackson - Sponsor: Chisum (Relating to the creation and administration of the Texas Environmental Education Partnership Fund and the Texas Environmental Education Partnership trust fund).**

  Status: The Texas Environmental Education Partnership (TEEP) Fund Board was appointed by Governor Bush and has been meeting at least quarterly since December 1999. Three members of the TEEP Fund Board formed the Environmental Education Foundation of Texas which applied for, and received, a 501(c)(3) letter of recognition from the Internal Revenue Service. The Foundation will provide administrative support for the TEEP Fund Board. The Board has also entered into an agreement with the TNRCC to provide air monitors at public schools as part of the Supplemental Environmental Project (SEP) program. In conjunction with this project the Board will raise additional funds to provide training for teachers in the use and maintenance of the monitors, as well as necessary materials for teachers to educate their students about monitoring the air. The Foundation hired a director in September 2000. With the placement of staff and the designated non-profit status of the Foundation, the TEEP Fund Board expects to move forward at an accelerated pace.

GRANDFATHERED FACILITIES[3]

Senate Bill 7[20] and Senate Bill 766[21] from the 76th Legislative Session address the issue of 'grandfathered' facilities, which are not subject to state air permitting requirements because they existed before the requirements for state air quality permitting programs.[22] Given the high degree of attention and importance given to air quality issues and the permitting of grandfathered facilities, The Committee notes that between 1997 and October 1999:

- **193 sites submitted applications to the TNRCC to permit grandfathered facilities;**
- **the TNRCC issued permits for 139 sites;**
- **29,922 total tons of reported 1997 grandfathered emissions have been permitted; and**
- **the permitting of grandfathered facilities reduced total tons of actual emissions by 19,630.**

Five of the grandfathered facility permit applicants listed above also applied for air permits under the permitting requirements for electric facilities included in Senate Bill 7.[23] In total, 75 electric utility sites applied for permits under Senate Bill 7, which the TNRCC estimates will reduce sulphur dioxide emissions from 1997 levels by 148,615 tons and nitrous oxide emissions from 1997 levels by 66,193 tons.

[3]**Up to date information regarding the status of grandfathered facility permits can be accessed on the TNRCC website at www.tnrcc.state.tx.us/grandfathered/index.html.**

The Committee believes the grandfathered permitting initiatives adopted by the legislature in 1999 have met with a high degree of success despite some critics.[24]

WASTE TIRES[4]

In 1991, the legislature created the waste tire recycling program with the intent to remediate abandoned waste tire dumps and establish a recycling market.[25] After the waste tire program operated for several years, few recycling and end-use markets for waste tire products emerged, and in 1997 the legislature changed the law to subsidize only program participants who actually sent waste tire products to an end-use.[26]

Apparently deeming the waste tire program a failure, the legislature ultimately repealed certain provisions of the waste tire program and allowed the remainder to expire at years end in 1997.[27] Finally, legislation to implement a less extensive waste tire program approved by the House in 1999 died with a 'tag' in Senate Committee.[28]

The Committee notes that some problems with illegal waste tire dumping have been brought to the attention of individual legislators and legislative committees. However, the legislature intends for enforcement of current state laws prohibiting illegal dumping to address the issue. The Committee intentionally makes no recommendation to implement a waste tire recycling program.

TEXAS AGRICULTURE RESOURCES PROTECTION AUTHORITY[5]

The Texas Agriculture Resources Protection Authority (ARPA) coordinates the policies and programs of management, regulation, and control of pesticides conducted by the Texas Department of Agriculture, the State Soil and Water Conservation Board, the Texas Agricultural Extension Service, the Texas Department of Health, the TNRCC and the Texas Structural Pest Control Board.[29]

The ARPA conducted a 'Pesticide Summit' on May 11, 2000. The purpose of the Summit was to determine how state agencies interact and what role they play in the regulation of pesticides in order to pinpoint areas of overlap. Representatives from every agency involved with

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[4] **Because of continued controversy surrounding waste tire disposal, reuse and recycling and whether a legislative issue continues to exist, this section has been included in this report.**

[5] **The section of this report relating to the ARPA is provided by the Texas Department of Agriculture, Intergovernmental Relations Division.**

pesticides and the ARPA Board were invited to participate. Each quarter the TDA prepares a report of pesticide regulatory enforcement activities for the ARPA. The report is generated from information provided to the TDA by the agencies involved with the ARPA.

PUBLIC TESTIMONY

The Committee met in the Capitol Extension on May 3, 2000 to hear public testimony regarding issues under The Committee's oversight authority.

- **Jeff Saitas, Executive Director of the TNRCC, noted that the Sunset review of the TNRCC thoroughly addresses most legislative issues relating to the agency. He noted that air quality issues currently dominate discussions relating to environmental regulations. Saitas said the agency takes great pains to treat everybody fairly and consistently in the enforcement process, with the focus centering on compliance with the law. Regarding waste tires, he said a recent TNRCC and Texas Department of Transportation study reveals that recyclers or end-users take 16 million of the 20 million waste tires generated in Texas each year. Tire derived fuel accounts for 62% of the end-uses and results in lower nitrous oxide emissions than most other fuels. Illegal waste tire dumping does exist, but only in isolated 'pockets' around the state. On funding issues, Saitas said the current TNRCC funding procedures effectively hand-cuff the agency since some personnel work on numerous programs and must then receive partial salary from various earmarked accounts.**
- **Joey Longley, Director of The Sunset Advisory Commission, advised The Committee that recommendations on the review of the TNRCC focus on a flexible approach to regulation, based on historical performance and enforcement. Longley noted the inclusion of other standard Sunset issues such as public participation and the complaint process as well as consideration of the unique funding problems faced by the agency. He said the Sunset review omits air issues and other substantive environmental policy issues which do not fall under the purview of the Sunset process.**
- **Joseph L. Fuller, Associate Commissioner of the Texas Department of Health, testified regarding several issues under the jurisdiction of The Committee which his agency regulates or monitors. He said 750,000 tires illegally dumped remain in the border area. Regarding increased attention to indoor air quality, he noted that the legislature requires indoor air quality guidelines for public schools. Lastly, he said based on improvements in testing results, the agency recently approved several water bodies of water for fishing, including Town Lake in Austin.**
- **Claren J. Kotrla, with the Texas Department of Health, testified regarding outbreaks of mold which detrimentally affect indoor air quality. He said indoor mold problems never existed until building design changes instituted in the 1970s for energy conservation began preventing the circulation of air which in turn promotes moisture retention and**

mold. He said mold eats organic matter like sheet-rock or paper if moisture is present. Kotrla said no state agency currently has legislative authority or resources to address an indoor air quality problem associated with mold in a private home or a private business.

FINDINGS & RECOMMENDATIONS

Because the current Sunset Review of the TNRCC encompasses a thorough analysis of the agency and because other interim committee charges relating to air quality and low-level radioactive waste management and disposal address those issues, The Committee makes no specific findings and recommendations relating to this oversight charge.

ENDNOTES

1. **75TH LEGISLATURE, INTERIM CHARGES, TEXAS HOUSE OF REPRESENTATIVES (December 20, 1999).**

2. **Rule 3, Sec. 12, HOUSE RULES, 76th Tex. Leg., 1999.**

3. **TEX. WATER CODE ANN. §5.014 (West Supp. 2000).**

4. **See generally TEX. GOV'T CODE, §325 et al. (West 1998 & Supp. 2000).**

5. ***Joint Hearing of the Texas Senate Committee on Natural Resources and Texas House Committee on Environmental Regulation,* 76th Tex. Leg. (Houston, Texas, March 7, 2000) (statement of Representative Fred Bosse, Chair of the Texas Sunset Commission).**

6. **Briefing Report prepared for February 3, 2000 hearing: Texas Sunset Advisory Commission, 76th Tex. Leg. (February 3, 2000).**

7. ***TNRCC Sunset Review: Hearings before Texas Sunset Advisory Commission,* 76th Tex. Leg. (June 21-22, 2000).**

8. ***TNRCC Sunset Review: Hearings before Texas Sunset Advisory Commission,* 76th Tex. Leg. (September 20, 2000).**

9. **Sunset Commission Decisions, Texas Natural Resource Conservation Commission, 76th Tex. Leg., pp. 3 - 13 (September 2000).**

10. **Id. at 15 - 19.**

11. **Id. at 21 - 26.**

12. **Id. at 27 - 31.**

13. **Id. at 33 - 36.**

14. **Id. at 37 - 45.**

15. **Id. at 47 - 51.**

16. **Id. at 53 - 59.**

17. **Id. at 61 - 67.**

18. **Id. at 69 - 70.**

19. **Id. at 75 - 77.**

20. **S.B. 7, 76th Tex. Leg., R.S., 1999.**

21. **S.B. 766, 76th Tex. Leg., R.S., 1999.**

22. **BILL ANALYSIS, S.B. 766, 76th Tex. Leg., R.S., 1999.**

23. **Telephone conversation between Steve Hagle with the TNRCC and Committee Staff, October 2, 2000.**

24. ***Environmental group blasts Bush pollution initiative,* FORT WORTH STAR-TELEGRAM, October 3, 2000.**

25. **Acts 1991, 72nd Tex. Leg., ch. 303 §1.**

26. **HOUSE COMMITTEE REPORT, H.B. 3132, 76th Tex. Leg., R.S., 1999.**

27. **See generally TEX. HEALTH & SAFETY CODE, Supchapter P, §§361.471 to 361.482, §§361.484 to 361.499 (expired December 31, 1997 pursuant to §361.497); TEX. HEALTH & SAFETY CODE, Supchapter P, §§361.483 to 361.4832 (Repealed by Acts 1997, 75th Tex. Leg., ch. 1072, §60(b)(3), eff. Sept. 1, 1997; TEX. HEALTH & SAFETY CODE, Supchapter P, §§361.491 (Repealed by Acts 1997, 75th Tex. Leg., ch. 1072, §60(b)(3), eff. Sept. 1, 1997.**

28. **H.B. 3132, 76th Tex. Leg., R.S., 1999.**

29. **TEX. AGRIC. CODE ANN., 76.009 (West Supp. 2000).**