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February 13, 2026

Laurie Gharis, Chief Clerk
Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
P.O. Box 13087
Austin, TX 78711

RE: Midwest Sterilization Corporation
TCEQ Docket No. 2026-0043-AIR
Response to Hearing Requests

Dear Ms. Gharis:

Enclosed please find Midwest Sterilization Corporation's Response to Hearing Requests regarding the above-entitled matter.

If you have any questions, please do not hesitate to call me at (512) 391-8010. Thank you for your attention to this matter.

Sincerely,

Madeleine Boyer
Counsel to Midwest Sterilization Corporation

Cc:

Karen Eldridge, President, Midwest Sterilization Corporation
Lisa Dyar, Beveridge & Diamond PC

TCEQ DOCKET NO. 2026-0043-AIR

APPLICATION BY MIDWEST STERILIZATION CORPORATION FOR A NO-INCREASE RENEWAL FOR AIR QUALITY PERMIT NO. 55557, WEBB COUNTY, TEXAS	**§** **§** **§** **§**	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

APPLICANT MIDWEST STERILIZATION CORPORATION'S RESPONSE TO HEARING REQUESTS

Applicant Midwest Sterilization Corporation ("***MSC***" or "***Applicant***") files this Response to requests by the City of Laredo, Rio Grande International Study Center ("***RGISC***"), and 20 individuals[1] for a contested case hearing or reconsideration (the "***Requests***") on MSC's no-increase permit renewal application for Air Quality Permit No. 55557 (the "***Application***") for its medical equipment sterilization facility located in Laredo, Webb County, Texas (the "***Plant***"). The Plant is responsible under contract for sterilizing over 30 million surgical kits annually, including all surgical kits used by Laredo hospitals and 600 medical facilities in Texas. MSC Comment at 2. The proposed draft renewed permit (the "***Draft Permit***") will reauthorize existing facilities, to allow the Plant to continue operating. The Application does not seek any operating changes or any increase in emissions. For those reasons, the Application is not subject to a contested case hearing. Tex. Health & Safety Code § 382.056(g). As detailed below, MSC requests that the Texas Commission on Environmental Quality ("***TCEQ***") Commissioners (the "***Commission***") deny the Requests, adopt the TCEQ Executive Director's (the "***ED***") Response to Public Comment (the "***RTC***"), and issue the Draft Permit.

[1] The TCEQ Chief Clerk identified 19 individual hearing requestors and one reconsideration requestor: Ana Campos, Rosalinda Canales-Aviles, Melody Carriere, Eduardo Cavazos, Jr., Julio de la Cruz, Jose V. Flores, Raul Garza, Ricardo Guerra, Analaila Gutierrez, Reynaldo Gutierrez, Jr., Edna Ibarra, Lauro Martinez, Jaqueline Mendoza, Roxana Moyeda, Pamela Neumann, Tannya Perez, Vanessa J. Perez, Marissa Perez-Garcia, Ariana Salinas, and Jorge Serrato.

I. PROCEDURAL BACKGROUND

The Application is subject to the procedural requirements adopted pursuant to House Bill 801, 76th Legislature, 1999, and Senate Bill 709, 84th Legislature, 2015, codified in the Texas Government Code and TCEQ rules. The Commissioners' Integrated Database and the RTC accurately describe the procedural background of the Application.

The ED conducted a thorough technical review of the Application and determined that the Plant met all legal and technical renewal requirements. The ED determined that no changes to the existing permit were warranted. The RTC and the ED's decision were issued on November 26, 2025, and the deadline to submit a hearing request or request for reconsideration ended December 29, 2025.

II. THE COMMISSION LACKS AUTHORITY TO GRANT ANY HEARING REQUESTS FOR MSC'S NO-INCREASE RENEWAL APPLICATION.

The Texas Clean Air Act prohibits a contested case hearing on a permit renewal application when that application does not propose increased allowable emissions or emission of an air contaminant not previously authorized. Tex. Health & Safety Code § 382.056(g); 30 Tex. Admin. Code § 55.201(i); *see Tex. Comm'n on Env't Quality v. City of Waco*, 413 S.W.3d 409, 419 (Tex. 2013) (confirming no-increase renewal permit action under 30 Tex. Admin. Code § 55.201(i) is exempt from a contested case hearing). Likewise, TCEQ procedural rules prohibit "a right to a contested case hearing where the opportunity for a contested case hearing does not exist under other law." 30 Tex. Admin. Code § 50.113(b).

The Application is a very straightforward no-increase renewal of MSC's existing New Source Review permit. As the ED rightly concluded from its technical review, renewal will not authorize any increase in allowable emissions, new air contaminants not previously authorized, or any operational changes. RTC, Response 1 at 3. The Commission has reached the same legal

decision on multiple recent no-increase renewal air permits and has ample precedent to do so here.[2] Requestors advance a preferred narrative that the Application "*should* be submitted to more rigorous regulations,"[3] but the statute unambiguously forecloses a contested case hearing for a no-increase renewal application. As a matter of law, there is no right to a contested case hearing on the Application and on that basis, the Commission should deny all contested case hearing requests.

MSC acknowledges the Commission's discretionary authority to hold a hearing on a permit renewal for a site that has an unsatisfactory compliance history rating. Tex. Health & Safety Code § 382.056(o); Tex. Water Code §§ 5.753, 5.754. Neither MSC nor the Plant have an unsatisfactory compliance history.

III. MSC'S NO-INCREASE RENEWAL APPLICATION MEETS ALL REQUIREMENTS AND IS PROTECTIVE.

A. The Draft Permit is Protective of Human Health and the Environment.

The law is clear. So too are the merits of the Draft Permit. The ED determined that MSC demonstrated that the Draft Permit meets Best Available Control Technology and will continue to be protective of human health, welfare, and the environment. Tex. Health & Safety Code § 382.0518(b); RTC, Response 1 at 3-5. Nevertheless, Requestors' primary and overarching concerns relate to the Plant's ethylene oxide emissions. *See, e.g.*, RTC, Comments 1, 3, 4, 5, 6.

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2 *See, e.g., In the Matter of the Application by Tamko Building Products LLC for the Asphalt Roofing Manufacturing Plant in Dallas County, Texas*, TCEQ Docket No. 2025-0791-AIR (July 23, 2025) (denying all hearing requests on no-increase air permit renewal after weighing evidence); *In the Matter of the Application by Argos USA LLC for the Renewal of Air Permit No. 105998*, TCEQ Docket No. 2024-1224-AIR (Sept. 11, 2024) (same); *In the Matter of the Application by West Gin, LLC for Renewal of Air Quality Permit No. 21589*, TCEQ Docket No. 2023-0545-AIR (Jan. 10, 2024) (same).

3 RGISC Request (Oct. 17, 2023) at 6 (emphasis added).

Through its extensive technical expertise, TCEQ genuinely understands Ethylene Oxide ("***EtO***") risk. TCEQ's intentional multi-year effort to evaluate the toxicology and cancer risk of EtO produced a detailed state-specific carcinogenic dose-response assessment in 2020 and an updated Effects Screening Level ("***ESL***") in 2022. Both reflect independent scientific evaluation. As the ED stated in the RTC, TCEQ's long-term comparison values for EtO are derived to protect the population and based on extensive scientific studies, assessment, and peer reviews. As such, the ED determined that EtO emissions authorized by the Draft Permit will continue to be at safe levels that will not cause or contribute to health or welfare effects. TCEQ's fulsome review of cancer data and estimated emissions for the Draft Permit did not indicate a likelihood of increased cancer occurrence or other health effects—in fact, the opposite is true. *See* RTC, Response 1 at 4-5. Accordingly, the ED does not expect existing health conditions to worsen or adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment because of existing emissions rates associated with the Draft Permit. *Id.*

Despite TCEQ's elevated proficiency in the science of EtO, Requestors raise a host of unsupported assertions and assumptions, each of which the ED dispelled with facts in its RTC. The Draft Permit does ***not*** increase emissions. *See* RTC, Response 1 at 3. Notice was properly provided in English and Spanish. *See* RTC, Response 7 at 13. Lawsuits and OSHA concerns are irrelevant to or outside the scope of the Application. *See* RTC, Response 5 at 10-11; Response 15 at 16; and Response 17 at 17. Declarations about emissions rates are accurate and properly calculated. *See* RTC, Response 3 at 8-9.

MSC most recently submitted EtO air dispersion modeling to TCEQ in February 2018 in connection with an amendment to Permit No. 55557 (the "***2018 Health Effects Evaluation***"). As described in the attached affidavit, Lucy Fraiser, Ph.D., DABT, a highly accredited toxicologist

with expertise in evaluating air quality impacts, including EtO impacts, reviewed the 2018 Health Effects Evaluation. A modeling evaluation for non-criteria contaminants compares predicted emissions concentrations to the TCEQ ESLs, which are levels well below those at which adverse health effects have been observed or at odor detection/vegetative effect thresholds in sensitive individuals/species. Exhibit LF-1 ¶ 7. The TCEQ Air Permits Division uses the Modeling and Effects Review Applicability ("***MERA***") guidance and its eight-step process to assess human health and welfare effects related to proposed emissions.

Dr. Fraiser reviewed the MERA analysis in the 2018 Health Effects Evaluation. In that evaluation, the modeled maximum ground level concentrations of EtO were less than 10% of the ESL and satisfied the MERA process at Step 3, completing the human health and welfare effects review. Exhibit LF-1 ¶ 7. Dr. Fraiser concluded that the estimated emissions evaluated in the 2018 Health Effects Evaluation represent substantial overestimates of actual EtO emissions at the Plant today. Exhibit LF-1 ¶ 13. Dr. Fraiser further determined that the estimated EtO emissions from the Plant are not expected to increase cancer in the community in general nor in the Requestors based on their residences located upwind from the Plant. Exhibit LF-1 ¶ 19. In her opinion, Dr. Fraiser determined that EtO emissions from the Plant will not have any adverse health effects on the community. Exhibit LF-1 ¶ 20.

B. The Plant's Actual Emissions Are Already Lower than Allowed by the Draft Permit.

The Plant's actual EtO emissions are lower than will be allowed by the Draft Permit and will go lower still. Through control device upgrades outlined below, MSC has already achieved emissions reductions below EtO emissions limits to be authorized in the Draft Permit. MSC will further reduce EtO emissions through implementation of Maximum Available Control Technology

("***MACT***") requirements—specifically, the National Emission Standards for Hazardous Air Pollutants ("***NESHAP***") for Commercial Sterilization Facilities (the "***Sterilizer MACT***").

IV. THE PLANT HAS INSTALLED POLLUTION CONTROL EQUIPMENT REQUIRED TO COMPLY WITH EPA'S STRINGENT NEW STERILIZER MACT.

A no-increase renewal application is not subject to a contested case hearing as a matter of law, which should end the matter. Tex. Health & Safety Code § 382.056(g). Further, in the time since the Plant submitted the Application in 2023, EPA and MSC have taken actions that address Requestors' primary concerns regarding EtO emissions.

First, EPA undertook a risk and technology review of its Sterilizer MACT. Second, EPA proposed to revise the Sterilizer MACT to strengthen the controls for EtO emissions from commercial sterilizers. Third, the Plant implemented the revised Sterilizer MACT standards in advance of the applicable compliance dates, which have not yet become effective. As such, EtO emissions at the Plant will comply with the most recent MACT by the compliance date, if not sooner. MSC's technological enhancements have greatly reduced emissions and substantively addressed Requestors' concerns regarding EtO emissions at the Plant. A brief timeline of the Plant's permitting history reflects steady, proactive compliance:

- On February 24, 2023, the Plant timely submitted the no-increase renewal Application, nearly three years ago. The Draft Permit incorporates two Pollution Control Project Standard Permits for voluntarily installed EtO control equipment that already substantially reduced emissions levels represented in the Draft Permit. *See* Standard Permit 159301 (wet scrubber system) and Standard Permit 169480 (aeration room vents). No other changes were proposed and the associated EtO emissions limit reductions from controls remain in place.

- On April 13, 2023, EPA proposed an overhaul of the Sterilizer MACT. The primary driver[4] of the revisions was to address projected risks based on EPA's 2016 revised IRIS toxicological risk value for EtO.[5] EPA fast-tracked the Sterilizer MACT revisions and finalized the rule on April 5, 2024. The revised MACT imposes various two- and three-year compliance dates of April 6, 2026, and April 5, 2027. The revised Sterilizer MACT applies to the Plant and requires EPA's latest maximum achievable controls for EtO emissions from commercial sterilizers.
- On November 6, 2024, well in advance of Sterilizer MACT compliance deadlines, the Plant applied for Pollution Control Project Standard Permit No. 178176 to authorize new EtO control systems required by the Sterilizer MACT.[6]

MSC's decision to voluntarily install EtO emissions equipment and its prompt implementation of the Sterilizer MACT requirements resulted in substantial reductions in the Plant's EtO emissions. As dictated by a Special Condition in the Draft Permit, MSC is required to submit a permit amendment to incorporate Standard Permit No. 178176 within 30 days of issuance of the renewal, which MSC will do. That amendment will also reflect a significant reduction in the EtO emissions limits from the current permit. RTC, Response 2 at 7; Response 3 at 9.

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4 In the preamble to the adoption of the Sterilizer MACT, EPA stated "[t]his final rulemaking reflects the EtO toxicological assessment that EPA's Integrated Risk Information System (IRIS) Program completed in December 2016, which indicated that EtO is a far more potent carcinogen than we had understood when the RTR for this source category was conducted in 2006." 89 Fed. Reg. 24090, 24091 (April 5, 2024). A similar statement was made in the preamble to the proposed rule. 88 Fed. Reg. 22790, 22792 (April 13, 2023).

5 *See Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide*, December 2016, EPA/635/R–16/350Fa. The risk value is commonly referred to as the "IRIS" value because the assessment was completed by EPA's Integrated Risk Information System. TCEQ undertook its own cancer assessment of EtO in 2020 and reached a less conservative risk value. *See generally* https://www.tceq.texas.gov/toxicology/ethylene-oxide.

6 These include: a warehouse air recirculation system to capture EtO; a system to capture all fugitive exhaust air; a polishing system for aeration rooms vent emissions; a polishing system for wet scrubber emissions; a Permanent Total Enclosure to meet EPA Method 204 and that will be monitored by differential pressure transmitters. *See* Process Description for Midwest Sterilization Corporation Pollution Control Project for Aeration and Wet Scrubber Polishing and PTE Implementation.

Moreover, Requestors' concerns about EtO are also addressed by the Plant's early implementation of the revised Sterilizer MACT requirements. For example, RGISC relies on EPA's revised EtO IRIS value as the primary technical basis for its assertions about public health risk, particularly from the Plant's fugitive emissions. *See* RGISC Request (Oct. 17, 2023) at 2. EPA's 2016 EtO IRIS value was the same basis on which EPA reviewed and revised the Sterilizer MACT—rules the Plant has already implemented. 89 Fed. Reg. at 24091. The Sterilizer MACT revisions specifically address fugitive emissions. *See* 40 C.F.R. §§ 63.360, .361.

On behalf of RGISC, Dr. Ranajit Sahu asserts generalized flaws with the Plant's EtO emissions estimates, pollution monitoring and controls, and testing, repeatedly pointing to EPA's then-anticipated revised Sterilizer MACT, which was not yet proposed at the time of his affidavit in 2023. Those assertions are not procedurally appropriate for consideration in a no-emissions increase permit renewal application and, in any event, do not reflect the Plant's current EtO emissions following implementation of the new MACT requirements.

V. CONCLUSION AND PRAYER

The TCEQ ED's comprehensive evaluation of the Application, in addition to the attached technical affidavit, demonstrates that the Application fully satisfies all applicable legal and technical requirements for a no-increase permit renewal. MSC's permit renewal will not result in an increase in allowable emissions and will not result in emission of an air contaminant not previously admitted. A no-increase permit renewal is not subject to a contested case hearing. MSC is required to and will apply for a permit amendment to incorporate applicability of the new Sterilizer MACT requirements, which it has already begun implementing to meet compliance deadlines. MSC stands ready to submit this amendment within 30 days after the Draft Permit is

issued. MSC respectfully requests that the Commission deny the Requests, adopt the Executive Director's Response to Public Comment, and issue the Draft Permit.

Respectfully Submitted,

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ATTORNEYS FOR
MIDWEST STERILIZATION CORPORATION

CERTIFICATE OF SERVICE

I hereby certify that I filed a true and correct copy of the foregoing Midwest Sterilization Corporation's Response to Hearing Requests through TCEQ's E-file system and served a copy on the following persons via electronic mail on February 13, 2026:

Madeleine Boyer

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EXHIBIT LF-1

Affidavit of Lucy Fraiser, PH.D, DABT

TCEQ DOCKET NO. 2026-0043-AIR
AFFIDAVIT OF LUCY FRAISER, PH.D., DABT
FRAISER TOXICOLOGY CONSULTING, LLC

STATE OF ARKANSAS §
COUNTY OF WASHINGTON §

BEFORE ME, the undersigned authority, on this day personally appeared Lucy Fraiser, Ph.D., DABT, who after being duly sworn upon her oath stated as follows:

1. My name is Lucy Fraiser. I am over 21 years of age, am of sound mind, and am fully competent to make this affidavit. Each and every statement contained in this affidavit is based upon my personal knowledge and is true and correct.

EXPERIENCE

2. I am a toxicologist with over 35 years of experience in the areas of exposure and risk assessment, health effects and toxicology evaluations, development of quantitative toxicity criteria, development of risk-based air and water quality guidelines, and soil cleanup criteria, and litigation support. My education includes a B.A. in Psychology and a Ph.D. in Toxicology from the University of Texas in Austin. I am a Diplomate of the American Board of Toxicology ("***DABT***"). The DABT certification is a globally recognized credential in toxicology awarded by the American Board of Toxicology ("***ABT***"), which is the largest professional toxicology credentialing organization in the world. The DABT certification represents competency and commitment to human health and environmental sciences. Becoming certified by the ABT requires a combination of higher education and experience, with rigorous certification (testing) and recertification processes. I am also a member of the American College of Toxicology. I worked for the Toxicology Division of the Texas Natural Resource Conservation Commission (***"TNRCC"***) early in my career. I have extensive experience performing public Health and Welfare Effects Evaluations related to air quality permit applications submitted to the Texas Commission on Environmental Quality ("***TCEQ***") and its predecessor agency, the TNRCC. I have worked for a number of consulting firms and formed Lucy Fraiser Toxicology Consulting LLC, a toxicology consulting firm, in 2017. A copy of my curriculum vitae is included in this affidavit as **Exhibit LF-1**.

BACKGROUND

3. I have been retained by Midwest Sterilization Corporation ("***MSC***") to provide comments related to the company's pending renewal application for TCEQ Air Quality Permit No. 55557 (the "***Application***") at the Midwest Sterilization Laredo Facility in Webb County, Texas (the "***Plant***").

4. In its Application, MSC seeks reauthorization of emissions from existing facilities. MSC does not propose any throughput changes or operational changes to the existing permit and will not increase emissions.

TOXICOLOGICAL COMMENTS

5. Since MSC does not propose any changes to the existing permit and emissions will not increase, no modeling is required in support of the current reauthorization. The most recent air dispersion modeling submitted to TCEQ was conducted in February 2018. At that time, MSC conducted a State Health Effects Evaluation, including SCREEN3 modeling in support of an amendment to New Source Review ("***NSR***") Permit 55557, which sought to authorize an emissions increase of 0.1 pounds per hour ("***lbs/hr***") Ethylene Oxide ("***EtO***"). In that report, MSC provided a Modeling and Effects Review Applicability ("***MERA***") analysis that demonstrated that the proposed increase in EtO emissions would not negatively impact public health or welfare based on TCEQ Air Quality Modeling Guidelines, the MERA guidelines, and the EtO Effects Screening Levels ("***ESLs***") applicable at that time.

6. The eight steps of the MERA process dictate whether highly conservative screening-level or more refined site-wide air dispersion modeling is used to predict maximum off-property ground-level concentrations ("***GLCmax***") and whether those GLCmax are compared to a small fraction of the health and welfare-protective ESL or the full ESL. Pollutants that fall out in the early MERA steps do so for one of several possible reasons: 1) the pollutant is not considered to pose a health or welfare threat because it is minimally toxic (e.g., is a simple asphyxiate, has been evaluated by TCEQ for health and welfare effects and exempted, or has a high ESL); 2) short-term emission increases are small (e.g., short-term effects unlikely to be of immediate concern) combined with chronic health effects that *only* occur at relatively high concentrations over time; or 3) a GLCmax that clearly overstates the actual concentration is well below the ESL, which is set at: a) a concentration well below those at which health effects are observed; or b) a conservative odor detection (in a sensitive odor panel participants) or vegetative effect threshold (in a sensitive plant species).

7. In the 2018 permit amendment application, consistent with MERA guidance, MSC determined a unit impact multiplier from emissions on a per unit basis [emission rate of 1.0 lb/hr] using the SCREEN3 screening-level air dispersion model. The impact for the unit run was then scaled by the proposed EtO emission rate increase (0.1 lbs/hr) to predict an hourly GLCmax of 0.31 $\mu g/m^3$. The results of the 2018 MERA evaluation are provided in **Table 1**.

TABLE 1
2018 HEALTH AND WELFARE EFFECTS EVALUATION

Pollutant	Averaging Time	MERA Modeling Required	GLC_{max}	ESL	Basis	Uncertainty Factor	MERA Step in Which Pollutant Screened Out
			$\mu g/m^3$				
EtO	1-hr	SCREEN3	0.31	20	TLV	100	Step 3
	Annual	None	--	2	Cancer Risk	1000	GLC_{max} < 10% ESL

The MERA analysis is summarized below.

- Step 1: The net change in EtO emissions proposed in the 2018 permit amendment was greater than zero and therefore, the EtO evaluation proceeded to step 2 of the MERA process.
- Step 2: Short-term EtO emissions exceeded *de minimis* levels specified in the TCEQ MERA guidance (specifically, the proposed 0.10 lb/hr increase in EtO was greater than the allowable increase of 0.04 lb/hr specified for a chemical with a short-term ESL $\geq$ 2 $\mu g/m^3$ and < 500 $\mu g/m^3$) and therefore, the evaluation proceeded to step 3 of the MERA process.
- Step 3: The modeled 1-hour EtO GLCmax (0.31 $\mu g/m^3$) was compared to 10% of the 1-hour ESL (0.1 x 20 $\mu g/m^3$ = 2 $\mu g/m^3$). Any pollutant for which the GLCmax is less than or equal to 10 % of the ESL can be safely excluded from a Health and Welfare Effects Evaluation because ESLs are conservatively set at levels well below those at which adverse health effects have been observed or at odor detection/vegetative effect thresholds in sensitive individuals/species.
    - Long-term modeling was not performed because if the annual ESL (2 $\mu g/m^3$) is greater than or equal to 10 % of 1-hour ESL (20 $\mu g/m^3$), compliance with the 1-hour ESL guarantees compliance with the annual ESL.
    - TCEQ does not require long-term modeling under these circumstances because *worst-case* hourly impacts occur only rarely and annual average air concentrations are well below hourly maxima (the meteorological conditions that produce the single highest 1-hour concentration almost never persist for long enough to materially affect a 1-year average). Regulatory practice and EPA guidance often use 10% as a conservative factor for estimating annual averages from hourly maxima (i.e., observed ratios of annual averages to hourly maxima are often 1–5 %).[1] The TCEQ

[1] EPA. 2011. US Environmental Protection Agency. Office of Air Quality Planning and Standards. "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2, National Ambient Air Quality Standard," p. 16. March; NRC. 1994. National Research Council. Science and Judgment in Risk Assessment. Washington, DC: The National Academies Press. https://doi.org/10.17226/2125. pp. 198 – 199.

MERA guidance recommends using a factor of 8 % to estimate annual averages from hourly maxima, which is supported by EPA guidance.[2]

8. The 2018 MERA analysis was highly conservative (i.e., erring on the side of safety). SCREEN3 modeling is intended to produce *worst-case* (i.e., overestimated) screening air dispersion modeling results (especially 1-hour concentrations) because it deliberately stacks conservative assumptions. It uses *worst-case* meteorology as opposed to realistic meteorology (i.e., very low wind speeds, stable atmospheres, minimal mixing, etc.). It also uses conservative dispersion physics and reports the single maximum concentration amongst conservatively positioned receptors beginning at 10 meters (m) and up to 3,000 m from the stack. Typically, predicted hourly maxima from SCREEN3 are higher than those produced by AERMOD modeling.[3] In addition, rural land use was assumed, which is conservative since use of urban land use generally results in more dispersion (i.e., lower predicted air concentrations). Moreover, as discussed in more detail later, MSC's EtO emissions are considerably lower today than those represented in the 2018 permit amendment because MSC has since achieved reductions by installing additional pollution control equipment and taken other measures to comply with the stringent revised Sterilizer Maximum Achievable Control Technology (MACT) requirements finalized by EPA in 2024 and for which compliance deadlines in 2026 apply.

9. In 2016, US Environmental Protection Agency (EPA) published a new cancer-based toxicity factor for EtO.[4] After release of the 2014 National Air Toxics Assessment (NATA), EPA evaluated facilities across the US that emit EtO and concluded that EtO substantially contributes to potential elevated cancer risks in some census tracts. EPA's 2024 revisions to the Sterilizer MACT were based on EPA's 2016 toxicity factor.

10. In early 2017, as part of a standard yearly review of newly derived toxicity factors, the TCEQ Toxicology, Risk Assessment, and Research Division reviewed the EPA's cancer-based toxicity factor derivation for EtO to determine if the TCEQ would provisionally adopt the EPA's value for use in the TCEQ remediation and air permitting programs. However, instead of adopting the EPA's EtO toxicity factor, TCEQ decided to complete its own systematic review and dose-response assessment of EtO's toxicity. In 2020, the TCEQ published its EtO carcinogenic dose-response assessment.[5] This document featured a slightly higher annual ESL (4.3 $\mu g/m^3$) than the previous long-term ESL (2 $\mu g/m^3$). No short-term (1-hour) ESL was derived as part of the dose-response assessment.

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2 TCEQ. 2018. Texas Commission on Environmental Quality. Air Permits Division. APDG 5874 Modeling and Effects Review Applicability (MERA), p. 4. March; EPA. 2004. US Environmental Protection Agency. Office of Air Quality Planning and Standards. Air Toxics Risk Assessment Reference Library. Vol 2: Facility-Specific Assessment. EPA-453-K-04-001B. p. 50. April.

3 OMECC. 2016. Ontario Ministry of the Environment and Climate Change. Air Dispersion Modelling Guideline for Ontario. PIBs # 5165e03. https://ontario.ca/admgo-id50_aoda_v2b.pdf.. p. 27. July. https://ontario.ca/admgo-id50_aoda_v2b.pdf.

4 EPA. 2016. United States Environmental Protection Agency. Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide. EPA/635/R-16/350Fa. December. https://iris.epa.gov/static/pdfs/1025tr.pdf.

5 TCEQ. 2020. Texas Commission on Environmental Quality. Ethylene Oxide Carcinogenic Dose-Response Assessment.

11. As previously mentioned, long-term annual modeling was not performed in 2018 because the annual ESL of 2 $\mu g/m^3$ was equal to 10 % of the 1-hour ESL (20 $\mu g/m^3$), and therefore, demonstration of compliance with the 1-hour ESL guarantees compliance with the annual ESL (as discussed above). However, since the TCEQ only developed an annual ESL in 2020, comparing MSC's projected EtO emissions with TCEQ's current ESL requires estimation of annual EtO emissions. According to the MERA guidance,[6] if a long-term impacts evaluation is necessary and SCREEN3 modeling is used, an annual GLCmax must be calculated by multiplying:

- An annual unit impact multiplier, and
- An emission rate representative of the annual emission increase associated with the 1-hour GLCmax.

Per the MERA guidance, the annual unit impact multiplier is determined by multiplying the hourly unit impact multiplier from the SCREEN3 unit run (3.1 $\mu g/m^3$) by 0.08, which is an annual conversion factor that accounts for the variation in meteorological conditions throughout the year. Therefore, the annual unit impact multiplier is 0.248 $\mu g/m^3$. The annual GLCmax is then calculated by multiplying that annual unit impact multiplier and the lb/hr emission rate representative of the annual emissions:

$$\text{Annual GLCmax} = 0.248\ \mu g/m^3 \times 0.1\ \text{lb/hr} = 0.0248\ \mu g/m^3$$

12. As shown in **Table 2**, the annual GLCmax estimated for EtO using the TCEQ SCREEN3 hourly-to-annual conversion factor is more than two orders of magnitude below the annual ESL published by the TCEQ for EtO in 2020.

TABLE 2
2026 HEALTH AND WELFARE EFFECTS EVALUATION

Pollutant	Averaging Time	Modeling	GLC_{max}	ESL	Basis	Margin of Safety
			$\mu g/m^3$			
EtO	1-hr	SCREEN3	0.31	--	--	--
	Annual	SCREEN3 Conversion	0.025	4.3	Lymphoid cancer in occupationally exposed workers[7]	172

Margin of Safety – difference between the estimated ambient concentration and ESL.

13. The Rio Grande International Study Center submitted an affidavit by Dr. Ranajit Sahu, which alleges that MSC's EtO emissions are underestimated. However, in reality, the emissions are considerably lower today than they were at the time of the 2018 permit

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6 TCEQ. 2018. Texas Commission on Environmental Quality. Air Permits Division. APDG 5874 Modeling and Effects Review Applicability (MERA). p. 4. March.

7 Steenland, K., Stayner, L., & Deddens, J. 2004. Mortality analyses in a cohort of 18 235 EtO exposed workers: follow up extended from 1987 to 1998. *Occupational and Environmental Medicine*, *61*(1), 2-7.

amendment and at the time MSC submitted the permit renewal application to TCEQ in 2023.

14. In December 2021, MSC voluntarily began operation of an additional wet scrubber (Wet Scrubber System 2) and routed the outlet of Wet Scrubber System 1 to Wet Scrubber System 2 for further emissions control. All chamber evacuations executed by the vacuum pumps are vented to these acid scrubbers (Scrubber System 1, Scrubber System 2).[8]

15. In July 2025, MSC installed pollution control equipment to support compliance with the Sterilizer MACT in advance of its April 6, 2026, and April 5, 2027 compliance dates. The project installed two 350 horsepower (350 HP) blower fans, ten extraction ducts on the north side of the warehouse, and 20 supply ducts on the south side. The blower fans recirculate warehouse air at approximately 2.25 times per hour and the air is recirculated through an abatement system comprised of 32 Safe-Cell dry beds with a target volumetric airflow of 60,000 cubic feet per minute (CFM).

16. In January 2026, MSC installed the aeration room polishing system. Aeration Room Vent emissions are currently sent through a scrubbing system that achieves at least a 99 % efficiency. The aeration room polishing system will further increase that scrubbing efficiency. By April 2026, these emissions systems will be configured such that the Plant is operated as a Permanent Total Enclosure (PTE) in compliance with EPA Method 204. Differential pressure transmitters will be installed to monitor compliance with EPA Method 204.

17. In light of the equipment installed since December 2021, MSC anticipates that EtO emissions using *worst-case* estimates are expected to be substantially reduced once all MACT-required updates are complete. Any decreased EtO usage will equate to further reductions.[9] These implemented and anticipated emissions reductions were not considered when the emissions estimate for the 2018 permit amendment was made or when the 2023 permit renewal application was filed. Therefore, the estimated emissions used in the 2018 Health Effects Evaluation that were compared to the TCEQ health-protective ESLs represent substantial overestimates of actual emissions.

18. A number of commenters on MSC's renewal application and the TCEQ Executive Director's preliminary decision expressed concerns about the effect of the emissions from the Plant on the air quality and health of people of Laredo. As noted in the TCEQ's response to comments (RTC), TCEQ is required to review permit applications to ensure they will be protective of human health and the environment. MSC did not propose any changes to the current permit (i.e., no increase in allowable emissions, no new air contaminants emitted, and no operational changes) in the permit renewal application, so a new Health and Welfare

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8 See TCEQ Investigation Report for Investigation # 1874450 (July 23, 2025).

9 Maximum possible number of batches run in each 28 pallet sterilization chamber per day (3 batches), maximum possible number of batches run in each 8 pallet sterilization chamber per day (3.7 batches), all 13 sterilization chambers operating 24 hours per day, 7 days a week, 365 days per year, and maximum EtO usage per sterilization chamber (200 lbs for 28 pallet sterilization chambers and 55 lbs for 8 pallet sterilization chambers).

Effects evaluation was not required. However, as outlined above, the previous Health and Welfare Effects Assessment was highly conservative and when the hourly GLCmax from SCREEN3 is converted to an annual GLCmax, that value is orders of magnitude below the current TCEQ annual ESL for EtO. Moreover, as indicated in the RTC, "TCEQ has carefully reviewed the estimated emissions from the MSC Sterilization plant and does not expect emissions of any chemical from this facility (including EtO) to result in an increased occurrence of cancer or other health effects in the community."[10]

19. I agree that the estimated EtO emissions from MSC's Laredo plant are not expected to increase cancer in the community in general, or for the requestors in particular, given that most live upwind from the Plant and residential areas that are downwind are over a mile from the Plant. TCEQ conducted mobile monitoring in the vicinity of MSC's Plant in Laredo and in several surrounding neighborhoods (La Bota Ranch, Deer Creek, Green Ranch, San Isidro and Indian Sunset) on September 17–19, 2024. All but two of the instantaneous measurements were below the baseline-derived investigation level, which is set at 10 times the chemical- and instrument-specific baselines (background + instrument noise) and all were well below instantaneous health-based action levels derived for use in interpreting mobile monitoring.

20. Therefore, it is my opinion that EtO emissions from the MSC Plant will not have any adverse health effects on the community.

Further affiant sayeth not."

Lucy Fraiser
Fraiser Toxicology Consulting, LLC

This instrument was acknowledged before me, the undersigned authority, this 13 th day of February 2026, by Lucy Fraiser, Fraiser Toxicology Consulting, LLC.

Notary Public in and for the State of Arkansas

INEZ Y. HERNANDEZ
Notary Public - Arkansas
Washington County
Commission # 12393665
My Commission Expires May 29, 2033

[10] RTC, Response 1 at 5.

ALL-PURPOSE ACKNOWLEDGMENT

State of Arkansas

County of Washington

On Feb. 13, 2026 (DATE) before me, Inez Y. Hernandez (NAME OF NOTARY PUBLIC)

personally appeared Lucy Fraiser (NAME(S) OF SIGNER(S)),

☐ personally known to me **OR** ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), an that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

INEZ Y. HERNANDEZ
Notary Public - Arkansas
Washington County
Commission # 12393665
My Commission Expires May 29, 2033

Place Notary Seal or Stamp Here

WITNESS my hand and official seal.

SIGNATURE OF NOTARY

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it may prove valuable to persons relying on this Acknowledgment and could prevent fraudulent reattachment of this certificate to another document.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT

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TCEQ Docket - Affidavit
TITLE OR TYPE OF DOCUMENT

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NUMBER OF PAGES

Feb 13, 2026
DATE OF DOCUMENT

SIGNER(S) OTHER THAN NAMED ABOVE

LUCY H. FRAISER, PH.D., DABT
PRINCIPAL SCIENTIST

Lucy Fraiser Toxicology Consulting LLC

AREAS OF EXPERTISE

- Toxicological Evaluations
- Risk Assessments
- Risk Communication
- Nuisance Evaluations
- Litigation Support
- Development of Innovative Risk-Based Approaches
- Exposure Modeling

EDUCATION

Ph.D., Toxicology, *University of Texas at Austin, 1992*

B.A. Psychology, *University of Texas at Austin, 1985*

CERTIFICATIONS/AFFILIATIONS

Diplomate of the American Board of Toxicology

American College of Toxicology

National Society of Toxicology

South Central Society of Toxicology

Society for Risk Analysis

Northwest Arkansas Food Bank, Volunteer

Rowing Club of Northwest Arkansas, Treasurer

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Dr. Lucy Fraiser is a board-certified toxicologist with over 35 years of experience in the areas of exposure and risk assessment, health effects and toxicology evaluations, development of quantitative toxicity criteria, development of risk-based air and water quality guidelines and soil cleanup criteria, and risk communication. Dr. Fraiser works with all environmental media, including soil, sediment, groundwater, surface water and air and is well versed in methods for evaluating exposure via all exposure routes (inhalation, dermal, ingestion). She has performed numerous air quality evaluations to determine whether pollutant emissions have caused or contributed to a condition of air pollution and the likelihood that air toxics will adversely impact health or welfare.

Dr. Fraiser has worked in both the public and private sectors. She has conducted and managed multi-pathway exposure assessments and human and ecological risk assessments for a wide variety of environmental pollutants and sources. Dr. Fraiser has, on many occasions, examined the scientific foundation on which exposure assumptions and toxicity criteria are based on behalf of private and public-sector clients and trade organizations. Her leading work on these issues has resulted in corrections to regulatory guidance and risk-based criteria on several occasions. She has conducted hundreds of exposure assessments for chemicals used in pharmaceutical laboratories and industrial processes, chemicals applied to control pests and unwanted vegetation, and chemicals released as unwanted by-products of chemical and product manufacturing, combustion of fossil and waste-derived fuels, operation of liquified natural gas (LNG) facilities, generation of electricity, petroleum refining, smelting, rock crushing, and activities at military installations.

Litigation Experience

Dr. Fraiser has been qualified as an expert, deposed, and has provided expert testimony in contested case hearings, criminal case hearings, Federal Civil suits, toxic tort litigation, and Class Action cases on many occasions. She has testified before the Texas and Illinois State Legislatures, in public meetings, and before numerous state regulatory agencies on behalf of commercial clients. Dr. Fraiser also conducted a televised press conference on behalf of a state and a national trade organization regarding mercury emissions from power plants.

Dr. Fraiser has developed opinions, produced reports, and been deposed in several Class Action lawsuits in false advertising cases involving “green washing”. She has developed opinions and produced

numerous reports regarding the potential for chemicals used in the semiconductor industry to cause developmental toxicity in a multi-Plaintiff lawsuit. She has testified regarding the health protectiveness of air permits for multiple industries (chemical manufacturers, aggregate facilities, oil and gas companies, power plants) in Texas. In a lawsuit filed by the U.S. EPA seeking reimbursement costs incurred for response actions taken in connection with the release of cement kiln dust from a redeveloped site that was formerly a mine and cement plant, Dr. Fraiser developed opinions regarding when the site ceased posing an "imminent and substantial" threat to public health, welfare, and/or the environment under CERCLA.

Dr. Fraiser provided critical expert testimony in a high-profile toxic tort case involving a flaring event at a multi-national petrochemical company that resulted in a jury verdict for the defense. She also provided critical testimony in a citizen suit against a Texas energy company in which a judge from the Western District of Texas ruled from the bench that there were no violations of the Clean Air Act and later ordered the Plaintiff to pay $6.4 million in defense attorneys' fees. She has also provided critical expert testimony in a citizen suit against a Texas petrochemical company involving excess air emission and maintenance, startup, and shutdown events. The federal cases involved alleged violations of opacity standards, National Ambient Air Quality Standards (NAAQS), and effects screening levels (ESLs) for compounds considered to be hazardous air pollutants.

Dr. Fraiser has provided testimony on potential risks associated with permitting of rock crushers (silica, limestone, particulates [$PM_{10/2.5}$]), concrete batch plants (silica, $PM_{10/2.5}$), hazardous waste combustion units (polycyclic aromatic hydrocarbons, polychlorinated biphenyls (PCBs), dioxins, and other semi-volatile organic compounds [SVOCs]), petrochemical plants/refineries ($PM_{10/2.5}$, NO_2, sulfur dioxide [SO_2], sulfuric acid [H_2SO_4], hydrogen sulfide [H_2S], and a variety of volatile organic compounds [VOCs] and SVOCs, a copper smelter ($PM_{10/2.5}$, NO_2, SO_2, sulfuric acid [H_2SO_4], arsenic, lead, and cadmium). She has testified on potential H_2S/SO_2 health effects from a Sulfur Recovery Unit, health effects associated with relatively short-term exposure to benzene concentrations in drinking water above the Maximum Contaminant Level (MCL), and potential risks associated with lead and total petroleum hydrocarbon (TPH) levels detected in street sweepings.

Air Quality Health Effects Evaluations

Several local governments with ethylene oxide sterilization facilities within their purview have considered imposing additional operating restrictions upon or complete prohibition of ethylene oxide emissions from these facilities. Dr. Fraiser was engaged by two of these communities to provide specialized toxicological expertise and advice to local Counsel on ethylene oxide health effects and to serve on their ethylene oxide task forces. Dr. Fraiser also testified before the Illinois House and Senate, and she has provided detailed presentations to community members, local regulators and EPA Region 7 on ethylene oxide health effects. Dr. Fraiser is helping one commercial sterilizer to communicate to the public and local officials about potential risks associated with ethylene oxide emissions.

Dr. Fraiser has recently performed inhalation risk assessments for two liquified natural gas (LNG) facilities for the Federal Energy Regulatory Commission ("FERC"). She was the health risk assessment advisor for a study completed on behalf of the Electric Power Research Institute (EPRI) that evaluated the potential health risk from emissions of coal fired power plants throughout the U.S. using EPA's TRIM (Total Risk Integrated Methodology) model. She served as project manager responsible for multi-pathway risk assessment updates for a specialty chemical company to support permitting activity that reflected the installation of new SO_2 abatement equipment, served as the risk assessment team lead for a vapor intrusion evaluation using crawl-space soil vapor and ambient air samples collected beneath and near a house in the vicinity of a crude oil release and performed a health risk assessment using indoor and ambient air samples from a manufacturing facility.

Dr. Fraiser has conducted or served as task leader on more than two dozen human health risk assessments conducted in support of applications for hazardous waste combustion units at chemical plants, waste management facilities, army depots, and cement kilns.

Nuisance Evaluations

Dr. Fraiser has been engaged on numerous occasions to evaluate alleged nuisance odors and to determine whether odorous emissions could be accompanied by health effects. She has also evaluated other nuisance impacts as well (i.e., aesthetic and recreational impacts and vegetative damage). She evaluates the potential impact of alleged

nuisances by: 1) obtaining local meteorological data for the time of the alleged event 2) documenting the frequency, intensity, duration and offensiveness (odor only) of episodes based on reports from first-hand observers; and 3) noting any physical effects experienced by first-hand observers. A critical step in determining whether odors are likely to be accompanied by adverse health effects is establishing whether the threshold for odor detection is above or below the health effects threshold for the chemicals involved. Dr. Fraiser has substantial knowledge regarding the way in which odor thresholds and health-based levels are established, as well as the potential toxicological and psychological mechanisms by which odors may result in actual or perceived health effects. Even if the odors do not rise to the level of

causing adverse health effects by known toxicological mechanisms, they can in some cases adversely affect welfare if they are frequent/recurring. Determining aesthetic nuisances often entails evaluating visibility impairment via opacity (airborne material that obscures the visual background) violations and/or computer-assisted stack visibility assessment.

Regulatory Experience

Dr. Fraiser advised a trade association that represents medical device manufacturers regarding potential health effects of sterilizer plant ethylene oxide emissions on workers and neighboring communities in the midst of EPA rule development for controlling emissions of ethylene oxide.

She provided comments to EPA on behalf of several commercial clients and a trade organization questioning the extent to which health research studies supported the need for a tighter ozone NAAQS during the 2015 review. Dr. Fraiser also provided comments on the Second External Review Draft of the Integrated Science Assessment For Oxides Of Nitrogen (NO_2)–Health Criteria in 2014 and the Boiler MACT Health-Based Emissions Limitations on behalf of a trade organizations. In the past, she has developed technical comments on EPA Risk Assessment Protocols for Hazardous Waste Combustion Facilities on behalf of the Louisiana Chemical Association and the Cement Kiln Recycling Coalition and completed formal technical comments on behalf of a power generation client on a risk-based program intended to significantly reduce levels of toxic air contaminants in Kentucky.

As a Senior Toxicologist with the Texas Natural Resource Conservation Commission (TNRCC), the predecessor agency to the Texas Commission on Environmental Quality (TCEQ), Dr. Fraiser conducted and managed risk assessments for incinerators and industrial boilers seeking permits to burn hazardous waste. These risk assessments involved using air deposition modeling to estimate uptake into agricultural products (i.e., produce and livestock) and estimating risk to livestock as well as humans that consumed livestock and produce. Dr. Fraiser provided support to the U.S. EPA as they formulated national policies related to combustion risk assessment, provided critical input into the development of protective concentrations levels (PCLs) under the Texas Risk Reduction Program (TRRP), served as an external peer reviewer for risk assessment guidance documents developed by EPA Region 6 and adopted as national guidance and represented the Agency on EPA workgroups and in contested case hearings.

Risk-Based Corrective Action and Risk Assessment

Dr. Fraiser has conducted and/or served as task leader for over 75 human health risk assessments and/or risk-based corrective action (RBCA) evaluations in support of Resource Conservation Recovery Act (RCRA) closures or under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for both commercial companies and government clients.

Dr. Fraiser has substantial experience performing human health and ecological risk evaluations under the Texas Risk Reduction Rule and the Texas Risk Reduction Program (TRRP), as well as other state RBCA programs. She has completed and received Texas Commission on Environmental Quality (TCEQ) approval for several Affected Property Assessment Reports and has provided support on the successful completion of several Response Action Completion Reports.

Dr. Fraiser completed a multi-media human health risk assessment for a high school at which placement of fill material to build up the area for sports fields resulted in PCB contamination. She also assisted with a toxicity assessment and fish cooking loss study for dioxins and PCBs for a contaminated river segment in the northeast.

Toxicological Evaluations and Risk-Based Regulatory Criteria Development

Dr. Fraiser evaluated the potential health and nuisance (odor) impacts of Concentrated Animal Farming Operations (CAFOs) at the request of a law firm filing an appeal against the citing of a proposed CAFO near an existing CAFO in Texas.

She has developed numerous health-based criteria for compounds lacking published values using toxicity studies, structure activity relationships, and her knowledge of pharmacokinetics. She has developed risk-based regulatory criteria including emergency response planning guidelines (ERPGs), inhalation reference concentrations (RfCs), water quality criteria, and acceptable ambient air levels, including Effects Screening Levels (ESLs), for several compounds. Based on her understanding of the human health underpinnings of federal regulations and state corrective action and air quality guidelines, Dr. Fraiser has assisted many clients wishing to challenge health-based criteria during public comment periods and in identifying adjustments to existing criteria.

Publications, Presentations and Training Courses

Fraiser L. Trends in Setting National Ambient Air Quality Standards. Earth Day Legal Symposium. Dallas, TX. April 21, 2017

Fraiser L. In Chemical Litigation, Toxicology Fundamentals Matter. American Bar Association Newsletter. August 2016.

Fraiser L. EPA May Go Beyond Law and Science in Setting NAAQS. Natural Gas & Electricity, 30(3):1-8. October 2014.

Fraiser L., and Karen Olson. Ozone NAAQS – Where is it Headed? Texas Association of Business, Austin TX. July 24, 2014.

Fraiser L. Ozone NAAQS – Where is it Headed? Houston Regional Monitoring Association, Houston, TX. July 9, 2014.

Fraiser L., and Davis B. Ozone NAAQS – Where is it Headed? Clean Air Force of Central Texas, Austin TX. April 24, 2014.

Fraiser L., and Karen Olson. Ozone NAAQS – Where is it Headed? Winstead PC, Austin TX. May 27, 2014.

Fraiser L., and Sullivan, T. Ozone NAAQS – Where is it Headed? Texas Pipeline Association, Austin TX. April 9, 2014.

Fraiser, L. Recent Reductions in NAAQS – Good Science or Perpetuation of Dogma on Health Consequences of Low-Level Air Pollutants? Energy Utility Environment Conference, Phoenix AZ. February 3 -5, 2014.

Fraiser, L.H. and Bradley, L.J.N. Key Decisions in Establishing National Ambient Air Quality Standards. 52nd Annual Meeting of the Society of Toxicology. San Antonio, Texas. March 10 – 14, 2013.

Fraiser, L.H. Health Basis for EPA's 1-Hr SO2 NAAQS. Alamo Chapter AWMA Meeting, January 10, 2013.

Ruffle, B., Fraiser, L., Kaczmar, S., Schew, W. Update on Cooking Loss Factors for PCDD/PCDFs, PCBs and Chlorinated Pesticides. Passaic River Symposium V. Passaic River Institute of Montclair State University. October 19, 2012.

Fraiser, L.H. and Vosnakis, K.A.S. Evolution of PCB Regulations and Toxicity Assessment: Impact on Environmental Management. 27th Annual International Conference on Soils, Sediments, Water and Energy, Amherst, Massachusetts. October 17 – 19, 2011.

Fraiser, L. Toxicology & Risk Assessment in the News: Recent EPA Proposals with Broad Implications. Invited Presented at the Gulf Coast Air & Waste Management Association Meeting. Houston, Texas. June 08, 2010.

Quintin, A. and Fraiser, L. Comparison of International Risk-Based Screening Levels. Proceedings of the Annual International Conference on Soils, Sediments, Water and Energy. Vol. 15, Article 24. June 2010.

Fraiser, L.H. Toxicology & Risk Assessment in the News: Recent EPA Proposals with Broad Implications. Houston Air & Waste Management Association. June 2010.

Fraiser, L.H., Quintin, A. Durocher, K. Szembek, C. Heinold, D. EPRI Human Health and Environmental Risk Assessment Process. February 18, 2010.

Fraiser, L.H. Trends in International Risk-Based Screening Levels (RBSLs). Society of Toxicology and Chemistry, New Orleans, Louisiana. November 19 – 23, 2009.

Fraiser, L.H. Risk Assessment: How it Can Inform Site Closure Decisions. Invited Short Course presented to the Department of Environment Malaysia, Kuala Lumpur. March 4 – 5, 2009.

Fraiser, L.H. Incinerator Risk Assessment: Principles and Practices, Hong Kong. Regional Conference on Sustainable Waste Management in Carbon-Conscious Cities. December 2008.

Fraiser, L.H. Site-Specific Risk Assessments, RCRA Omnibus Provision and Combining Risk Burns and Comprehensive Performance Tests. MACT EEE EPA Training Workshop, Dallas, TX. November 3 – 8, 2008.

Fraiser, L.H. Involvement of Local Governments in Air Toxics Regulation. Texas Chemical Council/ Association of Chemical

Industry of Texas's EH&S Seminar Moody Gardens Hotel, Galveston Texas. June 10, 2008.

Fraiser, L.H., and Chaudhuri, I. Short-Term Toxicity Benchmark for Nickel Oxide. 42nd Annual Society of Toxicology Meeting. March 9 – 14, 2002. Salt Lake City, Utah.

Fraiser, L.H., and Ruffle, B. "Chemical Regulations with Business Implications." Environmental Protection. June 2002.

Fraiser, L.H., and Chaudhuri, I. Short-Term Toxicity Benchmark for Nickel Oxide. International Conference on Incineration & Thermal Treatment Technologies Proceedings. May 13 -17, 2002. New Orleans, Louisiana.

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Fraiser, L.H., Chaudhuri, I, and Smith, D. EPA's Dioxin Reassessment – Potential Impacts to the Regulated Community. Proceedings of the Air & Waste Management Association. June 24 - 28, 2001. Orlando, Florida.

Fraiser, L.H., Roeck, D., and Smith, D. New Developments in Dioxin Regulation – Potential Impacts on the Regulated Community. International Conference on Incineration & Thermal Treatment Technologies Proceedings. May 14 -18, 2001. Philadelphia, Pennsylvania.

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Fraiser, L., and Kehrer, J.P. Murine Strain Differences in Bladder Toxicity of Cyclophosphamide. Toxicol. 75:257-272, 1992.

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