Prepared By: EA Engineering, Science, and Technology, Inc.
Final Prepared: 8/13/09

GUDE LANDFILL REMEDIATION

GLCC/DEP MEETING NO. 2

DATE: July 16, 2009
TIME: 7:30 PM to 9:00 PM
LOCATION: Montgomery County Transfer Station

ATTENDANCE:

Name	Organization	Designation
Bob Day	Gude Landfill Concerned Citizens (GLCC)	Member
Dean Dozier	Gude Landfill Concerned Citizens (GLCC)	Member
Keith Ligon	Gude Landfill Concerned Citizens (GLCC)	Member
Dave Peterson	Gude Landfill Concerned Citizens (GLCC)	Member
Julia Tillery	Gude Landfill Concerned Citizens (GLCC)	Member
Laszlo Harsanyi	Gude Landfill Concerned Citizens (GLCC)	Member
Bob Hoyt	Montgomery County Dept. of Env. Protection (DEP)	Director
Peter Karasik	Montgomery County Dept. of Env. Protection (DEP)	Section Chief
Steve Lezinski	Montgomery County Dept. of Env. Protection (DEP)	Engineer III
Andrew Kays	Northeast Maryland Waste Disposal Authority (NMWDA)	Project Manager
John Kumm	EA Engineering, Science, and Technology, Inc. (EA)	DEP Consultant
Barb Roeper	EA Engineering, Science, and Technology, Inc. (EA)	DEP Consultant
Mark Gutberlet	EA Engineering, Science, and Technology, Inc. (EA)	DEP Consultant

The Meeting Agenda is included as Attachment 1.
Contact information for attendees is included as Attachment 2.

MINUTES:

1) Peter Karasik of DEP opened the meeting by introducing EA as the County's Consultant for the Gude Landfill Remediation Project (Project). John Kumm of EA provided a brief overview of EA's experience and capabilities and meeting attendees were provided with a copy of "EA Experience and Project Team," which is included as Attachment 3.

2) Andrew Kays of NMWDA explained the Authority's role in the Project as contract administrator.

3) Steve Lezinski of DEP summarized the activities of Phase 0 – Aerial Mapping, Field Survey and Waste Delineation of the Project. The aerial survey has been completed, the ground survey is in progress, and test pitting for determining the limit of waste will likely begin in early August 2009.

4) Bob Hoyt stated that the latest water quality monitoring and testing data (groundwater and surface

water) will be posted on the DEP website within the week. GLCC requested that trend plots be included.

5) A question was raised by GLCC regarding which Total Maximum Daily Loads (TMDLs) apply to Rock Creek. Bob Hoyt stated that Rock Creek, an impaired waterway in Montgomery County, is impaired by microbial contamination from wildlife as well as nutrients and sediment. These constituents originate primarily from outside the Gude Landfill.

6) GLCC was asked about the data and information they would like to see posted on the Project webpage. Dean Dozier of GLCC responded that they would like the information to include:

   a. Aerial Photo of the Gude Landfill
   b. Maryland Department of the Environment (MDE) inspection reports and approved plans
   c. Groundwater and Surface Water Monitoring Data and Trends Analyses
   d. Landfill Gas Data
   e. Consultant Reports
   f. Meetings Minutes
   g. Other Pertinent Information

7) Bob Day of GLCC stated that he viewed the webpage as having three purposes:

   a. To provide an open channel for the disclosure of information
   b. To provide reassurance to the Community that the Project is moving forward
   c. To serve as a basis or tool for eventual funding for remediation

8) Keith Ligon commented that in posting information on the webpage, the County should err on the side of disclosure, since the webpage is a vehicle to help GLCC keep all of the citizens apprised of Project progress.

9) Bob Day commented that the tone and the introductory paragraphs of the webpage are important and referenced another County website for a project in Dickerson as having appropriate tone. He also suggested adding sufficient narrative explanation to the web site to make it as self-explanatory as possible.

10) Steve Lezinski provided a status update on the recent surface water sampling at the Gude Landfill. Potential Springs identified as S1 and S2 near Crabbs Branch Stream were sampled on July 8 by DEP. MDE inspected S1, S2, and seven (7) other areas of concern at the Gude Landfill on July 8. Five (5) areas of concern for potential leachate seepage along the northwest slope were sampled on July 16. The other two (2) areas were dry, but will continue to be monitored.

11) Dean Dozier asked if the surface water from the potential leachate seeps was tested for pH during the recent sampling event of July 16. Steve Lezinski stated that pH was not tested on-site.

12) GLCC was asked if they had any comments on EA's June 30th version of the Phase 1 – Nature and Extent Study proposal scope, which had been previously distributed. Bob Day stated that the proposal looked good and that GLCC had no issues with it.

13) GLCC asked about the anticipated duration of the Nature and Extent Study. DEP and EA indicated that between 6 and 8 months was the expected duration.

14) Julia Tillery of GLCC asked about the difference between Gude Landfill and a Superfund site and asked what personal protective equipment (PPE) EA and its subcontractors would be using. Ms. Tillery and Mr. Ligon also expressed concern about the possible hazards citizens may face, both inside and outside the Landfill fence, between now and when the Nature and Extend Study is finalized and noted that the landfill is not a secured site. The possibility of surface soil sampling in the near term was also raised by GLCC.

Barb Roeper of EA explained that although Superfund-type hazards are not anticipated at the Gude Landfill and workers would be wearing minimal PPE, the investigation procedures are systematic and continuous air sampling is conducted during field work. If there are indications of hazards, additional PPE is donned and appropriate control measures are implemented. EA stated that this real time monitoring is probably the best indicator of whether or not citizens are at risk from incidental contact with the site. EA agreed to furnish their Site Specific Health & Safety Plan to be posted on the Project webpage. She also stated, however, that the landfill has certain inherent hazards and should not have general public access.

15) GLCC indicated that they would like to hold a Community meeting in September to provide additional information and to confirm to citizens that they are not in immediate danger from the Landfill.

16) Bob Hoyt requested input from the Community on possible end uses for the Landfill after remediation. The Community in turn asked EA what sorts of things were possible for a closed landfill site. Mark Gutberlet explained that because of differential settling of the waste and the continuing evolution of landfill gas, the surface of a closed landfill is not usually suitable for any type of civil construction. Even playing fields would require significant maintenance. Even though the Maryland-National Capital Park and Planning Commission (M-NCPPC) had originally planned to develop the Landfill as parkland, the presence of settling and the need to manage landfill gas indicates that the site will probably remain the responsibility of DEP in the future.

Low impact reuses such as grass-covered fields, solar beneficial uses, and nature trails were discussed. GLCC was satisfied with the possibility that after remediation the site may revert to low impact use.

17) GLCC raised the question of having the County fund an independent, technical resource for the Community. GLCC provided a summary description of their view of such a Technical Representative, which is included as Attachment 4. Bob Hoyt proposed providing GLCC with access to EA as an interpretive technical resource in lieu of a third party technical representative,

and if any problems evolved DEP would reconsider this approach. GLCC stated that this was an acceptable alternative.

18) Steve Lezinski provided an update on the Landfill Gas-to-Energy (LFGE) Project, which is complete. GLCC asked about Dioxin and Furan testing. The dioxin and furan testing will be completed by a third party entity following substantial completion acceptance of the Oaks Landfill LFGE Facility. Both LFGE Facilities (Gude and Oaks) and applicable Flare Stations will be tested.

19) GLCC/DEP meetings will continue to be held on the second Thursday of each month. The next meeting will be held on Thursday, August 13th from 7:30 to 9:00 PM at the Transfer Station.

The above summation is the writer's interpretation of the items discussed at the meeting. Comments involving differences in understanding of any of the meeting items will be received for a period of thirty (30) days from the date of these meeting minutes. Clarifications will be made, as deemed necessary. If no comments are received within the specified time period, the minutes will remain as written.

ATTACHMENT 1

Gude Landfill Remediation
Gude Landfill Concerned Citizens
Monthly Meeting No. 2

Meeting Agenda

1. **Introduction of Authority and Contractor Representatives and Qualifications (Authority/Contractor)**

2. **Status of Survey and Limit of Waste Delineation (DEP/Contractor)**

    a. The Aerial Flyover was completed on 6/24/09.
    b. Metes and Bounds Property Deed Research and Survey have been initiated.
    c. The Limit of Waste Delineation is to be initiated once the Metes and Bounds Survey is completed (end 7/2009).
    d. TMDL requirements for the stream segment.

3. **Status of Nature and Extent Study (DEP/Contractor)**

    a. Technical Proposal was provided on 7/1/09 to DEP.
    b. Overview of approach to the assessment of contamination and the potential for any human exposure at this stage in the Remediation Approach.

4. **Status of Gude Remediation Website (DEP)**

    a. DEP has started to convert hard copy materials to electronic versions for placement on the website.
    b. DEP posting electronic information on the website.

5. **Preliminary Discussion of Remediation Alternatives (Contractor/DEP)**

    a. Alternatives as a function of Reuse Options.
    b. Low Impact vs. High Impact Reuse Options.
    c. Considerations and Choices for Reuse Options.
    d. Process to engage the Community (Public Outreach).

6. **Liaison Role, Needs and Suggested Activities (GLCC/DEP)**

7. **Update on Landfill Gas-to-Energy (LFGE) Facility**

    a. LFGE Facility operating at 87% capacity in conjunction with Flare Station since beginning of July. Substantial Completion acceptance on July 13.
    b. Dioxin Testing – to be completed following Substantial Completion acceptance for the Oaks LFGE Facility. Testing will occur during the same week for each LFGE Facility and applicable Flare Station.

8. **Next Meeting/Action Items**

Montgomery County Transfer Station
July 16, 2009
7:30 PM – 9:00 PM

ATTACHMENT 2

Date	July 16, 2009
Time	7:30 -9:00 PM
Meeting	Gude Landfill Remediation: GLCC/DEP

Name	Affiliation	Phone	Email	Address
Stephen Lezinski	Mont. Co. DEP	240-777-6590	steve.Lezinski@montgomerycountymd.gov	16101 Frederick Road Derwood, MD 20855
Mark Gutberlet	EA	410-771-4950	Mg2@eaest.com	15 Loveton Circle Sparks, MD 21152
John Kumm	EA	410-329-5141	jkumm@eaest.com	15 Loveton Circle Sparks, MD 21152
Peter Karasik	Mont. C. DEP	240-777-6569	peter.karasik@montgomerycountymd.gov	16101 Frederick Rd. Derwood MD 20855
DAVE PETERSON	GLCC	301-921-6357	kmpdhp@hotmail.com	7612 ANAMOSA WAY DERWOOD, MD 20855
Dan Dziuk	GLCC	240 912 4409	DZSpike1@Aol.Com	7613 ANAMOSA WAY DERWOOD
KEITH LIGON	GLCC	301 742 9634	LIGONFAMILY@COMCAST.NET	15501 MORNA Ct DERWOOD
BOB DAY	GLCC	301 294 3272	bobcarol day@yahoo.com	7128 GRINNELL Dr.
Barb Roeper	EA	410 329-5150	broeper@eaest.com	15 Loveton Circle Sparks, MD 21152
Andrew Kays	NMWDA	410.333.2730	akays@nmwda.org	TOWER II, STE. 402 100 S. Charles Balt. 21201
LASZLO HARSANYI	PSHOA 2	301-840-3822	LASZLOH@COMCAST.NET	7228 TITONKA WAY DERWOOD
Julia Tillery	GLCC	202-329-8740	Julia@Tilleryoffice.com	15461 Indianola Dr. Rockville, MD 20855

ATTACHMENT 3

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

EA is a multidisciplinary environmental consulting firm headquartered in Baltimore, Maryland with 17 offices across the nation. EA has been providing environmental investigation and engineering services support to clients in the Mid-Atlantic Region for more than 33 years. EA's staff of over 380 scientists, engineers, industrial hygienists and technical support personnel maintain expertise in all areas of environmental assessments. Our overall environmental engineering experience includes more than 75,000 projects worldwide for a highly diverse client base that includes academic institutions, utilities, the federal government, states and municipalities, trade associations, law firms, and other private companies.

EA is the largest solid waste management services firm in Maryland, and one of the largest in the country. For local solid waste management projects, EA has developed strong and trustworthy relationships with MDE and U.S. Environmental Protection Agency (USEPA) Region III. Our proven experience with these agencies is invaluable in successfully implementing environmental programs. In the past five years alone, EA has demonstrated our leadership in the solid waste industry by executing nearly $30 million in solid waste management-related services for municipal, state, and Federal clients. We have worked at more than 50 landfill sites in the Mid-Atlantic Region, bringing innovation and cost savings to our clients. EA's landfill project experience includes permitting; cell construction design and specification; leachate collection and storage design; landfill operational plans; capping design and specifications; methane control and energy recovery; and remedial investigations, feasibility studies, and clean-up actions at closed landfills and dumps.

EA GUDE LANDFILL PROJECT TEAM

John H. Kumm, P.E., BCEE – Senior Environmental Engineer and Team Leader
Mark J. Gutberlet, P.E., MCP – Civil Engineer
Barbara C. Roeper, P.E., PMP – Senior Engineer
Peter C. Lekas, P.G. – Senior Hydrologist
Cynthia Cheatwood – Human Health Risk Assessor
Laura Jo Bertrand, P.E. – Environmental Engineer
Thomas M. King – Environmental Scientist
Daniel R. Cockerham – Environmental Scientist/Certified Arborist

Project Team Technical Resources

Paul Caprio, PG – Technical Director, Site Characterization and Remediation Services
Rich Pfingsten, PWS – Senior Ecological Restoration Scientist
Geoffrey A. Tizard, II, P.E. – Senior Project Manager

PROJECT TEAM EXPERIENCE SUMMARIES:

John H. Kumm, P.E., BCEE
Senior Environmental Engineer and Team Leader

Mr. Kumm is a registered Professional Engineer and a Board Certified Environmental Engineer, with 26 years of broad ranging environmental experience with a wide variety of industries including solid, infectious, and hazardous waste management; thermal treatment technologies; wastewater treatment and biosolids management; agricultural crop and livestock production; electric power generation; engineering and construction; forest products; healthcare facilities; iron and steel; military installations; National Parks; organic and inorganic chemical processing; petroleum refining; pharmaceuticals; plastic and fiber composite production; printing; public transit; commercial and military aviation; and textile manufacturing. His solid waste experience includes landfill gas collection and beneficial use, incineration and waste-to-energy processes for municipal solid waste, clean and contaminated wood waste, scrap tires, sludges, regulated medical waste, and hazardous waste, including the implementation of stabilization technologies for combustion residues. Mr. Kumm has experience with material recovery facility design and operation. He also has experience with technical and economic evaluation of biological waste treatment systems including in-vessel and windrow composting, and low and high solids anaerobic digestion of solid waste. Mr. Kumm has extensive experience managing multidisciplinary teams of professionals executing complex environmental tasks. He is currently a Senior Project Manager in EA's Facility Compliance and Engineering Group

Education

Post-Masters Advanced Certificate; Johns Hopkins University, Baltimore, MD; Environmental Engineering, 2001
M.E.; Johns Hopkins University, Baltimore, MD; Environmental Engineering, 1997
M.S.; University of Maryland, College Park, MD; Engineering Management, 1994
B.S.; University of Maryland, College Park, MD; Chemical Engineering, 1982
B.S.; University of Maryland, College Park, MD; Chemistry, 1980

Registrations/Certifications

Board Certified Environmental Engineer (BCEE)—American Academy of Environmental Engineers, Maryland, 2003
Registered Professional Engineer—MD (No. 27088); 2002
Leadership in Energy and Environmental Design Accredited Professional (LEED AP)—Green Building Certification Institute, 2009

Mark J. Gutberlet, P.E., MCP
Civil Engineer

Mr. Gutberlet has 15 years of professional experience and serves as a Civil Engineer and Project Manager in the engineering design group and has experience with many aspects of solid waste management, groundwater monitoring, site remediation, stormwater management, erosion and sediment control, and eco-restoration. He leads multi-discipline project teams and works with engineers, geologists, wetland scientists, surveyors, and other team members to meet project goals. He performs engineering calculations and prepares plans, specifications, and cost estimates for a variety of civil and environmental engineering projects. Mr. Gutberlet has prepared permit applications for landfill permits, Clean Water Act Section 404 permits, erosion and sediment control permits, stormwater permits, and various other permits.

Education

M.S.; Virginia Polytechnic Institute and State University; Civil Engineering (Geotechnical); 1994
B.S.; Virginia Polytechnic Institute and State University; Civil Engineering; 1993

Registrations/Certifications

Registered Professional Engineer—MD (No. 23402); 1998
Erosion and Sediment Control–MD (Designers Certificate No. D07-064); 2007
Erosion and Sediment Control–MD (Yellow Card No. 07-097); 2007
Erosion and Sediment Control–MD (Green Card No. 34271); 2006
Microsoft Certified Professional; October 2000

Barbara C. Roeper, P.E., PMP
Senior Engineer
Ms. Roeper is an experienced project manager and environmental engineer with a strong working knowledge of compliance, waste management, site investigation, and remediation requirements under Federal and state regulations. She has more than 19 years of experience in soil and groundwater investigation tasks, remediation projects, and UST compliance program development for a variety of clients, including Maryland counties and state agencies, Federal government agencies, and private companies. On behalf of clients, Ms. Roeper has worked closely with representatives of the Maryland Department of the Environment (MDE), the U.S. Environmental Protection Agency (EPA), local health departments, and other resource agencies.

Education
M.S., The Johns Hopkins University, Baltimore, MD; Environmental Engineering; 1999
B.S., Bucknell University, Lewisburg, PA; Chemical Engineering; 1988

Registrations/Certifications
Registered Professional Engineer: MD (No. 23130), 1998; DE (No. 14765), 2006; PA (No. PE075505), 2008
Project Management Professional (No. 1267810); 2009
EA Project Manager Training
MDE Drinking Water Sampler (No. 3433BR)
40-Hour OSHA training for workers at hazardous waste sites
8-Hour OSHA site supervisor training

Peter C. Lekas, PG
Senior Hydrogeologist/Project Manager
Mr. Lekas has 14 years of experience conducting and managing environmental site assessments and remediation efforts. For 4 years, he has developed managed and implemented sewage and industrial wastewater treatment design, operation, and maintenance programs. He has developed an industrial wastewater operation and maintenance business line focusing on technical excellence and customer service. He is experienced in business development and management, environmental site assessments, hydrogeologic investigations, remedial technology implementation, sewage treatment design, operation and maintenance and industrial wastewater treatment design, and operation and maintenance. Mr. Lekas has successfully managed and executed site assessments, remedial design, and the installation, monitoring, and maintenance of groundwater, product skimming, and vapor extraction systems. He has designed, managed, and executed groundwater bioremediation programs designed to stimulate the biological degradation of dissolved benzene, toluene, ethylbenzene, and xylene and methyl tertiary-butyl ether. Mr. Lekas has designed and executed complex soil gas investigations and soil vapor extraction feasibility testing programs at unknown landfills, petroleum service stations, terminals, and refining facilities in the Mid-Atlantic area. He has managed underground storage tank and hydraulic lift removal and associated assessment programs for several commercial clients in the Maryland/Washington D.C. metropolitan area. As a senior hydrogeologist and project manager, Mr. Lekas has been responsible for the geologic and hydrogeologic characterization of terminals, refineries, military bases and major airports in the mid-Atlantic area.

Education
B.A., Denison University, Granville, OH; Geology; 1994

Registrations/Certifications
Registered Professional Geologist—TN (No. 5473); 2008
Certified Project Manager, URS Corporation; 2006
Certified Project Manager, EA Engineering; 2008
Certified Wastewater Service Provider – Cromaglass Corporation
Certified Wastewater Service Provider – NORWECO
NASSCO Pipeline Assessment and Certification Program; 2008

Cynthia Cheatwood
Human Health Risk Assessor

Ms. Cheatwood is a senior human health risk assessor with over 16 years of experience. She has performed over 100 risk assessments for public and private sector clients. Ms. Cheatwood has extensive experience with all aspects of the risk assessment process. Her risk assessments have included a wide range of potential human receptors as well as various media of concern. She has experience in project management, fate and tranpsort modeling, exposure assessment, toxicology, statistical analysis, and remedial design. Ms. Cheatwood has performed risk assessments for the U.S. Army, U.S. Navy, U.S. Air Force, the States of Maryland, Delaware, and New Jersey, Baltimore County, Baltimore City, and private sector clients. Risk assessments have included industrial complexes, parks, brownfields, manufacturing facilities, military bases, landfills, and private residences. She has experience with both federal and state regulators in all aspects of the risk assessment process

Education

B.S., University of Maryland, College Park; Civil Engineering; 1993

Registrations/Certifications

EA Project Manager Training; 2007
OSHA 8-Hour Hazardous Waste Operations Supervisor Training; 1996
OSHA 40-Hour Hazardous Waste Operations Safety Training; 1993
Confined Space Entry Training
CPR and First Aid Training

Laura Jo Bertrand, P.E.
Project Engineer
Ms. Bertrand is an environmental engineer with 5 years of experience in landfill gas, groundwater, and surface water monitoring programs and compliance. Ms. Bertrand is EA's environmental monitoring coordinator for the Facilities, Compliance and Engineering Group and currently manages environmental monitoring programs for nine sanitary landfills in Maryland. She has performed and now assists in managing landfill gas, groundwater, leachate, and surface water monitoring activities; assists in the implementation of corrective action activities to improve a landfill leachate treatment system; oversees monitoring well installations; and prepares various monitoring and sampling reports and plans. As part of the reporting process, Ms. Bertrand performs regulatory quality assurance/quality control of semi-annual landfill groundwater and surface water analytical results from landfills. Quality assurance/quality control includes review of analytical methods, relative percent difference of blind duplicates, charge balance errors, as well as a statistical trends analysis. She prepares reports that summarize findings, data, and updated groundwater contour maps on a semi-annual basis. She has developed a Groundwater Remediation Plan to address groundwater contamination resulting from unlined landfill cells at a site in MD. This remediation plan included potential remedial treatment systems, as well as an approach for the development of a feasibility study. In addition, Ms. Bertrand serves as Project Engineer for various solid waste and wastewater collection, conveyance, and treatment projects.

Education
M.S.; Clarkson University, Potsdam, NY; Civil Engineering (Environmental Specialty); 2005
B.S.; Clarkson University, Potsdam, NY; Civil Engineering (minor in Environmental Science); 2003

Registrations/Certifications
Registered Professional Engineer—MD (36798); 2009
OSHA 8-Hour Hazardous Waste Operations Supervisor Safety Training; 2007 – Present
OSHA 8-Hour Hazardous Waste Operations Safety Training; 2000 – 2006
OSHA 40-Hour Hazardous Waste Operations Safety Training; 1999

Thomas M. King
Environmental Scientist

Mr. King has 4 ½ years of professional experience where he has performed and managed dozens of wetland projects including delineations, assessments, jurisdictional determinations, obtaining 404 and 401 permits, wetland monitoring, and compliance reviews. Project sites range from large tracts of raw land (over 1,000 acres) to small half-acre residential yards. He has performed delineations on active sand and gravel mines, U.S. Army installations, golf courses, and current developed sites (commercial and residential). Clients included large financial institutions, property developers, national homebuilders, government agencies, and other commercial clients. Mr. King has experience working with regulatory agencies in Delaware, New Jersey, Maryland, and Virginia, as well as North and South Carolina. He also has experience working on Phase I Environmental Site Assessments, sediment and erosion control inspections, and is proficient in Global Positioning System data collection and AutoCAD drafting. Mr. King also has prior experience with identification and delineation of existing forest on site based on Maryland State Forest Conservation Technical Manual, including the identification of species composition and age in order to inventory and assess on-site forests and to locate priority areas for retention, reforestation, and afforestation.

Education

M.S.; Long Island University, C.W. Post; Environmental Studies; 2004
B.S.; Towson University; Biology; 2002

Daniel R. Cockerham
Environmental Scientist / Certified Arborist
Mr. Cockerham has over 10 years of experience with environmental studies. He performs wetland delineations. Including wetland area identification and flagging of wetlands based on the three parameter approach, hydrophytic vegetation, hydric soils and hydrology, as defined by the U.S. Army Corps of Engineers 1987 Wetland Delineation manual. In addition Mr. Cockerham has extensive experience with the preparation and submittal of Federal/State Joint Wetland Permit Applications to state and federal agencies for impacts to wetlands, wetland buffers, streams and/or 100-year floodplains. Including site meeting with agencies for jurisdictional determination of flagged wetland boundaries and correspondence with agencies to fulfill possible additional requirements in order to receive permits in a timely manner. Mr. Cockerham is also a Certified Forestry Professional and has experience with forest stand delineations, forest conservation plan preparation, Chesapeake and Atlantic Coastal Bays Critical Area studies, breeding bird surveys, rare/threatened/endangered species surveys and sensitive area reports. He is also a Certified Arborist with experience in tree assessment/management and specimen tree identification and flagging.

Education
B.S.; Frostburg State University, Frostburg, MD; Wildlife Management; 1994

Registrations/Certifications
Certified Arborist; International Society of Arboriculture; (No. MA-4435A); 2004
Erosion and Sediment Control Certification (No. 36678); 2007
Maryland Department of Natural Resources Qualified Professional – Forest Conservation and Breeding Bird Survey

Paul Caprio, P.G.
Technical Director Site Characterization and Remediation Services
Mr. Caprio is EA's Technical Director for Site Characterization and Remediation Services. He is a Professional Geologist responsible for management, design, implementation, and interpretation of remedial investigation/feasibility studies (RI/FS) and other types of hazardous waste site characterization and remediation projects. Specific areas of technical expertise include: surficial and subsurface geologic data collection; groundwater/surface water modeling; geologic mapping; geophysics (seismic surveys, electromagnetic conductance, and resistivity surveys); hydro geologic investigations; aquifer analysis; assessment of cleanup goals; human health risk assessment; expert witness testimony; and evaluation of remedial alternatives for soil and groundwater; field and laboratory experience in soil and geotechnical materials testing; and database management. His focus is on the risk-based application of innovative soil and groundwater remedial technologies, including *in situ* remedies, monitored natural attenuation, and system optimization. Mr. Caprio has managed or been lead geologist for site investigation and remediation on a wide variety of sanitary, rubble, and hazardous waste disposal sites, including permitted, unpermitted, and open dump sites, including regional sites (e.g., Richie, Quarantine, and Scarbough landfills), NPL landfill sites at Aberdeen Proving Ground, and other sate of Federal CERCLA landfill sites (e.g., Pepe Field Landfill, Boonton, New Jersey and East Mt Zion Landfill, York Pennsylvania). Mr. Caprio's expertise with state of Maryland (COMAR) regulations pertaining to groundwater remediation, ,landfill construction, and surface water discharge has been helpful in designing integrated solutions for groundwater mitigation to include; conventional and alternative landfill caps, engineered wetlands to control/treat leachate, *in situ* groundwater remediation and traditional groundwater pump and treat technologies.

Education
B.S.; Virginia Tech; Geology; 1979

Registrations/Certifications
Professional Geologist—PA (No. No. 002495G); 1995

Richard P. Pfingsten, PWS
Senior Ecological Restoration Scientist
Mr. Pfingsten is a Project Manager and Wildlife and Fisheries Biologist specializing in the science of ecological restoration. He has over 23 years of experience providing technical and managerial expertise to both public and private sector clients on a wide range of natural and water resource assessment, planning, design and construction projects. Mr. Pfingsten collaborates with other wildlife and fisheries biologists, stream ecologists, fluvial geomorphologists, hydrologists, watershed planners, water quality experts, and environmental and engineering professionals in conducting multidisciplinary studies. His particular areas of expertise include wetland assessments and monitoring, wetland mitigation/restoration design, stream assessment and restoration, environmental permitting and regulatory agency coordination, watershed planning, conducting natural resource inventories, National Environmental Policy Act (NEPA) compliance, and in the design, construction management, "hands-on" construction, and monitoring of a variety of ecological restoration projects.

Education
B.S., Frostburg State University, Frostburg, MD; Wildlife & Fisheries Biology/Management w/ Biology Minor; 1984
A.A., Garrett Community College, McHenry, MD; Wildlife & Fisheries Biology; 1982

Registrations/Certifications
Professional Wetland Scientist (PWS) Certification - Society of Wetland Scientists (No. 1105); U.S.; 1997
Erosion & Sediment Control Certification (Green Card) – Maryland Department of the Environment (No. 9617); MD; 1997
Qualified Forest Professional under the MD Forest Conservation Act (COMAR 08.19.06.01) – Maryland Department of Natural Resources; MD; 1993

Geoffrey A. Tizard, II, P.E.
Senior Project Manager

Mr. Tizard, a senior project manager and civil engineer, manages, designs, and implements solid and hazardous waste projects. He has more than 30 years of experience in this field, including an extensive background managing large, multidisciplined Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), and Resource Conservation and Recovery Act (RCRA) projects under contract to federal, state, local, and private clients. Mr. Tizard's project efforts include landfill planning, new cell design, closure design, and landfill gas control, recovery, and utilization. He has also worked on projects that include leachate treatment design, soil and groundwater remediation, resource recovery, power generation, petroleum and recycle system storage, process mechanical systems, and miscellaneous building structures. In addition, Mr. Tizard has designed water, wastewater, and stormwater management systems, and waste-to-energy and composting facilities, and has performed hydrologic, hydraulic, flood plain and flood management studies. Mr. Tizard has also performed and participated in the design and rehabilitation of industrial, commercial and residential structures. Mr. Tizard prepares reports, contract drawings, and specifications for multidisciplinary engineering projects, including site and building designs, site remediation, CERCLA and RCRA groundwater studies, and hazardous waste site closures. His report efforts include economic and financial analyses and evaluations, feasibility studies, engineering investigations, cost estimates, and operation and maintenance manuals. Mr. Tizard conducts construction management, inspections and post-closure monitoring programs. He also provides client liaison, federal and state agency interface, and coordination of in-house engineers and outside subcontractors. Mr. Tizard provides senior technical review/oversight and quality assurance/quality control multidisciplined engineering projects, specializing in solid and hazardous waste projects, and stormwater, water quality and flood management projects. Mr. Tizard has managed the remedial investigation of numerous landfill sites. Designed methane gas collection, recovery, and venting systems for municipal and industrial landfills, and has implemented innovative leachate recycling at municipal sanitary landfills using the waste mass as a controlled bioreactor.

Education

M.B.A.; Loyola College; Finance; 1989
M.S.; Virginia Polytechnic Institute and State University; Civil Engineering; 1981
B.S.; Virginia Polytechnic Institute and State University; Civil Engineering; 1979

Registrations/Certifications

Registered Professional Engineer—AZ (No. 29797), 1995; DE (No. 7437), 1987; FL (No. 52317), 1997; ME (No. 6935), 1990; MD (No. 15453), 1987; MO (No. 27721), 1995; NJ (No. 37256), 1992; NC (No. 18646), 1992; PA (No. 37002), 1987; VA (No. 17935), 1987; WV (No. 10307), 1987; Puerto Rico (No. 17642), 1999

ATTACHMENT 4

Suggested name: Technical Representative

Role: To assist the Derwood community in understanding the process, science, schedule and alternatives associated with the preparation of the remediation plan.

Responsibilities:

- Be a neutral information source on the science of landfills and contamination; provide a communications path between the Department of Environmental Protection (DEP) and the Gude Landfill Concerned Citizens (GLCC) committee;

- Assist the GLCC, and the Derwood community if requested, in understanding events as they occur and results as they are reported;

- Provide information to the GLCC on accepted industry best practices, the remediation experience in the State of Maryland, the remediation options available for the Gude Landfill, and the typical remediation pitfalls and areas of concern.

Activities:

- The GLCC will attend the regular monthly Gude Landfill remediation meeting hosted by the DEP. In addition to that information exchange, the GLCC would like a separate information technical source available by email, phone and occasionally in person at a GLCC meeting. How this occurs and at what frequency will be set up by the GLCC and the Technical Representative.

- The GLCC anticipates hosting a community wide meeting 2-3 times per year to present the County's remediation efforts to the citizens of Derwood.

- Occasionally DEP may brief the Derwood community, but usually the Technical Representative would be present to explain the events occurring and the science supporting them.

Reporting: If at any time this relationship needs to be adjusted, it shall be raised as an agenda item at the monthly DEP-GLCC meeting.