



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

September 30, 2004

MEMORANDUM

SUBJECT: Request for Information for Triad Projects Profile

FROM: Jean M. Balent
Technology Innovation Program
Office of Superfund Remediation and Technology Innovation

The purpose of this memorandum is to request your assistance in gathering information and supporting documents for completed Triad projects. The Technology Innovation Office (now the Technology Innovation Program) has been gathering information on Triad work from EPA and other Federal programs for some time. This information will be published on a new website, the Triad Resource Center (www.triadcentral.org). A portion of this website will be devoted to site-specific examples and case studies in a searchable Triad Project Profile database. These Triad Project Profiles will also be accessible via Clu-in.org and the Brownfields Technical Support Center website.

We are now collecting information on completed Triad projects for this planned database. Tetra Tech EM Inc. (TTEMI), under EPA Contract No. 68-W-02-034, is supporting this task. Enclosed is a worksheet containing a standardized list of project elements which we hope to collect for each project. If you could provide the information in the format shown, it would be appreciated. Furthermore, copies of supporting documents (e.g. Dynamic Work Strategies, Statements of Work, etc.) would be of great assistance as we finalize the profiles. Please contact me to make arrangements to pass on any supporting documents that are available.

Further details on sending the information are provided in the worksheet. Should you have any questions, please do not hesitate to contact me at (703) 603-9924, balent.jean@epa.gov or Mark Colman of TTEMI at 303-313-8284, mark.colman@ttemi.com. Your response to this request by as soon as possible would be appreciated. Thank you for your assistance.

Enclosure

Jean M. Balent

Triad Project Profile
Form to Submit a New Profile

Please complete all fields. If you have any questions on this form, please contact Mark Colman of TTEMI, 303-313-8284, mark.colman@ttemi.com. Completed forms should be sent to Mark Colman of TTEMI by email.

Project Information		
Field	Pick List	Response
Site Name	If text is listed in this column, please select an appropriate response from the options listed here.	Milltown Redevelopment Site
Site ID (if applicable)		
City		Milltown
State		New Jersey
Site Type	See Site Type Options List at end of form	
Project Objectives/ Decisions		
Remedial Phase	<ul style="list-style-type: none"> Cleanup design or implementation Site Assessment (Includes ASTM Phase 1/2, PA/SI, HRS scoring, other pre-remedial work) Site close-out or long-term monitoring Site Investigation (Includes RI/FS or similar detailed investigation work) 	
Triad Elements Implemented (Details below)	Systematic Planning: Yes or No	
	Real-time Measurements and Data Management: Yes or No	
	Dynamic Work Strategies (DWS): Yes or No	

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Project Information		
Field	Pick List	Response
	<p>If text is listed in this column, please select an appropriate response from the options listed here.</p>	
Abstract/Project Summary - include date - emphasize the project “highlights” from a Triad perspective		<p>The Milltown Redevelopment site is a Brownfields site in Milltown, New Jersey. A large, diverse stakeholder group was formed to plan, conduct, and oversee the project. The stakeholder group included representatives from federal, state, and local agencies as well as a potential site developer.</p> <p>The primary project goals were to (1) evolve a CSM of site geology, hydrology, and contaminant fate and transport by collecting soil, sediment, and groundwater samples and geologic profiles on a regular grid, and (2) delineate potential areas of concern (AOC) on a closer grid spacing of adaptive sampling locations. The results of the investigation were to be used to develop estimates of contaminated soil volumes that could provide a basis for negotiations with the potential buyer and developer of the property.</p>
Triad Project Benefits		
Cost and Time Savings		
Contaminant(s) of Concern	<p>See Contaminant Options List at end of form</p>	

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Project Information		
Field	Pick List	Response
Contaminated Media	<p style="color: red; text-align: center;">If text is listed in this column, please select an appropriate response from the options listed here.</p> <ul style="list-style-type: none"> • Soil • Sludge • Solid (Slag) • Sediment • Groundwater • Off-gases • Dense Non-aqueous Phase Liquids (DNAPLs) • Light Non-aqueous Phase Liquids (LNAPLs) • Soil Gas • Air Particulates and Aerosols • Leachate • Surface Water • Organic Liquids • Fractured Bedrock • Debris (Buildings, Structures, or Equipment) • Acid Mine Drainage • Drinking Water • Wastewater 	
Reuse Objective Identified	<ul style="list-style-type: none"> • Yes • No 	
If YES, Proposed Reuse	<ul style="list-style-type: none"> • Residential • Recreational • Commercial/Industrial • Other (site-specific) 	

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Project Information		
Field	Pick List	Response
	<p>If text is listed in this column, please select an appropriate response from the options listed here.</p>	
Project Lead Type	<ul style="list-style-type: none"> • DOE Lead • EPA Lead • Insurance/ Due Diligence • Municipal/ Local Lead • PRP Lead • State Lead • U.S. Air Force Lead • U.S. Army Corps of Engineers Lead • U.S. Army Lead • U.S. Navy Lead 	
Project Lead Organization		
Regulatory Lead Program (if applicable)	<ul style="list-style-type: none"> • Base Realignment and Closure (BRAC) • Insurance/ Due Diligence • RCRA Corrective Action • State Remedial • Superfund Remedial • Superfund Removal • Targeted Brownfields Assessment • Voluntary Cleanup Program 	
Triad Project Status	<ul style="list-style-type: none"> • Investigation Completed • Investigation Ongoing 	Investigation Completed

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Project Information		
Field	Pick List	Response
<p>Background Information About Site <i>Discuss (as applicable):</i> - Site history and past uses. - Must the project be concluded within a set time period? - Was it necessary to develop a project/analyte specific field analytical technology?</p>	<p>If text is listed in this column, please select an appropriate response from the options listed here.</p>	<ul style="list-style-type: none"> • The site is a 22-acre Brownfields site in the heart of downtown Milltown, New Jersey. More than 50 percent of the site is covered with warehouses and industrial buildings. • Industrial use of the site began with a rubber manufacturing plant in the late 1800s succeeded by numerous other industries. • The Milltown Redevelopment Authority and Middlesex County Improvement Agency entered into an agreement with a developer to develop the parcel for mixed uses, including more than 300 age-restricted residential units, commercial space, and open space along Mill Pond, the main waterway through central Milltown. • Principal contaminants of concern (COC) included volatile organic compounds (VOC) (particularly chlorobenzene), PAHs, PCBs, pesticides, and total petroleum hydrocarbons (TPH).
<p>Project Results and Outcomes <i>Discuss as applicable:</i> - contaminants and concentrations found - complete pathways to receptors - conclusions from the investigation</p>		<p>The field team was able to sample over 400 locations in slightly more than 5 weeks. The field team collected more than 130 groundwater samples and 600 soil samples, generating over 30,000 analytical results that were loaded into the database and underwent QC review in a short time.</p> <p>The benefits of streamlined data acquisition and processing using Scribe were evident during the dynamic investigation of the chlorobenzene plume (Figure 4). During a site walk-through immediately preceding the Triad investigation, a vat was discovered under a formerly used loading dock that had been obscured by heavy brush. A sample from the vat verified the presence of chlorobenzene. The DWS provided a flexible means to adapt the sampling strategy after the discovery was made in the field. The plume was delineated in approximately 4 days after 63 groundwater and 28 soil samples were collected from 46 sampling locations</p>

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Triad Approach Information		
Field	Pick List	Response
	<p>If text is listed in this column, please select an appropriate response from the options listed here.</p>	
Systematic Project Planning <i>Discuss (as applicable):</i> - How a CSM was developed - Strategy for uncertainty management - Integration of project decisions and analytical strategy - How project goals were achieved - General discussion on collaboration among parties		
Project Team Description - Types of organizations/ roles/expertise		
Dynamic Work Strategies (DWS) <i>Discuss (as applicable):</i> - General data collection approach - How field work was conducted in a dynamic manner - How dynamic activities were communicated among the team		

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Triad Approach Information		
Field	Pick List	Response
Decision Logic - How decision logic was designed and implemented for real-time decision-making	If text is listed in this column, please select an appropriate response from the options listed here.	
Real Time Measurement Technologies <i>Discuss (as applicable):</i> - Activities performed in a fixed lab - Activities performed using field-based methods (sampling as well as analytical tools) - Demonstration of methods applicability? - Whether data were managed and evaluated in the field (e.g. were decision trees used?)		

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Triad Approach Information		
Field	Pick List	Response
Technology Category(s) for Sampling and Analysis	<p style="color: red; text-align: center;">If text is listed in this column, please select an appropriate response from the options listed here.</p> <ul style="list-style-type: none"> • Direct-Push Analytical Systems • Direct-Push Geotechnical Sensors • Direct-Push Groundwater Samplers • Direct-Push Platforms • Direct-Push Soil and Soil-Gas Samplers • Fiber Optic Chemical Sensors • Gas Chromatography • Graphite Furnace Atomic Absorption Spectrometry • Ground Penetrating Radar • Immunoassay • Infrared Spectrometry • Laser-Induced Fluorescence • Magnetics • Mass Spectrometry • Test Kits • X-Ray Fluorescence • Inductively Coupled Plasma Spectrometry (ICP) 	
Specific Technology(s)/Model Used (e.g., SCAPs)		
Technology Vendor(s)		
Attached Technology Quick Reference Sheet (TQRS) Form		<i>None</i>

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Data Quality Assessment - Types of quality control measures used for analytical and sampling quality - Method Performance Attained		

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Triad Approach Information		
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	<p>If text is listed in this column, please select an appropriate response from the options listed here.</p>	
<p>Data Management Approach and Tools (e.g., Spreadsheets, FIELDS, SADA, VSP)</p>		<p>The stakeholders' group identified several concerns through a series of systematic planning meetings, including implementation of a protocol that did not strictly comply with State technical regulations and management of the sheer volume of data that would be generated by field analytical methods over a relatively short, 2-month time frame. EPA's BTSC identified Scribe and Scriplets as DSTs that would meet the project team's needs for data management and address the stakeholder concerns discussed above. Another outcome of systematic planning was the development of a DWS for selecting successive rounds of sampling locations in real time, thus allowing rapid delineation of potential AOCs. Figure 2 presents a generalized schematic diagram of data pathways followed during the field program.</p> <p>Data Management Tools and Procedures</p> <p>Scriplets allows the user to set up a sampling template before field work begins; a field technician uses the template to enter data electronically as they are generated in the field. A sample numbering sequence was assigned in Scriplets before sampling began, providing sample numbers automatically as the sampling event progressed. Sample data, real-time analytical results, and sampling location data (coordinates generated using GPS survey equipment) were entered into Scriplets in the field and then imported to the Scribe database by connecting the PDA to a laptop computer with a USB cable. The result was an all-electronic data pathway that minimized the potential for transcription errors.</p> <p>Scribe facilitated "in the trailer" review of data and enabled the project team to plan the next day's sampling locations before team members left the site for the day (Figure 3). After each round of sampling, the data were imported to Scribe, queried, and exported to AutoCAD through an electronic data format created by the project team in Scribe. Most importantly, Scribe made available in real time many of the features and advantages of a relational database while the team was still in the field.</p> <p>Data Interpretation Tools and Procedures</p> <p>The DWS anticipated the need for rapid delineation of AOCs and provided decision logic diagrams in the work plan to facilitate delineation, even though sampling locations were not specified. After preliminary review in Scribe, data were downloaded to AutoCAD. Because Scribe provided quick turnaround of preliminary sample results, optimal adaptive sampling locations were identified shortly after previously collected sample results were reviewed in Scribe and plotted in AutoCAD. In this manner, the groundwater plume delineation was expedited (see Figure 4) and the CSM was developed to explain the likely source of the</p>

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Supporting Information		
Field	Pick List	Response
	If text is listed in this column, please select an appropriate response from the options listed here.	
Key Triad Project Milestones - project timeline		
Dates of Operation – Field Work		
Source(s) of Information		
Electronic Documentation of Supporting/Related Information		
Point(s) of Contact		<p>James Mack New Jersey Institute of Technology 138 Warren Street Newark, NJ 07102 Telephone: (973) 596-5857 E-mail: mack@adm.njit.edu</p> <p>Ms. Denise Nickel Senior Project Manager Middlesex County Improvement Authority (MCIA) 101 Interchange Plaza Cranbury, NJ 08512 Telephone: (609) 409-5002 E-mail: DRN@mciath.com</p>
Last Update		June 9, 2006

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Site Type List

- Aboveground Storage Tank
- Agriculture Applications
- Aircraft Manufacturer
- Aircraft Rework Facility
- Automotive Parts, Storage, and Packaging
- Battery Recycling/Disposal
- Chemical Distributor
- Chemical Reclamation
- Chemical Waste Management and Incineration
- Chlor-alkali Manufacturing
- Coal Gasification
- Contaminated Aquifer - Contamination Source Unknown
- Disposal Pit
- DNAPL Tracer Treatability Study
- DOE Facility
- Drum Storage/Disposal
- Dry Cleaner
- Dumping-Unauthorized
- Electronic Equipment Processing
- Electronics Manufacturing
- Electroplating
- Federal Facility
- Fire/Crash Training Area
- Gaseous Diffusion Plant
- Gasoline Service Station/Petroleum Storage Facility
- Herbicide Manufacturing/Use
- Industrial Landfills
- Inorganic/Organic Pigments
- Lighting Manufacturer
- Machine Shops
- Manufactured Gas Plant (MGP)
- Manufacturing Process
- Medical Wastes
- Metal Ore Mining and Smelting
- Metal Plating
- Municipal Landfills
- Municipal Water Supply
- Munitions Manufacturing/Storage
- Naval Shipyard
- Open Burn/Open Detonation Area
- Other Inorganic Chemical Manufacturing/Use
- Paint/Ink Formulation/Use
- PCB Capacitor Manufacturing/Testing
- Pesticide Manufacturing/Use/Storage
- Petroleum Refining and Reuse
- Petroleum, Oil, Lubricant (POL) Line
- Pharmaceutical Manufacturing Facility
- Photographic Products
- Plastics Manufacturing
- Power Plant
- Pulp and Paper Industry
- Railyard
- Recycling (other than as primary operation)
- Research and development facility
- Road Oiling
- Rocket Maintenance Facility
- Rocket Manufacturing Facility
- Rubber Manufacturing
- Semiconductor Manufacturing
- Shipyard
- Small Arms Firing Range
- Solvent Manufacturing/Packing
- Solvent Recovery Facility
- Spill
- Storage-Drums/Containers
- Surface Disposal Area
- Surface Impoundment/Lagoon
- Telecommunications Manufacturer
- Textile Dye Manufacturing
- Underground Storage Tank
- Uranium Mining
- Vehicle Maintenance
- Warehouse Facility
- Waste Pile
- Waste Treatment Plant
- Wood Preserving

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Contaminant List

- | | | | | |
|--|--|--|---|--|
| • 1,1,1,2-Tetrachloroethane | • 1,2,3,4,7,8,9-Heptachlorodibenzofuran | • 1,2,3-Trichloropropane | • 1,3,5-Trimethylbenzene | • 2,2',3,3',4,4',5-Heptachlorobiphenyl |
| • 1,1,1-Trichloroethane | • 1,2,3,4,7,8-Hexachlorodibenzofuran | • 1,2,4,5-Tetrachlorobenzene | • 1,3,5-Trinitrobenzene | • 2,2',3,4,4',5,5'-Heptachlorobiphenyl |
| • 1,1,2,2-Tetrachloro-1,2-difluoroethane | • 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | • 1,2,4-Trichlorobenzene | • 1,3-Dichloro-2-propanol | • 2,2',3,4,4',5',6-Heptachlorobiphenyl |
| • 1,1,2,2-Tetrachloroethane | • 1,2,3,4-Diepoxybutane | • 1,2,4-Trimethylbenzene (pseudocumene) | • 1,3-Dichlorobenzene | • 2,2',3,4,4',5'-Hexachlorobiphenyl |
| • 1,1,2-Trichloro-1,2,2-Trifluoroethane | • 1,2,3,6,7,8-Hexachlorodibenzofuran | • 1,2-Deoxycorticosterone acetate | • 1,3-Dinitrobenzene | • 2,2',3,4,4',5'-Hexachlorobiphenyl |
| • 1,1,2-Trichloroethane | • 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | • 1,2-Dibromo-3-chloropropane | • 1,4-Dichlorobenzene | • 2,2',3,4,5,5'-Hexachlorobiphenyl |
| • 1,1-Dichloroethane | • 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | • 1,2-Dichloroethane | • 1,4-Naphthoquinone | • 2,2',3,4,5,5'-Hexachlorobiphenyl |
| • 1,1-Dichloroethene | • 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | • 1,2-Dichloro-1,1,2,2-tetrafluoroethane | • 1,4-Phenylenediamine | • 2,2',3,4,5,5'-Hexachlorobiphenyl |
| • 1,1-Dimethylhydrazine (UDMH) | • 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | • 1,2-Dichloroacetic acid | • 1-Acetyl-2-thiourea | • 2,2',3,4,5'-Pentachlorobiphenyl |
| • 1,2,3,4,5,6,7,8-Octachlorodibenzofuran | • 1,2,3,7,8-Pentachlorodibenzofuran | • 1,2-Dichlorobenzene | • 1-Chloronaphthalene | • 2,2',3,4,5,6-Hexachlorobiphenyl |
| • 1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin | • 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | • 1,2-Dichloroethane | • 1-Naphthylamine | • 2,2',3,5,5,6-Hexachlorobiphenyl |
| • 1,2,3,4,6,7,8-Heptachlorodibenzofuran | • 1,2,3,7,8-Pentachlorodibenzofuran | • 1,2-Dichloroethene | • 1-Propanol | • 2,2',3,5'-Tetrachlorobiphenyl |
| • 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | • 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | • 1,2-Dichloropropane | • 2 - (2-Methyl-4-chlorophenoxy) propionic acid | • 2,2',4,4',5,5'-Hexachlorobiphenyl |
| | • 1,2,3-Trichlorobenzene | • 1,2-Dinitrobenzene | • 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | |
| | | • 1,2-Diphenylhydrazine | | |

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- | | | | | |
|--|---------------------------------------|----------------------------------|--|----------------------------------|
| • 2,2',4,5,5'-Pentachlorobiphenyl | • 2,3,7,8-Tetrachlorodibenzo-p-dioxin | • 2-Amino-4,6-dinitrotoluene | • 3,3'-Dimethoxybenzidine | • 4-Amino-2,6-dinitrotoluene |
| • 2,2',5,5'-Tetrachlorobiphenyl | • 2,3-Dichlorobiphenyl | • 2-Aminoanthraquinone | • 3,3'-Dimethylbenzidine | • 4-Aminobiphenyl |
| • 2,2',5-Trichlorobiphenyl | • 2,4,5-T | • 2-Butanone (MEK) | • 3-Amino-9-ethylcarbazole | • 4-Bromophenyl phenyl ether |
| • 2,2-Bis(ethylferrocenyl)propane (catocene) | • 2,4,5-TP (silvex) | • 2-Chlorobiphenyl | • 3-Chloromethylpyridine hydrochloride | • 4-Chloro-1,2-phenylenediamine |
| • 2,3,3',4',6-Pentachlorobiphenyl | • 2,4',5-Trichlorobiphenyl | • 2-Chloroethanol | • 3-Chloropropionitrile | • 4-Chloro-1,3-phenylenediamine |
| • 2,3',4,4'-Tetrachlorobiphenyl | • 2,4,5-Trichlorophenol | • 2-Chloroethyl vinyl ether | • 3-Hydroxycarbofuran | • 4-Chloro-3-methylphenol |
| • 2,3,4,5-Tetrachlorophenol | • 2,4,5-Trimethylaniline | • 2-Chloronaphthalene | • 3-Methylcholanthrene | • 4-Chloroaniline |
| • 2,3,4,6,7,8-Hexachlorodibenzofuran | • 2,4,6-Trichloroanisole | • 2-Chlorophenol | • 3-Methylphenol (m-cresol) | • 4-Chlorophenyl phenyl ether |
| • 2,3,4,6-Tetrachlorophenol | • 2,4,6-Trichlorophenol | • 2-Chlorotoluene | • 3-Nitroaniline | • 4-Methyl-2-pentanone (MIBK) |
| • 2,3,4,7,8-Pentachlorodibenzofuran | • 2,4,6-Trinitrotoluene | • 2-Cyclohexyl-4,6-dinitrophenol | • 3-Nitrotoluene | • 4-Methylphenol (p-cresol) |
| • 2,3,5,6-Tetrachlorophenol | • 2,4-D | • 2-Hexanone | • 4,4'-DDD | • 4-Nitroaniline |
| • 2,3,7,8-Tetrachlorodibenzofuran | • 2,4-DB | • 2-Hydroxypropionitrile | • 4,4'-DDE | • 4-Nitrobiphenyl |
| | • 2,4-Diaminotoluene | • 2-Methylhydroxypropionitrile | • 4,4'-DDT | • 4-Nitrophenol |
| | • 2,4-Dichlorophenol | • 2-Methylnaphthalene | • 4,4'-Methylenebis(2-chloroaniline) | • 4-Nitrotoluene |
| | • 2,4-Dimethylphenol | • 2-Methylphenol (o-cresol) | • 4,4'-Oxydianiline | • 5,5-Diphenylhydantoin |
| | • 2,4-Dinitrophenol | • 2-Naphthylamine | • 4,6-Dinitro-2-methyl phenol | • 5-Chloro-2-methylaniline |
| | • 2,4-Dinitrotoluene | • 2-Nitroaniline | • 4,6-Dinitro-o-sec-butyl phenol | • 5-Nitroacenaphthene |
| | • 2,5-Dimethylbenzaldehyde | • 2-Nitrophenol | • 4-Amino-2,6-dinitrotoluene | • 5-Nitro-o-toluidine |
| | • 2,6-Dichlorophenol | • 2-Nitropropane | | • 7,12-Dimethylbenz(a)anthracene |
| | • 2,6-Dinitrotoluene | • 2-Nitrotoluene | | • a-BHC |
| | • 2-Acetylaminofluorene | • 2-Pentanone | | • Acenaphthene |
| | | • 2-Picoline | | |
| | | • 3,3'-Dichlorobenzidine | | |

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- | | | | | |
|------------------------------|---------------------------------|--|-----------------------------------|---------------------------|
| • Acenaphthylene | • Ammoniated aluminum iodide | • Amyl ferrocene | • Benzo(b)fluoranthene | • Bromine pentafluoride |
| • Acetone | • Ammoniated beryllium iodide | • ANFO | • Benzo(ghi)perylene | • Bromoacetone |
| • Acetonitrile | • Ammoniated calcium iodide | • Anilazine | • Benzo(j)fluoranthene | • Bromochloromethane |
| • Acetophenone | • Ammoniated copper nitrate | • Aniline | • Benzo(k)fluoranthene | • Bromodichloromethane |
| • Acetylene | • Ammoniated lithium iodide | • Anthracene | • Benzoic acid | • Bromoform |
| • a-Chlordane | • Ammoniated magnesium iodide | • Antimony | • Benzyl alcohol | • Bromomethane |
| • Acrolein (propenal) | • Ammonium acetate | • Aramite | • Benzyl chloride | • Bromoxynil |
| • Acrylamide | • Ammonium aluminum perchlorate | • Argon | • Beryllium borohydride | • Butanal (butyraldehyde) |
| • Acrylic acid | • Ammonium azide | • Aroclor 1016 | • Beryllium hydride | • Butyl rubber |
| • Acrylonitrile | • Ammonium bicarbonate | • Aroclor 1221 | • Beryllium nitride | • Butyl benzyl phthalate |
| • Actinium (Ac) | • Ammonium bifluoride | • Aroclor 1232 | • Bis(2-chloroethoxy)methane | • Butylate |
| • Alachlor | • Ammonium borofluoride | • Aroclor 1242 | • Bis(2-chloroethyl) ether | • Butylbenzene |
| • Aldicarb (temik) | • Ammonium carbonate | • Aroclor 1248 | • bis(2-Chloroethyl)sulfide | • Butylmethyl ether |
| • Aldicarb sulfone | • Ammonium fluoride | • Aroclor 1254 | • Bis(2-chloroisopropyl) ether | • Cadmium |
| • Aldicarb sulfoxide | • Ammonium iodide | • Aroclor 1260 | • Bis(2-ethylhexyl) adipate (DOA) | • Calcium |
| • Aldrin | • Ammonium nitrate | • Arsenic | • Bis(2-ethylhexyl) phthalate | • Calcium boride |
| • Allyl alcohol | • Ammonium oxalate | • Asbestos | • Bolstar (sulprofos) | • Calcium Carbide |
| • Allyl chloride | • Ammonium perchlorate | • Aspon | • Borine ammoniate | • Calcium carbonate |
| • Aluminum | • Ammonium periodate | • Atrazine | • Boron | • Calcium chromate |
| • Aluminum beryllium (alloy) | • Ammonium picrate | • Azinphos-ethyl | • Bromate | • Calcium formate |
| • Aluminum borohydride | • Ammonium sulfate | • Azinphos-methyl | | • Calcium hydride |
| • Aluminum boron (alloy) | | • Barban | | • Calcium nitrate |
| • Aluminum diboride | | • Barium | | • Calcium peroxide |
| • Aluminum hydride | | • Barium peroxide | | • Calcium silicide |
| • Aluminum perchlorate | | • Basic lead carbonate | | • Candelilla wax |
| • Americium | | • Benz(a)anthracene | | • Captafol |
| • Aminoazobenzene | | • Benzaldehyde | | • Captan |
| • Ammonia | | • Benzene | | • Carbaryl (sevin) |
| • Ammonia triborane | | • Benzene-toluene-ethylbenzene-xylene (BTEX) | | • Carbazole |
| | | • Benzidine | | |
| | | • Benzo(a)pyrene | | |

Triad Project Profile
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- Carbofuran (furan)
- Carbon disulfide
- Carbon tetrachloride
- Carbophenothion
- Carboxy term. polybutadiene
- Castor oil
- Cellulose
- Cerium
- Cerium nitride
- Cesium
- Cesium 137
- Cesium azide
- Cesium carbonate
- Cesium hydride
- Cesium nitrate
- Cesium perchlorate
- Cesium tungsten fluoride
- Chemical and biological warfare agents
- Chloral hydrate
- Chlordane
- Chlorfenac
- Chlorfenvinphos
- Chloride
- Chlorine
- Chlorine pentafluoride
- Chlorine trifluoride
- Chloroacetic acid (CCA)
- Chlorobenzene
- Chlorobenzilate
- Chloroethane
- Chloroform
- Chloromethane
- Chloroprene
- Chlorpyrifos
- Chlorpyrifos methyl
- Chromium
- Chrysene
- cis-1,2-Dichloroethene
- cis-1,3-Dichloropropene
- cis-1,4-Dichloro-2-butene
- Coal tar
- Cobalt
- Cobalt 60
- Comp B
- Compound 4 (C-4)
- Copper
- Copper chloride
- Copper chromite
- Copper sulfide
- Corrosives
- Coumaphos
- Creosote (coal tar)
- Creosote (wood)
- Crotonaldehyde
- Crotoxyphos
- CTPB
- Curium
- Cyanide
- Cyclohexane
- Cyclohexanone
- Cyclotetramethylen etetranitramine (explosive)
- Cycolate
- Dalapon
- d-BHC
- Decaborane A
- Decaborane B
- Decacylene
- Decadiborane
- Decanal
- Decane
- Demeton
- Diallate
- Diazinon
- Dibenz(a,h)acridine
- Dibenz(a,h)anthracene
- Dibenz(a,j)acridine
- Dibenzo(a,e)pyrene
- Dibenzo(a,h)pyrene
- Dibenzo(a,i)pyrene
- Dibenzofuran
- Diborane
- Dibromochloromet hane
- Dibromomethane
- Dibutyl phthalate
- Dicamba
- Dichlone
- Dichlorobenzenes
- Dichlorodifluoromet hane
- Dichlorofenthion
- Dichloromethane
- Dichloroprop
- Dichlorvos
- Dicofol
- Dicrotophos
- Dicyclopentadiene
- Dieldrin
- Diesel fuel
- Diesel oil
- Diethyl ether
- Diethyl phthalate
- Diethyl sulfate
- Diethylbenzene
- Diethylstilbestrol
- Difluoromethane
- Diglycidyl ether of bisphenol A (DER 332)
- Dihydrosaffrole
- Diisobutyl acetate
- Diisocyanate
- Diisopropyl ether
- Dimethoate
- Dimethyl disulfide
- Dimethyl phthalate
- Dimethylaminoazo benzene
- Dimethylformamide (DMF)
- Dinocap
- Di-n-octyl phthalate
- Dinoseb
- Di-n-Propyl adipate
- Dioxacarb
- Dioxane
- Dioxathion
- Dioxins and furans
- Diphenylamine
- Diquat
- Disulfoton
- Diuron
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- Epichlorohydrin
- EPN
- Epon 828
- Epoxy 201
- Ethanol
- Ether
- Ethion
- Ethoprop
- Ethyl acetate
- Ethyl alcohol
- Ethyl carbamate
- Ethyl centralite
- Ethyl methacrylate

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- | | | | | |
|---|-------------------------------|---|----------------------------------|-------------------------------------|
| • Ethyl methanesulfonate | • Fuels and distillates | • Hexachloropropene | • Indeno(1,2,3-cd)pyrene | • Lead 2-ethyl hexoate |
| • Ethyl parathion | • Gasoline | • Hexadecane | • Inorganic cyanides | • Lead acetyl salicylate |
| • Ethyl tert-butyl ether | • GB (chemical warfare agent) | • Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) | • Iodic acid | • Lead azide |
| • Ethylacrylate acrylic acid | • g-BHC (Lindane) | • Hexahydro-1,3,5-trinitro-s-triazine (RDX) | • Iodine 131 | • Lead beta recorcyate |
| • Ethylbenzene | • g-Chlordane | • Hexamethylene diisocyanate (HMDI) | • Iodine pentafluoride | • Lead iodate |
| • Ethylene carbonate | • Glutamic acid | • Hexamethylphosphoramide | • Iodine pentoxide | • Lead nitrate |
| • Ethylene dibromide (EDB) | • Glycidyl azide | • Hexanal (hexaldehyde) | • Iodine trichloride | • Lead salicylate |
| • Ethylene dihydrazine | • Guanylazide nitrate (GAN) | • Hexane | • Iodomethane | • Lead styphnate |
| • Ethylene glycol | • Halogenated SVOCs | • HTPB | • IRFNA | • Leptophos |
| • Ethylene oxide | • Halogenated VOCs | • HTPB curative | • Iron | • Lewisite (chemical warfare agent) |
| • Europium | • HCFC 11 | • HTPB nitrile | • Iron carbonate | • Linuron |
| • Explosive D | • HCFC 113 | • HYCAT | • Iron oxide | • Lithium |
| • Explosives, propellants, and pyrotechnics | • HCFC-123 | • Hydrazine | • Isobutyl alcohol | • Lithium aluminum perchlorate |
| • Famphur | • HD (chemical warfare agent) | • Hydrazine diborane | • Isodrin | • Lithium azide |
| • FEFO | • Helium | • Hydrogen | • Isooctane | • Lithium beryllium hydride |
| • Fenitrothion | • Heptachlor | • Hydrogen azide | • Isophorone | • Lithium carbide |
| • Fensulfothion | • Heptachlor epoxide | • Hydrogen cyanide | • Isophorone diisocyanate (IPDI) | • Lithium dicyanamide |
| • Fenthion | • Heptanal | • Hydrogen fluoride | • Isopropyl alcohol | • Lithium nitrate |
| • Fluchloralin | • Heptane | • Hydrogen peroxide | • Isopropyl acetate | • Lithium periodate dihydrate |
| • Fluoranthene | • Hexachlorobenzene | • Hydrogen sulfide | • Isopropyl cellosolve (IPE) | • LP-33 |
| • Fluorene | • Hexachlorobutadiene | • Hydroquinone | • Isovaleraldehyde | • M1 |
| • Fluorine | • Hexachlorocyclohexane (HCH) | • IDP | • JP-4 | • M30 |
| • Fluorobenzene | • Hexachlorocyclopentadiene | • Indene | • JP-5 | • M6 |
| • Fonophos | • Hexachloroethane | | • Kepone | • Magnesium |
| • Formaldehyde | • Hexachlorophene | | • Kerosene | • Magnesium aluminum hydride |
| • Freon | | | • Lead | |
| | | | • Lead 210 | |

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- Magnesium nitrate hexahydrate
- Magnesium perchlorate
- Malathion
- Maleic anhydride
- Malononitrile
- Manganese
- Manganese dioxide
- MCPA
- MCPP
- Mercurous azide
- Mercury
- Merphos
- Mestranol
- Metals and metalloids
- Methacrylonitrile
- Methane
- Methanol
- Methapyrilene
- Methiocarb (mesurol)
- Methomyl (lannate)
- Methoxychlor
- Methyl acetate
- Methyl methacrylate
- Methyl methanesulfonate
- Methyl parathion
- Methyl tert butyl ether
- Methyl-2,4,6-trinitrophenylnitramine
- Methyl-2,4,6-trinitrophenylnitramine (tetryl)
- Methylated spirits
- Methylcyclohexane
- Methylene chloride
- Methyl-tert-butyl ether
- Metolachlor
- Mevinphos
- Mexacarbate
- Mineral oil (hydraulic oil)
- Mineral spirits (varsol)
- Mirex
- Miscellaneous contaminants (not found in other contaminant groups)
- Molinate
- Molybdenum
- Monobasic cupric
- Monobasic cupric salicylate
- Monocrotophos
- Monomethyl hydrazine (MMH)
- Monuron
- m-Tolualdehyde
- m-Xylene
- N,N-Dimethylaniline
- Naled
- n-Amyl alcohol
- Naphthalene
- n-Butanol
- Neodymium
- Neptunium 237
- Nickel
- Nickel carbide
- Nickel cyanide
- Nickel oxide
- Nicotine
- Nitrate
- Nitric acid
- Nitrile
- Nitrite
- Nitrobenzene
- Nitrocellulose
- Nitroethane
- Nitrofen
- Nitrogen tetroxide
- Nitrogen trifluoride
- Nitroglycerin
- Nitroguanidine
- Nitroquinoline-1-oxide
- Nitrous oxide
- N-Nitrosodibutylamine
- N-Nitrosodiethylamine
- N-Nitrosodimethylamine
- N-Nitrosodi-n-propylamine
- N-Nitrosodiphenylamine
- N-Nitrosomethylethylamine
- N-Nitrosomorpholine
- N-Nitrosopiperidine
- N-Nitrosopyrrolidine
- No. 2 fuel oil
- Nonanal
- Nonane
- Nonhalogenated SVOCs
- Nonhalogenated VOCs
- Nonmetallic toxic elements
- Normal hexyl carborane
- N-propyl acetate
- N-Propylamine
- N-Propylbenzene
- O,O,O-Triethyl phosphorothioate
- o-Anisidine
- Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
- Octamethyl pyrophosphoramidate
- Octanal
- O-Methylstyrene
- Organic cyanides
- Organic nitrogen
- Organometallic pesticides and herbicides
- o-Tolualdehyde
- o-Toluidine
- Oxalic acid
- Oxygen
- Oxygen difluoride
- o-Xylene
- Ozone
- Paraffinic oil
- Paraldehyde
- Parathion
- PBAN
- p-Benzoquinone
- p-Chloro-m-creosol
- p-Cresidine
- Pebulate
- Pentachlorobenzene
- Pentachloroethane
- Pentachloronitrobenzene
- Pentachlorophenol

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- | | | | | |
|---|----------------------------------|----------------------------------|----------------------------------|--------------------------------------|
| • Pentaerythritol tetranitrate | • Polyethylene glycol (carbowax) | • RJ-4 | • Styrene | • Thallium |
| • Pentanal (valeraldehyde) | • Potassium | • RJ-5 | • Sulfallate | • Thiocarbonate |
| • Perchloric acid (anhydrous) | • Potassium azide | • Ronnel | • Sulfate | • Thiocyanate |
| • Petroleum jelly | • Potassium iodate | • Rotenone | • Sulfides | • Thionazin (zinophos) |
| • Phenacetin | • Potassium nitrate | • RP-1 | • Sulfur dioxide | • Thiophenol (benzenethiol) |
| • Phenanthrene | • Potassium peroxide | • Ruthenium-106 | • Sulfur hexafluoride | • Thorium |
| • Phenobarbital | • Promecarb | • Safrole | • Sulfur trioxide | • Thorium |
| • Phenol | • Pronamide | • sec-Butylbenzene | • Sulfuric acid | • Tin |
| • Phenols | • Propanal (propionaldehyde) | • Selenium | • TBF (tert-butyl formate) | • Titanium |
| • Phorate | • Propargyl alcohol | • Shell epon 815 | • t-Butyl alcohol | • Tokuthion (Protothiofos) |
| • Phosalone | • Propionitrile (ethyl cyanide) | • Siduron | • Teflon | • Toluene |
| • Phosmet | • Propoxur (baygon) | • Silicon tetrafluoride | • TEPP | • Toluene diisocyanate |
| • Phosphamidon | • Propylthiouracil | • Silicone | • Terbufos | • Total heptachlorodibenz ofuran |
| • Phosphate | • p-Tolualdehyde | • Silver | • tert-Amyl methyl ether | • Total heptachlorodibenz o-p-dioxin |
| • Phosphine | • p-Xylene | • Silver iodate | • tert-Butylbenzene | • Total hexachlorodibenzo furan |
| • Phosphorous | • Pyrene | • Silver iodide | • Tertiary-amyl methyl ether | • Total hexachlorodibenzo -p-dioxin |
| • Phthalates | • Pyridine | • Silver nitrate | • Tetrachloroethene | • Total pentachlorodibenz ofuran |
| • Phthalic anhydride | • R-22 (chlorodifluoromethane) | • Silver oxide | • Tetrachlorothiophe ne | • Total pentachlorodibenz o-p-dioxin |
| • Picloram | • R45 | • Simazine | • Tetrachlorvinphos | |
| • Piperonyl sulfoxide | • R45M | • Sodium | • Tetraethyl dithiopyrophosphate | |
| • p-Isopropyltoluene | • Radioactive materials | • Sodium azide | • Tetraethyl lead | |
| • Plutonium | • Radium | • Sodium chlorate | • Tetraethyl pyrophosphate | |
| • Pollonium 210 | • Radon | • Sodium nitrate | • Tetrahydrodicyclo pentadiene | |
| • Polybutadiene | • Red fuming nitric acid | • Sodium perchlorate | • Tetrahydrofuran | |
| • Polybutene | • Red phosphorus | • Sodium β -BHC | • Tetramethyl lead | |
| • Polychlorinated biphenyls (PCBs) | • Resorcinol | • β -Propiolactone | | |
| • Polycyclic aromatic hydrocarbons (PAHs) | | • Stirophos (tetrachlorovinphos) | | |
| • Polyethylene | | • Stoddard solvent | | |
| | | • Strontium | | |
| | | • Strontium 90 | | |
| | | • Strychnine | | |

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- Total petroleum hydrocarbons
- Total tetrachlorodibenzofuran
- Total tetrachlorodibenzo-p-dioxin
- Toxaphene
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene
- trans-1,4-Dichloro-2-butene
- Triazine
- Tributyl phosphate
- Tricalcium phosphate
- Trichlorfon
- Trichloroethene
- Trichlorofluoromethane
- Trichloronate
- Trifluralin
- Triglycol dichloride
- Trimethyl phosphate
- Trinitromethane
- Tri-o-cresylphosphate
- Triphenyl bismuth
- Tri-p-tolyl phosphate
- Tris(2,3-dibromopropyl) phosphate
- Tritium
- TRPH
- Tungsten carbonyl
- Turpentine
- Uranium
- Urea
- Vanadium
- Vapona
- Vernolate
- Vinyl acetate
- Vinyl chloride
- Viton A
- VX (chemical warfare agent)
- Xylenes
- Yellow iron oxide
- Zecorez
- Zinc
- Zinc cyanide
- Zinc oxide
- Zirconium hydride
- α,α -Dimethylphenethylamine