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Margaret Hoffman, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 16, 2003

**CERTIFIED MAIL #4709**  
**RETURN RECEIPT REQUESTED**

Mr. Jerry S. Johnson  
Assistant Area Manager  
Department of Energy  
Albuquerque Field Office  
P.O. Box 30030  
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant  
TCEQ Solid Waste Registration No. 30459  
TCEQ Hazardous Waste Permit No. HW-50284  
EPA ID No. TX4890110527  
*Conditional Approval of Release Characterization, Final RCRA Facility Investigation Report (Soils Final Report) for the Burning Grounds Waste Management Group (WMG-13), Dated March 15, 2002*

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the RCRA Facility Investigation (RFI) Report referenced above along with a supplemental information submitted to the TCEQ on August 15, 2003. The RFI Report (Soils Final Report) is for the Burning Grounds Waste Management Group (WMG-13), Dated March 15, 2002 that is required by the Hazardous Waste Permit/Compliance Plan. The Soils Final Report summarizes the numerous phases of soil investigation conducted on approximately 101 acres of DOE-Pantex's property located in the northern portion of the facility that includes the Burning Grounds Waste Management Area (WMA) and Playa 3. The Soils Final Report evaluated historical releases from waste management units (Regulated Units and Solid Waste Management Units, SWMUs) within the industrialized area designated as WMG-13.

13730

Mr. Jerry S. Johnson  
Page 2  
September 16, 2003

The TCEQ reviewed the Soils Final Report in conjunction with DOE-Pantex's Evaluation Strategy reference document (Conceptual Site Model, CSM dated January 22, 2003) that was developed by the Pantex Core Team. Based on the information presented in the Soils Final Report, the TCEQ concurs that the data / information in the Soils Final Report properly reflects the geologic processes and conditions represented in the CSM for the Burning Ground WMA. The TCEQ concurs that the nature and extent has been delineated for the investigated area (from the surface to FGZ). Any uncertainties remaining for vertical definition will be further evaluated in the Groundwater RFI and be addressed with long-term monitoring.

The TCEQ conditionally approves the release characterization of soils associated with the Burning Ground WMA based on the conditions identified in Enclosure 1 to this letter. The conditional approval does not apply to the Playa 3 or any SWMU beyond the approximately 58 acre tract of land designated as the Burning Ground Waste Management Area (WMA). Also, as part of Enclosure 1 to this letter, the TCEQ clarifies several key issues that were instrumental in approving the Soil Final Report for the Burning Grounds WMA.

The Soils Final Report establish the Constituents of Potential Concern (COPCs) that have released to the environment. Enclosure 2 to this letter identifies the minimum list of COPCs associated with the Burning Grounds WMA that must be evaluated in the groundwater investigation. The COPCs that pose a risk to human health or the environment due to cross-media contamination (soil to air; soil to groundwater) must be carried forward to the Pantex Baseline Risk Assessment(s) for evaluation.

The Environmental Protection Agency (EPA) has also evaluated the Soils Final Report in accordance with the December 21, 1994 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the TCEQ, and concurs with TCEQ's conditional approval. The EPA's letter is enclosed as Enclosure 3 to this letter. DOE-Pantex must address the comments in the EPA's letter as a condition of the full closure (both soil and groundwater).

Enclosure 4 of this letter identifies all waste management units that are part of WMG-13. For clarity, Enclosure 4 identifies those waste management units that are associated with the Burning Ground WMA (58 acres property) and also identifies those units associated with WMG-13, but are not included in this conditional approval.

Pantex should be aware that closure will be based on TCEQ's approval of the Soil RFI, Groundwater RFI and Ecological Assessment, if applicable, as part of this industrialized area. This letter conditionally approves the Soil Final Report for the 58 Acre tract of property and completes the release characterization for the units identified in Enclosure 4 that are within the Burning Ground WMA.

Mr. Jerry S. Johnson  
Page 3  
September 16, 2003

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1 Office in Amarillo. The TCEQ Solid Waste Registration Number and SWMU information (e.g., Unit Description or Name) should be referenced in all submittals.

Sincerely,



Robert Musick, Project Manager  
Team I, Corrective Action Section  
Remediation Division  
Commission on Environmental Quality

REM/rm

cc: Mr. Richard Lee, Project Manager, TCEQ Region 01 Office - Amarillo  
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI

Enclosures:

- Enclosure 1 - Conditions of Approval and Clarification
- Enclosure 2 - Constituents of Potential Concerns (COPCs) for the Burning Ground WMA
- Enclosure 3 - Environmental Protection Agency Letter
- Enclosure 4 - Waste Management Units in the Burning Ground WMG

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Mr. Jerry S. Johnson  
Enclosure

**ENCLOSURE 1**

**CONDITIONS OF APPROVAL AND CLARIFICATION**

Mr. Jerry S. Johnson  
Enclosure

Enclosure 1 - Conditions of Approval and Clarification

I. Conditions of Approval

- A. The TCEQ agrees with the recommendations in the Soils Final Report that the investigation data for the Burning Grounds WMA should seek closure in accordance with the RRS No. 3 criteria. A RRS No. 3 closure approval will be issued to Pantex once a completed groundwater investigation and ecological evaluation is submitted which addresses the closure criteria established by rule.
- B. The “release characterization of the soil” is limited to the Burning Ground WMA portion of WMG 13 that addresses approximately 58 acres of DOE property. The conditional approval does not extend to Playa 3 and several other miscellaneous Solid Waste Management Units (SWMUs) that are also part of WMG-13 as defined in the Conceptual Site Model dated January 22, 2003. These SWMUs will be addressed in subsequent submittals to the TCEQ.
- C. The release characterization for the Burning Grounds WMA is limited to the 58 acre industrial area investigated as presented in the Soils Final Report. The investigation data suggest that the impacts to soils are from the surface to the FGZ, however there remains a degree of uncertainty associated with the sediments below the FGZ. As a result of the uncertainty the Ogallala Aquifer will be further evaluated in the Groundwater RFI and long-term monitoring will be established in the Permit/Compliance Plan to address these uncertainties.
- D. Source areas established by the Soil RFI will be carried forward for further evaluation in the Groundwater RFI and be a candidate for long-term monitoring. As per discussions between TCEQ, Pantex and EPA on July 17, 2003, Pantex will develop soil source maps that will be included in the Groundwater RFI Report to allow map overlays that will expedite the technical reviews and identify those areas of cross-media contamination.
- E. As a condition of this RFI approval, per discussions on July 17, 2003 between the TCEQ, Pantex and EPA, the following “data needs” must be addressed in subsequent investigation reports. Pantex has agreed to provide the following information in the Groundwater RFI Report to address data needs associated with the RFI:
  - 1. Characterization of the nature and extent of contamination (e.g., Perchlorate and other COPCs) detected in MW PTX01-1001;
  - 2. Characterization of the nature and extent of contamination associated with the Playa sediments (surface and near subsurface to approximately 15 feet);

Mr. Jerry S. Johnson  
Enclosure

3. Other information applicable to this 58 acre tract of property (i.e., geophysical, additional sampling) will be included as a source update in the Burning Ground Groundwater RFI.
- F. As per discussions between Pantex, EPA and the TCEQ on July 17, 2003, Pantex will perform an ecological assessment (if applicable) of the Burning Grounds WMA as a stand alone report.
- G. The Soils Final Report does not address the extent of radionuclide releases associated with the Burning Ground WMA. Pantex will perform a radionuclide assessment of the Burning Grounds WMA as a stand alone report.

## II. Clarification

- A. As per discussions with Pantex and the Environmental Protection Agency (EPA) on July 17, 2003, the soil/sediment investigations associated with Playa 3 (approximately 43 acres) and SWMUs No. 11, 53, 73, SVS7b, and 74 will be deferred until additional release characterization is performed and reported to the TCEQ and the EPA in the form of an RFI Report. The characterization of SWMU Nos. 11, 53, 73 and 74 will be addressed in a Miscellaneous Soil Investigation Report and the Playa 3 soils will be fully addressed in the Groundwater RFI associated with the Burning Ground Area.
- B. Long-term groundwater monitoring is required to evaluate impacts of contamination on soils and groundwater beneath the FGZ. Contamination from industrial activities associated with the Burning Grounds WMA that have the potential to migrate to soils below the FGZ will be routinely evaluated in the Ogallala Aquifer via a Groundwater Monitoring Program established by the Permit/Compliance Plan. Therefore, to “manage any uncertainties” associated with the release characterization and delineation associated with the Burning Ground WMA, the TCEQ is requiring a long-term monitoring program to determine source(s) of contamination in soils beneath the FGZ and any cross-media contamination (from soils to groundwater) associated with the Burning Grounds WMG.
- C. Groundwater monitoring locations associated with the Burning Ground area will be determined after the approval of the Groundwater RFI Report and the Baseline Risk Assessment associated with the Burning Grounds. Groundwater monitoring will address areas with higher levels of uncertainty caused by: 1) data gaps in the investigation record; 2) areas with soil source areas; and, 3) areas of known groundwater contamination. Monitoring needs will also consider the protectiveness and effectiveness of the existing monitoring network. Supplemental monitoring wells may be needed to be installed to manage the uncertainties and source areas. It should be noted that monitoring will be used as a verification tool to support the

Mr. Jerry S. Johnson  
Enclosure

investigation uncertainties and Conceptual Site Model conclusions. Groundwater modeling is utilized to establish proper well placement for the monitoring program.

Mr. Jerry S. Johnson  
Enclosure

**ENCLOSURE 2**  
**CONSTITUENTS OF POTENTIAL CONCERN (COPCs)**  
**FOR THE BURNING GROUND WMA**

Mr. Jerry S. Johnson  
Enclosure

**Enclosure 2**

**CONSTITUENTS OF POTENTIAL CONCERN (COPCs) \***

1. **VOLATILE ORGANIC COMPOUNDS (VOCs)**

ACE, BZME, DBMA, DCA12, FC12, HX02, MTLNCL NN, PCA, PCE, TCE, TCLME, TCP123, THF, XYLENES

2. **SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)**

ANTH, BIS2EHP, BZAA, BZAP, B ZBF, B ZGHIP, B ZKF, B ZLAL, C ARBAZOLE, CHRYSENE, CPPE4, CYHEKET, CYHEXENE, DBAHA, DNA46M, DNBP, DNOP, FL, FLA, INP123, ISOP, NNSPH, PHAN, PHENOL, PYR

3. **METALS**

AG, AS, B, BA, CA, CD, CO, CR, CR-6, CU, F, FE, HG, K, MG, MN, NA, NI, PB, SR, TL, ZN

4. **HIGH EXPLOSIVES (HE)**

DNB13, DNT24, DNT26, DNT2A, DNT4A, HMX, NO2BZ, NT2, NT3, NT4, RDX, TETRYL, TNB135, TNT, TATB

5. **PESTICIDES**

ALDRIN, GHCALPHA, BHC BETA, BHC DELTA, GHCGAMMA, CHLORDANE, CHLORDANE A, DDE, DIELDRIN, ENDOSULFANA, ENDOSULFANB, ENDOSULFANS, ENDRIN ENDRINALD, HEPTACHLOR, HEPT-EPOX

6. **DIOXIN/FURAN**

HPCDD, HPCDF, HXCDD, HXCDF, OCDD, OCDD12346789, OCDF, PECDD, PECDF, TCDD, TCDD2378, TCDF, TCDF2378C13

7. **RADIONUCLIDES**

TH-232, U-234, U-238

8. **MISCELLANIOUS**

**PERCHLORATE**

**Note:** The key to COPC abbreviations are found in the Soil Final Report. The COPCs identified above are the constituents that were associated with releases to soils in the Burning Ground WMA and is further discussed in Section 4 of the Soils Final Report. At a minimum, the investigation(s) of groundwater must evaluate these identified COPCs along with any COPC detected that is not listed.

# - INSTALLATION RESTORATION PROGRAM INFORMATION MANAGEMENT SYSTEM (IRPIMS)

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IRPIMSCLASSIFICATIONIUPAC NAME

|            |  |
|------------|--|
| 245T       | 2,4,5-T (TRICHLOROPHENOXYACETIC ACID)      |
| 24D        | 2,4-D (DICHLOROPHENOXYACETIC ACID)         |
| 24DB       | 2,4 DB                                     |
| 24DCPHYAA  | 2,4-DICHLOROPHENYLACETIC ACID              |
| 2A4NT      | 2-AMINO-4-NITROTOLUENE                     |
| 4A2NT      | 4-AMINO-2-NITROTOLUENE                     |
| 4NQO       | 4-NITROQUINOLINE-n-OXIDE                   |
| AC         | ACETIC ACID                                |
| ACAMFL2    | 2-ACETYLAMINOFLUORENE                      |
| ACCN       | ACETONITRILE                               |
| ACE        | ACETONE                                    |
| ACETHYDE   | ACETALDEHYDE                               |
| ACNP       | ACENAPHTHENE                               |
| ACNPY      | ACENAPHTHYLENE                             |
| ACPHN      | ACETOPHENONE                               |
| ACRAMD     | ACRYLAMIDE                                 |
| ACRL       | ACROLEIN                                   |
| ACRN       | ACRYLONITRILE                              |
| ACTINOLITE | ACTINOLITE                                 |
| AFF        | ACIFLUORFEN                                |
| AG         | SILVER                                     |
| AL         | ALUMINUM                                   |
| ALACL      | ALACHLOR                                   |
| ALDICARB   | ALDICARB (SULFIDE, SULFOXIDE, AND SULFONE) |
| ALDRIN     | ALDRIN                                     |
| ALDSULF    | ALDICARB SULFONE                           |
| ALDSULFOX  | ALDICARB SULFOXIDE                         |
| ALLYLCH    | ALLYL CHLORIDE                             |
| ALPHA      | GROSS ALPHA (as measured in the field)     |
| ALPHADISS  | GROSS ALPHA DISSOLVED                      |
| ALPHASUSP  | GROSS ALPHA SUSPENDED                      |
| AM-241     | AMERICIUM-241                              |
| AMETRYN    | AMETRYN                                    |
| AMINOBPH4  | 4-AMINOBIHENYL (4-BIPHENYLAMINE)           |
| AMINONAPH1 | 1-NAPHTHYLAMINE                            |
| AMINONAPH2 | NAPHTHYLAMINE                              |
| AMMONIA    | AMMONIA                                    |
| AMPER      | Ammonium Perchlorate                       |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                              |
|-----------------------|--|
| AN-910                | 9,10-ANTHRACENEDIONE                           |
| ANILINE               | ANILINE (PHENYLAMINE, AMINOBENZENE)            |
| ANLNAM2               | o-PHENYLENEDIAMINE                             |
| ANLNAM3               | m-PHENYLENEDIAMINE                             |
| ANLNAM4               | p-PHENYLENEDIAMINE                             |
| ANTH                  | ANTHRACENE                                     |
| ANTHOPHYL             | ANTHOPHYLLITE                                  |
| ARAMITE               | ARAMITE  |
| AS                    | ARSENIC  |
| ASPON                 | o,o,o,o-TETRA-n-PROPYL DITHIOPYROPHOSPHATE     |
| ASTMD3266             | ASTMD3266 (HYDROGEN FLUORIDE)                  |
| ATRATON               | ATRATON  |
| ATRAZINE              | ATRAZINE                                       |
| AU                    | GOLD   |
| AZIPM                 | AZINPHOS, METHYL (GUTHION)                     |
| AZOBENZENE            | AZOBENZENE                                     |
| B                     | BORON  |
| BA                    | BARIUM   |
| BARBAN                | 4-CHLORO-2-BUTYNYL m-CHLOROCARBANILATE         |
| BBZP                  | BUTYLBENZYLPHTHALATE                           |
| BC                    | bis-CYCLOHEXENE                                |
| BDCME                 | BROMODICHLOROMETHANE                           |
| BE                    | BERYLLIUM                                      |
| BE2                   | 2-BUTOXY ETHANOL                               |
| BECEM                 | bis(2-CHLOROETHOXY) METHANE                    |
| BENT                  | BENTAZON                                       |
| BETA                  | BETA, GROSS                                    |
| BETACS                | BETA, GROSS (AS CS-137)                        |
| BETADISS              | GROSS BETA DISSOLVED                           |
| BETASR                | BETA, GROSS (AS SR-90)                         |
| BETASUSP              | GROSS BETA SUSPENDED                           |
| BFB                   | BROMOFLOUROBENZENE                             |
| BFU23                 | 2,3-BENZOFURAN                                 |
| BHCALPHA              | ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)        |
| BHCBETA               | BETA BHC (BETA HEXACHLOROCYCLOHEXANE)          |
| BHCDELTA              | DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)        |
| BHCGAMMA              | GAMMA BHC (LINDANE)                            |
| BI                    | BISMUTH  |
| BIPHENYL              | BIPHENYL (DIPHENYL)                            |
| BIS2CEE               | bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) |
| BIS2CIE               | bis(2-CHLOROISOPROPYL) ETHER                   |
| BIS2EHP               | bis(2-ETHYLHEXYL) PHTHALATE                    |
| BMCHX                 | BROMOCYCLOHEXANE                               |

IRPIMSCLASSIFICATIONIUPAC NAME

|            |  |
|------------|--|
| BPPE4      | 4-BROMOPHENYL PHENYL ETHER                     |
| BR         | BROMIDE  |
| BR1CL2EA   | 1-BROMO-2-CHLOROETHANE                         |
| BR4FBZ     | 1-BROMO-4-FLUOROBENZENE (4-BROMOFLUOROBENZENE) |
| BRBZ       | BROMOBENZENE                                   |
| BRCLME     | BROMOCHLOROMETHANE                             |
| BRME       | BROMOMETHANE                                   |
| BTACET     | n-BUTYL ACETATE                                |
| BTACR      | n-BUTYL ACRYLATE                               |
| BTBZN      | n-BUTYLBENZENE                                 |
| BTBZS      | sec-BUTYLBENZENE                               |
| BTBZT      | tert-BUTYLBENZENE                              |
| BTCL       | n-BUTYL CHLORIDE                               |
| BTDI13     | 1,3-BUTADIENE                                  |
| BTE        | n-BUTYL ETHER                                  |
| BTEX       | BENZENE, TOLUENE, ETHENE, XYLENES              |
| BTHYDE     | n-BUTYRALDEHYDE                                |
| BTOH       | n-BUTANOL                                      |
| BTOXETACET | 2-(2-BUTOXY)ETHOXYETHYL ACETATE                |
| BU2OH      | sec-BUTYL ALCOHOL                              |
| BUTACHLOR  | BUTACHLOR                                      |
| BZ         | BENZENE  |
| BZAA       | BENZO(a)ANTHRACENE                             |
| BZACID     | BENZOIC ACID                                   |
| BZAP       | BENZO(a)PYRENE                                 |
| BZBF       | BENZO(b)FLUORANTHENE                           |
| BZBKF      | BENZO (b,k) FLOURANTHENE                       |
| BZD        | BENZIDINE                                      |
| BZEP       | BENZO[e]PYRENE                                 |
| BZGHIP     | BENZO(g,h,i)PERYLENE                           |
| BZKF       | BENZO(k)FLUORANTHENE                           |
| BZLAL      | BENZYL ALCOHOL                                 |
| BZLCL      | BENZYL CHLORIDE                                |
| BZLD       | BENZALDEHYDE                                   |
| BZLDCL     | BENZAL CHLORIDE                                |
| BZME       | TOLUENE  |
| BZMEDI     | TOLUENE DIISOCYANATE                           |
| BZOTCL     | BENZOTRICHLORIDE                               |
| BZQL       | BENZOQUINOLINE                                 |
| C10N       | n-DECANE                                       |
| C11N       | n-UNDECANE                                     |
| C12N       | n-DODECANE                                     |
| C2M5PH     | 2-CHLORO-5-METHYLPHENOL                        |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>             |
|-----------------------|-------------------------------|
| C4BZ1234              | 1,2,3,4-TETRACHLORO BENZENE   |
| C4BZ1235              | 1,2,3,5-TETRACHLORO BENZENE   |
| C4BZ1245              | 1,2,4,5-TETRACHLORO BENZENE   |
| C4M2PH                | 4-CHLORO-2-METHYLPHENOL       |
| C4M3PH                | 4-CHLORO-3-METHYLPHENOL       |
| C5N                   | n-PENTANE                     |
| C6N                   | n-HEXANE                      |
| C7N                   | n-HEPTANE                     |
| C8N                   | n-OCTANE                      |
| C9N                   | n-NONANE                      |
| CA                    | CALCIUM                       |
| CAPTAN                | CAPTAN                        |
| CARBAZOLE             | CARBAZOLE                     |
| CARBOPHENOT           | CARBOPHENOTHION (TRITHION)    |
| CCH                   | CHLOROCYCLOHEXANE             |
| CCHL                  | CHLOROCYCLOHEXANOL            |
| CD                    | CADMIUM                       |
| CDS                   | CARBON DISULFIDE              |
| CE                    | CERIUM                        |
| CE-141                | CERIUM-141                    |
| CEVETH                | 2-CHLOROETHYL VINYL ETHER     |
| CH4                   | METHANE                       |
| CHD12                 | 1,2-CYCLOHEXANEDIOL           |
| CHEXANEME             | METHYLCYCLOHEXANE             |
| CHLAM                 | CHLORAMBEN                    |
| CHLORDANE             | TECHNICAL CHLORDANE           |
| CHLORDANEA            | ALPHA-CHLORDANE               |
| CHLORDANEB            | BETA-CHLORDANE                |
| CHLORDANEG            | GAMMA-CHLORDANE               |
| CHLORDANET            | TOTAL CHLORDANE               |
| CHLOROBIPH            | 2-CHLOROBIPHENYL              |
| CHLOROPRENE           | 2-CHLORO-1,3-BUTADIENE        |
| CHLOROXYBIS           | 1-CHLOROPROPANE 2,2'-OXYBIS-  |
| CHLORPROPHA           | ISOPROPYL m-CHLOROCARBANILATE |
| CHLRL                 | CHLORAL                       |
| CHRYSENE              | CHRYSENE                      |
| CHRYSO                | CHRYSOTILE                    |
| CL                    | CHLORIDE (AS CL)              |
| CL10BZ2               | DECACHLOROBIPHENYL            |
| CL2ETOH               | ETHYLENE CHLOROHYDRIN         |
| CL3NATE               | TRICHLORONATE                 |
| CLACTH                | CHLOROACETALDEHYDE            |
| CLAE                  | CHLOROALKYL ETHERS            |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                 |
|-----------------------|-----------------------------------|
| CLANIL2               | 2-CHLOROANILINE                   |
| CLANIL4               | 4-CHLOROANILINE                   |
| CLBZ                  | CHLOROBENZENE                     |
| CLBZD5                | CHLOROBENZENE-d5                  |
| CLBZLATE              | CHLOROBENZILATE                   |
| CLBZME                | CHLOROTOLUENE                     |
| CLBZME2               | 2-CHLOROTOLUENE                   |
| CLBZME3               | 3-CHLOROTOLUENE                   |
| CLBZME4               | 4-CHLOROTOLUENE                   |
| CLBZS                 | CHLORINATED BENZENES              |
| CLE                   | CHLOROETHYLENE                    |
| CLEA                  | CHLOROETHANE                      |
| CLHX1                 | 1-CHLOROHEXANE                    |
| CLME                  | CHLOROMETHANE                     |
| CLMME                 | CHLOROMETHYL METHYL ETHER         |
| CLNAPHS               | CHLORINATED NAPHTHALENES          |
| CLNPH1                | 1-CHLORONAPHTHALENE               |
| CLPE3                 | ALLYL CHLORIDE (3-CHLOROPROPENE)  |
| CLPH2                 | 2-CHLOROPHENOL                    |
| CLPH2D4               | 2-CHLOROPHENOL-d4                 |
| CLPH3                 | 3-CHLOROPHENOL                    |
| CLPH4                 | 4-CHLOROPHENOL                    |
| CLPYRIFOS             | CHLORPYRIFOS                      |
| CMETHB                | bis-CHLOROMETHYLETHER             |
| CN                    | CYANIDE                           |
| CNA                   | CYANIDE, AMENABLE TO CHLORINATION |
| CNPH2                 | 2-CHLORONAPHTHALENE               |
| CO                    | COBALT                            |
| CO-57                 | COBALT-57                         |
| CO-58                 | COBALT-58                         |
| CO-60                 | COBALT-60                         |
| CPENTANEME            | METHYLCYCLOPENTANE                |
| CPHOSPH               | CYCLOPHOSPHAMIDE                  |
| CPPE4                 | 4-CHLOROPHENYL PHENYL ETHER       |
| CPTHAN                | CYCLOPENTAPHENANTHRENE            |
| CR                    | CHROMIUM, TOTAL                   |
| CR-3                  | CHROMIUM III                      |
| CR-51                 | CHROMIUM-51                       |
| CR-6                  | CHROMIUM, HEXAVALENT              |
| CRBFN                 | CARBOFURAN                        |
| CRESOL                | o-CRESOL                          |
| CROCID                | CROCIDOLITE                       |
| CROTHYDE              | CROTONALDEHYDE                    |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                       |
|-----------------------|---|
| CS                    | CESIUM                                  |
| CS-134G               | CESIUM-134 BY GAMMA                     |
| CS-137                | CESIUM-137                              |
| CS-137G               | CESIUM-137 BY GAMMA                     |
| CTCL                  | CARBON TETRACHLORIDE                    |
| CU                    | COPPER                                  |
| CYHEKET               | CYCLOHEXANONE                           |
| CYHEOH                | CYCLOHEXANOL                            |
| CYHEX2DNP46           | 2-CYCLOHEXYL-4,6-DINITROPHENOL          |
| CYHEXENE              | CYCLOHEXENE                             |
| CYMP                  | p-CYMENE (4-ISOPROPYLTOLUENE)           |
| D11M3N                | n-(1,1-DIMETHYLETHYL)-3-METHYLBENZAMIDE |
| DALAPON               | DALAPON                                 |
| DBAHA                 | DIBENZ(a,h)ANTHRACENE                   |
| DBAJACR               | DIBENZ(a,j)ACRIDINE                     |
| DBCME                 | DIBROMOCHLOROMETHANE                    |
| DBCP                  | 1,2-DIBROMO-3-CHLOROPROPANE             |
| DBF                   | DIBENZOFURAN                            |
| DBFM                  | DIBROMOFLUOROMETHANE                    |
| DBMA                  | DIBROMOMETHANE                          |
| DBT                   | DIBENZOTHIOPHENE (SYNFUEL)              |
| DBUTYLC               | DIBUTYLCHLORENDATE                      |
| DBZD33                | 3,3'-DICHLOROBENZIDINE                  |
| DCA                   | DICHLOROETHANES                         |
| DCA11                 | 1,1-DICHLOROETHANE                      |
| DCA12                 | 1,2-DICHLOROETHANE                      |
| DCA12TOT              | TOTAL 1,2-DICHLOROETHANE                |
| DCAA                  | DICHLOROACETIC ACID                     |
| DCBE14C               | cis-1,4-DICHLORO-2-BUTENE               |
| DCBE14T               | trans-1,4-DICHLORO-2-BUTENE             |
| DCBETOT               | TOTAL 1,4-DICHLORO-2-BUTENE             |
| DCBTA14               | 1,4-DICHLOROBUTANE                      |
| DCBZ12                | 1,2-DICHLOROBENZENE                     |
| DCBZ12D4              | 1,2-DICHLOROBENZENE-d4                  |
| DCBZ13                | 1,3-DICHLOROBENZENE                     |
| DCBZ14                | 1,4-DICHLOROBENZENE                     |
| DCBZ14D4              | 1,4-DICHLOROBENZENE-d4                  |
| DCBZA35               | 3,5-DICHLOROBENZOIC ACID                |
| DCE11                 | 1,1-DICHLOROETHENE                      |
| DCE11T                | trans-1,1-DICHLOROETHENE                |
| DCE12                 | 1,2-DICHLOROETHENE                      |
| DCE12C                | cis-1,2-DICHLOROETHENE                  |
| DCE12T                | trans-1,2-DICHLOROETHENE                |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                                     |
|-----------------------|---|
| DCE12TOT              | TOTAL 1,2-DICHLOROETHENE                              |
| DCP                   | DICHLOROPROPYLENES                                    |
| DCP11                 | 1,1-DICHLOROPROPENE                                   |
| DCP12                 | 1,2-DICHLOROPROPENE                                   |
| DCP13                 | 1,3-DICHLOROPROPYLENE (1,3-DICHLOROPROPENE)           |
| DCP13C                | cis-1,3-DICHLOROPROPENE                               |
| DCP13T                | trans-1,3-DICHLOROPROPENE                             |
| DCP23                 | 2,3-DICHLOROPHENOL                                    |
| DCP24                 | 2,4-DICHLOROPHENOL                                    |
| DCP25                 | 2,5-DICHLOROPHENOL                                    |
| DCP26                 | 2,6-DICHLOROPHENOL                                    |
| DCP34                 | 3,4-DICHLOROPHENOL                                    |
| DCPA                  | DICHLOROPROPANES                                      |
| DCPA12                | 1,2-DICHLOROPROPANE                                   |
| DCPA13                | 1,3-DICHLOROPROPANE                                   |
| DCPA22                | 2,2-DICHLOROPROPANE                                   |
| DCPROP                | DICHLOROPROP  |
| DCTC                  | DIMETHYL-2,3,5,6-TETRACHLORO-TEREPHTHALATE            |
| DD1234678C13          | 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-p-DIOXIN-C13         |
| DD123678C13           | 1,2,3,6,7,8-HEXACHLORODIBENZO-p-DIOXIN-C13            |
| DD12378C13            | 1,2,3,7,8-PENTACHLORODIBENZO-p-DIOXIN-C13             |
| DDD                   | 4,4-DDD (1,1-bis(CHLOROPHENYL)-2,2-DICHLOROETHANE)    |
| DDD24                 | o,p'-DDD  |
| DDE                   | 4,4-DDE (1,1-bis(CHLOROPHENYL)-2,2-DICHLOROETHENE)    |
| DDE24                 | o,p'-DDE  |
| DDT                   | 4,4-DDT (1,1-bis(CHLOROPHENYL)-2,2,2-TRICHLOROETHANE) |
| DDT24                 | o,p'-DDT  |
| DDTS                  | DDT TOTAL   |
| DEC                   | DECANAL   |
| DECB                  | B-DECANAL   |
| DECOH                 | n-DECYL ALCOHOL                                       |
| DEMETON               | DEMETON   |
| DEMETONO              | DEMETON-O   |
| DEMETONS              | DEMETON-S   |
| DEN                   | DENSITY   |
| DEPH                  | DIETHYL PHTHALATE                                     |
| DEUTERIUM             | DEUTERIUM   |
| DFBZ14                | 1,4-DIFLUOROBENZENE                                   |
| DIACOH                | DIACETONE ALCOHOL                                     |
| DIALATE               | DIALATE   |
| DIAZ                  | DIAZINON  |
| DICAMBA               | DICAMBA   |
| DICHBIPHEN            | 2,3-DICHLOROBIPHENYL                                  |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                       |
|-----------------------|---|
| DICHLORAN             | DICHLORAN                               |
| DICHLORVOS            | DICHLORVOS                              |
| DICOFOL               | DICOFOL                                 |
| DIELDRIN              | DIELDRIN                                |
| DIETBZ                | DIETHYL BENZENE (MIXED ISOMERS)         |
| DIISOBTKET            | DIISOBUTYL KETONE                       |
| DIISOBTOL             | DIISOBUTYL CARBINOL                     |
| DIMETHAT              | DIMETHOATE                              |
| DINOSEB               | DINOSEB                                 |
| DIOXANE14             | 1,4-DIOXANE (p-DIOXANE)                 |
| DIOXOLANE             | DIOXOLANE                               |
| DIQUAT                | DIQUAT                                  |
| DISUL                 | DISULFOTON                              |
| DIURON                | 3-(3,4-DICHLOROPHENYL)-1,1-DIMETHYLUREA |
| DM13NBZ2              | 1,3 DIMETHYL-2-NITROBENZENE (SURROGATE) |
| DMBZA712              | 7,12-DIMETHYLBENZ(a)ANTHRACENE          |
| DMBZD33               | 3,3'-DIMETHYLBENZIDINE                  |
| DMF                   | N,N-DIMETHYLFORMAMIDE                   |
| DMOBZD33              | 3,3'-DIMETHOXYBENZIDINE                 |
| DMP24                 | 2,4-DIMETHYLPHENOL                      |
| DMPH                  | DIMETHYL PHTHALATE                      |
| DMSO                  | DIMETHYL SULFOXIDE                      |
| DN46M                 | 4,6-DINITRO-2-METHYLPHENOL              |
| DNA35                 | 3,5-DINITROANILINE                      |
| DNB13                 | 1,3-DINITROBENZENE                      |
| DNBP                  | DI-n-BUTYL PHTHALATE                    |
| DNBZ                  | DINITROBENZENE                          |
| DNBZ12                | 1,2-DINITROBENZENE                      |
| DNBZ14                | 1,4-DINITROBENZENE                      |
| DNOP                  | DI-n-OCTYL PHTHALATE                    |
| DNP24                 | 2,4-DINITROPHENOL                       |
| DNRB                  | THIOCYANIC ACID 2,4 DINITROPHENYLESTER  |
| DNT                   | DINITROTOLUENES                         |
| DNT24                 | 2,4-DINITROTOLUENE                      |
| DNT26                 | 2,6-DINITROTOLUENE                      |
| DNT2A                 | 2-AMINO-4,6-DINITROTOLUENE              |
| DNT34                 | 3,4-DINITROTOLUENE                      |
| DNT4A                 | 4-AMINO-2,6-DINITROTOLUENE              |
| DPA                   | DIPHENYLAMINE                           |
| DPHE                  | DIPHENYL ETHER (PHENYLEETHER)           |
| DPHY12                | 1,2-DIPHENYLHYDRAZINE                   |
| DPHY24                | 2,4-DIPHENYLHYDRAZINE                   |
| DXYA12                | DXYA12                                  |

IRPIMSCLASSIFICATIONIUPAC NAME

|             |  |
|-------------|--|
| EBZ         | ETHYLBENZENE                           |
| EDB         | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) |
| EE          | DIETHYL ETHER (ETHYL ETHER)            |
| EMETHACRY   | ETHYL METHACRYLATE                     |
| EMSULFN     | ETHYL METHANESULFONATE                 |
| ENDO        | ENDOSULFAN                             |
| ENDO-ALPHA  | ALPHA ENDOSULFAN                       |
| ENDO-BETA   | BETA ENDOSULFAN                        |
| ENDOSULFANA | ALPHA ENDOSULFAN                       |
| ENDOSULFANS | ENDOSULFAN SULFATE                     |
| ENDOTHALL   | ENDOTHALL                              |
| ENDRIN      | ENDRIN                                 |
| ENDRINALD   | ENDRIN ALDEHYDE                        |
| ENDRINKET   | ENDRIN KETONE                          |
| EOE2        | 2-ETHOXYETHANOL                        |
| EPICLHDRN   | EPICHLOROHYDRIN                        |
| EPN         | EPN (ENT)                              |
| ESI         | ENDOSULFAN I                           |
| ESII        | ENDOSULFAN II                          |
| ET2BTHYDE   | 2-ETHYLBUTYRALDEHYDE                   |
| ET2BTOH     | 2-ETHYL-1-BUTANOL                      |
| ET2HEACET   | 2-ETHYLHEXYL ACETATE                   |
| ET2HEACR    | 2-ETHYLHEXYL ACRYLATE                  |
| ET2HEHYDE   | 2-ETHYLHEXYL ALDEHYDE                  |
| ET2HEOH     | 2-ETHYL-1-HEXANOL                      |
| ET2MAL      | DIETHYL MALEATE                        |
| ET2SUC      | DIETHYL SUCCINATE                      |
| ETACACET    | ETHYL ACETOACETATE                     |
| ETACET      | ETHYL ACETATE                          |
| ETACR       | ETHYL ACRYLATE                         |
| ETDM        | ETHYLENE DIAMINE                       |
| ETEGLY      | ETHYLENE GLYCOL                        |
| ETHION      | ETHION                                 |
| ETHOPROP    | ETHOPROP                               |
| ETHYLBIS    | bis (2-ETHYLHEXYL) ADIPATE             |
| ETIKET      | ETHYLIDENE ACETONE                     |
| ETMORP      | n-ETHYLMORPHOLINE                      |
| ETOX        | ETHYLENE OXIDE                         |
| ETOX113BT   | 1,1,3-TRIETHOXYBUTANE                  |
| F           | FLUORIDE                               |
| F10BPH      | DECAFLUOROBIPHENYL                     |
| F2ANIL      | o-FLUOROANILINE                        |
| FC11        | TRICHLOROFLUOROMETHANE                 |

IRPIMSCLASSIFICATIONIUPAC NAME

|              |   |
|--------------|---|
| FC113        | FREON-113 (1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE) |
| FC114        | TRICHLOROETHANE                                   |
| FC12         | DICHLORODIFLUOROMETHANE                           |
| FC21         | DICHLOROFLUOROMETHANE                             |
| FCXH2        | 2-FURANCARBOXALDEHYDE                             |
| FE           | IRON  |
| FE-59        | IRON-59   |
| FENSTHION    | FENSULFOTHION                                     |
| FENTHION     | FENTHION  |
| FENURON      | 3-PHENYL-1,1-DIMETHYLUREA                         |
| FENURONTCA   | 1,1-DIMETHYL-3-PHENYLUREA TRICHLOROACETATE        |
| FL           | FLUORENE  |
| FLA          | FLUORANTHENE                                      |
| FLUOMETURON  | 1,1-DIMETHYL-3-(a,a,a-TRIFLUORO-m-TOLYL)UREA      |
| FORMALD      | FORMALDEHYDE                                      |
| FURAL        | FURFURYL ALCOHOL                                  |
| FURFURAL     | FURFURAL  |
| GAMMA        | GAMMA, GROSS                                      |
| GAT          | GROSS ALPHA, TOTAL                                |
| GBT          | GROSS BETA, TOTAL                                 |
| H2SO4        | SULFURIC ACID                                     |
| H3PO4        | PHOSPHORIC ACID                                   |
| HBD          | HYDROXYBENZALDEHYDE                               |
| HBR          | HYDROBROMIC ACID                                  |
| HCBU         | HEXACHLOROBUTADIENE                               |
| HCCP         | HEXACHLOROCYCLOPENTADIENE                         |
| HCL          | HYDROCHLORIC ACID                                 |
| HCLBZ        | HEXACHLOROBENZENE                                 |
| HCLEA        | HEXACHLOROETHANE                                  |
| HCO3         | BICARBONATE (AS CAC03)                            |
| HCPR         | HEXACHLOROPROPENE                                 |
| HEOH         | 1-HEXANOL   |
| HEPTACHLBIPH | 2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL              |
| HEPTACHLOR   | HEPTACHLOR  |
| HEPTANE3ME   | 3-METHYLHEPTANE                                   |
| HEPT-EPOX    | HEPTACHLOR EPOXIDE                                |
| HEX          | HEXANAL or HEXALDEHYDE                            |
| HEXACHBIPH   | 2,2',4,4',5,6'-HEXACHLOROBIPHENYL                 |
| HEXANE3ME    | 3-METHYLHEXANE                                    |
| HF           | HYDROFLUORIC ACID                                 |
| HG           | MERCURY   |
| HMP          | HYDROXY METHYL PENTANONE                          |
| HMX          | CYCLOTETRAMETHYLENE-TETRANITRATE                  |

| <u>IRPIMS</u><br><u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                           |
|--|---|
| HNO3                                   | NITRIC ACID                                 |
| HNS                                    | 2,2,4,4,6,6-HEXANITROSTILBENE               |
| HPCDD                                  | HEPTACHLORINATED DIBENZO-p-DIOXINS, (TOTAL) |
| HPCDD1234678                           | 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-p-DIOXIN   |
| HPCDD-C13                              | HEPTACHLORINATED DIBENZO-p-DIOXINS, (C-13)  |
| HPCDF                                  | HEPTACHLORINATED DIBENZOFURANS, (TOTAL)     |
| HPCDF1234678                           | 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN       |
| HPCDF1234789                           | 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN       |
| HPCDF-C13                              | HEPTACHLORINATED DIBENZOFURANS, (C-13)      |
| HSD                                    | HYDROGEN SULFIDE DETECTOR                   |
| HXCDD                                  | HEXACHLORINATED DIBENZO-p-DIOXINS, (TOTAL)  |
| HXCDD123478                            | 1,2,3,4,7,8-HEXACHLORODIBENZO-p-DIOXIN      |
| HXCDD123678                            | 1,2,3,6,7,8-HEXACHLORODIBENZO-p-DIOXIN      |
| HXCDD123789                            | 1,2,3,7,8,9-HEXACHLORODIBENZO-p-DIOXIN      |
| HXCDD-C13                              | HEXACHLORINATED DIBENZO-p-DIOXINS, (C-13)   |
| HXCDF                                  | HEXACHLORINATED DIBENZOFURANS, (TOTAL)      |
| HXCDF123478                            | 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN          |
| HXCDF123678                            | 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN          |
| HXCDF123789                            | 1,2,3,7,8,9-HEXACHLORODIBENZOFURAN          |
| HXCDF234678                            | 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN          |
| HXCDF-C13                              | HEXACHLORINATED DIBENZO-p-DIOXINS,(C-13)    |
| HXCP                                   | HEXACHLOROPHENE                             |
| HXO2                                   | 2-HEXANONE                                  |
| HYCBF3                                 | 3-HYDROXYCARBOFURAN                         |
| HYDFGR                                 | HYDROCARBON FINGERPRINT                     |
| HYDRAZINE                              | HYDRAZINE                                   |
| I                                      | IODIDE (As I)                               |
| I-131                                  | IODINE-131                                  |
| IME                                    | IODOMETHANE (METHYL IODIDE)                 |
| IN                                     | INDIUM                                      |
| INP123                                 | INDENO(1,2,3-c,d)PYRENE                     |
| IPBZ                                   | ISOPROPYL BENZENE (CUMENE)                  |
| ISOBTACET                              | ISOBUTYL ACETATE                            |
| ISOBTOH                                | ISOBUTANOL                                  |
| ISODRIN                                | ISODRIN                                     |
| ISOOCTOH                               | ISOOCTANOL (ISOMERS)                        |
| ISOP                                   | ISOPHORONE                                  |
| ISOPRACET                              | ISOPROPYL ACETATE                           |
| ISOPRE                                 | ISOPROPYL ETHER                             |
| ISOPROH                                | ISOPROPANOL                                 |
| ISOPRYACET                             | ISOPROPENYL ACETATE                         |
| ISOSAFR                                | ISOSAFROLE                                  |
| K                                      | POTASSIUM                                   |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                                  |
|-----------------------|--|
| K-40                  | POTASSIUM-40                                       |
| KEP                   | KEPONE   |
| KR-85                 | KRYPTON-85   |
| LA                    | LANTHANUM  |
| LA-140                | LANTHANUM-140                                      |
| LI                    | LITHIUM  |
| LIM                   | LIMONENE   |
| LINURON               | 3-(3,4-DICHLOROPHENYL)-1-METHOXY-1-METHYLUREA      |
| MALA                  | MALATHION  |
| MB2CAN44              | 4,4'-METHYLENE-bis(2-CHLOROANILINE)                |
| MBAS                  | METHYLENE BLUE ACTIVE SUBSTANCES                   |
| MBSC2                 | 2-METHYLBENZENESULFONYLCHLORIDE                    |
| MBSC4                 | 4-METHYLBENZENESULFONYLCHLORIDE                    |
| MBSN2                 | 2-METHYLBENZENESULFONAMIDE                         |
| MBT213                | 2-METHYL-1,3-BUTADIENE (ISOPRENE)                  |
| MCPA                  | MCPA   |
| MCPP                  | MCPP   |
| ME2ET5PYR             | 2-METHYL-5-ETHYL PYRIDINE                          |
| ME2PEHYDE             | 2-METHYLPENTALDEHYDE                               |
| ME4PE2OH              | METHYL AMYL ALCOHOL                                |
| MEACACET              | METHYL ACETOACETATE                                |
| MEACET                | METHYL ACETATE                                     |
| MEBZOH                | METHYLBENZYL ALCOHOL                               |
| MECHLAN3              | 3-METHYLCHOLANTHRENE                               |
| MEISOPEKET            | METHYL ISOAMYL KETONE                              |
| MEK                   | METHYL ETHYL KETONE (2-BUTANONE)                   |
| MEMORP                | n-METHYLMORPHOLINE                                 |
| MEOH                  | METHANOL   |
| MEPH1314              | CRESOLS, m & p                                     |
| MEPH2                 | 2-METHYLPHENOL (o-CRESOL)                          |
| MEPH3                 | 3-METHYLPHENOL (m-CRESOL)                          |
| MEPH4                 | 4-METHYLPHENOL (p-CRESOL)                          |
| MEPHS                 | CRESOLS, TOTAL                                     |
| MEPRKET               | METHYL n-PROPYL KETONE                             |
| MERPHOS               | MERPHOS  |
| MESOX                 | MESITYL OXIDE                                      |
| METHACRN              | METHYLACRYLONITRILE                                |
| METHIDATHIO           | o,o-DIMETHYL PHOSPHORODITHIOATE                    |
| METHIOCARB            | 3,5-DIMETHYL-4-(METHYLTHIO) PHENYL                 |
| METHOMYL              | s-METHYL-n-((METHYLCARBAMOYL)-oxy)-THIOACETIMIDATE |
| METOCHLOR             | METOLACHLOR  |
| METRIBUZ              | METRIBUZIN   |
| MEVACET               | METHYL VINYL ACETATE                               |

| <u>IRPIMS</u>         |   |
|-----------------------|---|
| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                             |
| MEVINPHOS             | MEVINPHOS                                     |
| MEXACARBATE           | 4-DIMETHYLAMINO-3,5-xylol n-METHYLCARBAMATE   |
| MG                    | MAGNESIUM                                     |
| MGD                   | MAGNESIUM, DISSOLVED                          |
| MIBK                  | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) |
| MIREX                 | MIREX   |
| MMETHACRY             | METHYL METHACRYLATE                           |
| MMSULFN               | METHYL METHANESULFONATE                       |
| MN                    | MANGANESE                                     |
| MN-54                 | MANGANESE-54                                  |
| MO                    | MOLYBDENUM                                    |
| MO-99                 | MOLYBDENUM-99                                 |
| MONOCROPHOS           | DIMETHYL-(e)-1-METHYL-2-METHYLCARBAMOYL VINYL |
| MONURON               | 3-(p-CHLOROPHENYL)-1,1-DIMETHYLUREA           |
| MPEA11                | ALPHA, ALPHA DIMETHYLPHENETHYLAMINE           |
| MS                    | MOLECULAR SULFUR                              |
| MTLNCL                | METHYLENE CHLORIDE                            |
| MTNPH1                | 1-METHYLNAPHTHALENE                           |
| MTNPH2                | 2-METHYLNAPHTHALENE                           |
| MTPYRLN               | METHAPYRILENE                                 |
| MTXYCL                | METHOXYCHLOR                                  |
| N2O                   | NITROUS OXIDE                                 |
| NA                    | SODIUM  |
| NALED                 | NALED   |
| NAPH                  | NAPHTHALENE                                   |
| NAPH2                 | NAPHTHYLAMINE                                 |
| NAPHD8                | NAPHTHALENE-d8                                |
| NAPHQ14               | 1,4-NAPHTHOQUINONE                            |
| NB                    | NIOBIUM                                       |
| NB-94                 | NIOBIUM-94                                    |
| NB-95                 | NIOBIUM-95                                    |
| NCC                   | cis-NONACHLOR                                 |
| NDOC                  | NONDISSOLVED ORGANIC CARBON                   |
| NEBURON               | 1-n-BUTYL-3-(3,4-DICHLOROPHENYL)-1-METHYLUREA |
| NG                    | NITROGLYCERIN                                 |
| NH3N                  | NITROGEN, AMMONIA (AS N)                      |
| NI                    | NICKEL  |
| NITRANITRIN           | NITRATE/NITRITE AS N                          |
| NITRATE               | NITRATE AS N                                  |
| NITRITEASN            | NITRITE AS N                                  |
| NN                    | NONANAL                                       |
| NNSBU                 | n-NITROSODI-BUTYLAMINE                        |
| NNSE                  | n-NITROSODIETHYLAMINE                         |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                               |
|-----------------------|---|
| NNSM                  | n-NITROSODIMETHYLAMINE                          |
| NNSME                 | NITROSOMETHYLETHYLAMINE                         |
| NNSMRPH               | n-NITROSOMORPHOLINE                             |
| NNSPH                 | n-NITROSODIPHENYLAMINE                          |
| NNSPPRD               | n-NITROSOPIPERIDINE                             |
| NNSPR                 | n-NITROSODI-n-PROPYLAMINE                       |
| NNSPYRL               | n-NITROSOPYRROLIDINE                            |
| NO2ANIL2              | 2-NITROANILINE                                  |
| NO2ANIL3              | 3-NITROANILINE                                  |
| NO2ANIL4              | 4-NITROANILINE                                  |
| NO2BZ                 | NITROBENZENE                                    |
| NO2BZD5               | NITROBENZENE-d5                                 |
| NO2N                  | NITROGEN, NITRITE                               |
| NON2                  | 2-NONENAL                                       |
| NONACHLORT            | NONACHLOR TRANS-                                |
| NP-237                | NEPTUNIUM-237                                   |
| NT2                   | 2-NITROTOLUENE                                  |
| NT3                   | 3-NITROTOLUENE                                  |
| NT4                   | 4-NITROTOLUENE                                  |
| NTG                   | NITROGLYCERIN                                   |
| NTPH                  | NITROPHENOLS                                    |
| NTPH2                 | 2-NITROPHENOL                                   |
| NTPH4                 | 4-NITROPHENOL                                   |
| NTPRO2                | 2-NITROPROPANE                                  |
| O18                   | OXYGEN 18                                       |
| O2                    | OXYGEN  |
| OA                    | OCTADECANOIC ACID                               |
| OC                    | OCTANAL   |
| OCDD                  | OCTACHLORODIBENZO-p-DIOXIN                      |
| OCDD12346789          | 1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-p-DIOXIN      |
| OCDD-C13              | OCTACHLORODIBENZO-p-DIOXIN-C13                  |
| OCDF                  | OCTACHLORODIBENZOFURAN                          |
| OCDF12346789          | 1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN          |
| OCDF-C13              | OCTACHLORODIBENZOFURAN (C13)                    |
| OCTACHBIPH            | 2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL          |
| OCTENE1               | OCTENE-1  |
| OCTOH                 | n-OCTANOL                                       |
| OS                    | OSMIUM  |
| OX22CLP               | 2,2-OXYBIS(1-CHLORO)PROPANE                     |
| OXAMYL                | METHYL n,n-DIMETHYL-n-{(METHYLCARBAMOYL)oxy}-1- |
| P                     | PHOSPHORUS, TOTAL (AS P)                        |
| PA-234                | PROTACTINIUM 234                                |
| PACN                  | PROPANE NITRILE (PROPIONITRILE)                 |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                           |
|-----------------------|---|
| PARAE                 | PARATHION, ETHYL                            |
| PARALD                | PARALDEHYDE                                 |
| PARAM                 | PARATHION, METHYL                           |
| PARAQUAT              | PARAQUAT                                    |
| PB                    | LEAD  |
| PB-212                | LEAD 212                                    |
| PB-214                | LEAD 214                                    |
| PBTE                  | LEAD, TETRAETHYL                            |
| PBZN                  | n-PROPYLBENZENE                             |
| PCA                   | 1,1,2,2-TETRACHLOROETHANE                   |
| PCB                   | PCB, TOTAL                                  |
| PCB1016               | PCB-1016 (AROCLOR-1016)                     |
| PCB1221               | PCB-1221 (AROCLOR-1221)                     |
| PCB1224               | PCB-1224 (AROCLOR-1224)                     |
| PCB1232               | PCB-1232 (AROCLOR-1232)                     |
| PCB1242               | PCB-1242 (AROCLOR-1242)                     |
| PCB1248               | PCB-1248 (AROCLOR-1248)                     |
| PCB1254               | PCB-1254 (AROCLOR-1254)                     |
| PCB1260               | PCB-1260 (AROCLOR-1260)                     |
| PCB1262               | PCB-1262 (AROCLOR-1262)                     |
| PCE                   | TETRACHLOROETHYLENE(PCE)                    |
| PCL                   | PICLORAM                                    |
| PCLEA                 | PENTACHLOROETHANE                           |
| PCMC                  | 4-CHLORORESORCINOL                          |
| PCP                   | PENTACHLOROPHENOL                           |
| PD                    | PHOSPHORUS, DISSOLVED                       |
| PDMAABZ               | p-DIMETHYLAMINOAZOBENZENE                   |
| PDORG                 | PHOSPHORUS, DISSOLVED ORGANIC               |
| PDORTHO               | PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE        |
| PE23                  | 2,3-PENTANEDIONE                            |
| PEACET                | AMYL ACETATE (MIXED ISOMERS)                |
| PECDD                 | PENTACHLORINATED DIBENZO-p-DIOXINS, (TOTAL) |
| PECDD12347            | 1,2,3,4,7-PENTACHLORODIBENZO-p-DIOXIN       |
| PECDD12378            | 1,2,3,7,8-PENTACHLORODIBENZO-p-DIOXIN       |
| PECDF                 | PENTACHLORINATED DIBENZOFURANS, (TOTAL)     |
| PECDF12378            | 1,2,3,7,8-PENTACHLORODIBENZOFURAN           |
| PECDF23478            | 2,3,4,7,8-PENTACHLORODIBENZOFURAN           |
| PECLBZ                | PENTACHLOROBENZENE                          |
| PECLNO2BZ             | PENTACHLORONITROBENZENE                     |
| PENTACHBIPH           | 2,2',3',4,6-PENTACHLOROBIPHENYL             |
| PENTANE3ME            | 3-METHYLPENTANE                             |
| PEOH                  | AMYL ALCOHOL                                |
| PEOH2                 | 2-PENTANOL                                  |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                         |
|-----------------------|---|
| PERC                  | NON-SPECIATED PERCHLORATE                 |
| PERTHANE              | PERTHANE                                  |
| PERYD12               | PERYLENE-d12                              |
| PETN                  | PETN (PENTAERYTHRITOL TETRANITRATE)       |
| PFP                   | PENTAFLUOROPHENOL                         |
| PH246BR               | 2,4,6-TRIBROMOPHENOL                      |
| PH2F                  | 2-FLUOROPHENOL                            |
| PHAN                  | PHENANTHRENE                              |
| PHAND10               | PHENANTHRENE-d10                          |
| PHC                   | PETROLEUM HYDROCARBONS                    |
| PHD5                  | PHENOL-d5                                 |
| PHD6                  | PHENOL-d6                                 |
| PHEN2BR246            | 2,4,6-TRIBROMOBIPHENYL                    |
| PHEN2F                | 2-FLUOROBIPHENYL                          |
| PHEND14               | TERPHENYL-d14                             |
| PHENOL                | PHENOL, TOTAL                             |
| PHENOLD6              | PHENOL-d5                                 |
| PHNACTN               | PHENACETIN                                |
| PHORATE               | PHORATE                                   |
| PHOSPHATEO            | PHOSPHATE (ORTHO)                         |
| PHYDRO                | PHOSPHORUS, TOTAL HYDROLYZABLE (AS P)     |
| PICOLINE2             | 2-PICOLINE (ALPHA-PICOLINE)               |
| PICOLINE3             | 3-PICOLINE                                |
| PICOLINE4             | 4-PICOLINE                                |
| PIN                   | PINENE                                    |
| PLN                   | PHENYLNAPHTHALENE                         |
| PO-210                | POLONIUM-210                              |
| PO4                   | PHOSPHORUS, TOTAL ORTHOPHOSPHATE (AS PO4) |
| PORG                  | PHOSPHORUS, TOTAL ORGANIC (AS P)          |
| PORTHO                | PHOSPHORUS, TOTAL ORTHOPHOSPHATE)         |
| PR2BRCL               | 2-BROMO-1-CHLOROPROPANE                   |
| PRACET                | PROPYL ACETATE                            |
| PROH                  | n-PROPANOL                                |
| PROMETON              | PROMETON                                  |
| PROMETRYN             | PROMETRYN                                 |
| PRONAMD               | PRONAMIDE                                 |
| PROP2                 | 2-PROPANOL                                |
| PROPACHLOR            | PROPACHLOR                                |
| PROPAZINE             | PROPAZINE                                 |
| PROPHAM               | ISOPROPYL CARBANILATE                     |
| PROPOX                | PROPYLENE OXIDE                           |
| PROPOXUR              | 2-(1-METHYLETHOXY) PHENOL METHYLCARBAMATE |
| PTHZ                  | PHTHALAZINONE                             |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                   |
|-----------------------|-------------------------------------|
| PU-238                | PLUTONIUM-238                       |
| PU-239                | PLUTONIUM-239                       |
| PU-239/240            | PLUTONIUM-239/240                   |
| PU-244                | PLUTONIUM-244                       |
| PYR                   | PYRENE                              |
| PYRDN                 | PYRIDINE                            |
| PYRENED10             | PYRENE-d10                          |
| QUINO                 | QUINOLINE                           |
| RA                    | RADIUM                              |
| RA-223                | RADIUM-223                          |
| RA-224                | RADIUM-224                          |
| RA-226                | RADIUM-226                          |
| RA-226/228            | RADIUM 226, RADIUM 228              |
| RA-228                | RADIUM-228                          |
| RAD                   | RADIATION                           |
| RADIO TOTAL           | RADIOCESIUM, TOTAL                  |
| RB                    | RUBIDIUM                            |
| RCN                   | REACTIVE CYANIDE                    |
| RDX                   | CYCLOTRIMETHYLENE-TRINITRAMINE      |
| RE                    | RHENIUM                             |
| RN                    | RADON                               |
| RONNEL                | RONNEL                              |
| RS                    | REACTIVE SULFIDE                    |
| RU/RH-106             | RUTHENIUM/RHODIUM-106               |
| RU-103                | RUTHENIUM-103                       |
| RU-106                | RUTHENIUM-106                       |
| S                     | SULFIDE                             |
| SAFROLE               | SAFROLE                             |
| SAR                   | SODIUM ABSORPTION RATIO             |
| SB                    | ANTIMONY                            |
| SB-124                | ANTIMONY-124                        |
| SB-125                | ANTIMONY-125                        |
| SC                    | SCANDIUM                            |
| SE                    | SELENIUM                            |
| SECBUMETON            | SECBUMETON                          |
| SEVIN                 | SEVIN (CARBARYL)                    |
| SI                    | SILICON                             |
| SIDURON               | 1-(2-METHYLCYCLOHEXYL)-3-PHENYLUREA |
| SILVEX                | SILVEX (2,4,5-TP)                   |
| SIMAZINE              | SIMAZINE                            |
| SIMETRYN              | SIMETRYN                            |
| SN                    | TIN                                 |
| SO4                   | SULFATE (AS SO4)                    |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                           |
|-----------------------|---|
| SR                    | STRONTIUM                                   |
| SR-89                 | STRONTIUM-89                                |
| SR-89/90              | STRONTIUM-89/90                             |
| SR-90                 | STRONTIUM-90                                |
| STIROFOS              | STIROFOS (TETRACHLORVINPHOS)                |
| STROBANE              | STROBANE                                    |
| STY                   | STYRENE                                     |
| STYOX                 | STYRENE OXIDE                               |
| SUL                   | SULFATE                                     |
| SULFOTEP              | TETRAETHYLDITHIOPYROPHOSPHATE               |
| SULPROFOS             | BOLSTAR                                     |
| SULT                  | SULFITE (TITRIMETRIC)                       |
| SURFACT               | SURFACTANTS                                 |
| SWEP                  | METHYL-n-(3,4-DI-CHLOROPHENYL) CARBAMATE    |
| TA                    | TANTALUM                                    |
| TATB                  | 1,3,5-TRIAMINO-2,4,6-TRINITROBENZENE        |
| TBME                  | BROMOFORM                                   |
| TBUTMEE               | tert-BUTYL METHYL ETHER                     |
| TC1112                | 1,1,1,2-TETRACHLOROETHANE                   |
| TCA111                | 1,1,1-TRICHLOROETHANE                       |
| TCA112                | 1,1,2-TRICHLOROETHANE                       |
| TCB123                | 1,2,3-TRICHLOROBENZENE                      |
| TCB124                | 1,2,4-TRICHLOROBENZENE                      |
| TCB135                | 1,3,5-TRICHLOROBENZENE                      |
| TCDD                  | TETRACHLORINATED DIBENZO-p-DIOXINS, (TOTAL) |
| TCDD1234              | 1,2,3,4-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD1278              | 1,2,7,8-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD1289              | 1,2,8,9-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD1368              | 1,3,6,8-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD1378              | 1,3,7,8-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD1379              | 1,3,7,9-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD2378              | 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN         |
| TCDD2378C13           | 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN-C13     |
| TCDF                  | TETRACHLORINATED DIBENZOFURANS, (TOTAL)     |
| TCDF1278              | 1,2,7,8-TETRACHLORODIBENZOFURAN             |
| TCDF2378              | 2,3,7,8-TETRACHLORODIBENZOFURAN             |
| TCDF2378C13           | 2,3,7,8-TETRACHLORODIBENZOFURAN-C13         |
| TCE                   | TRICHLOROETHENE                             |
| TCEHP                 | TRICHLOROETHANOL PHOSPHATE                  |
| TCLME                 | CHLOROFORM                                  |
| TCMX2456              | 2,4,5,6-TETRACHLORO-MXYLENE                 |
| TCP123                | 1,2,3-TRICHLOROPHENOL                       |
| TCP2346               | 2,3,4,6-TETRACHLOROPHENOL                   |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                                  |
|-----------------------|--|
| TCP2356               | 2,3,5,6-TETRACHLOROPHENOL                          |
| TCP236                | 2,3,6-TRICHLOROPHENOL                              |
| TCP245                | 2,4,5-TRICHLOROPHENOL                              |
| TCP246                | 2,4,6-TRICHLOROPHENOL                              |
| TCPR                  | TRICHLOROPROPANE                                   |
| TCPR123               | 1,2,3-TRICHLOROPROPANE                             |
| TCPRE                 | TRICHLOROPROPENE                                   |
| TDS                   | TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)       |
| TE                    | TELLURIUM  |
| TECBPH2244            | 2,2,4,4-TETRACHLOROBIPHENYL                        |
| TECLPHS               | TETRACHLOROPHENOLS, TOTAL                          |
| TEPP                  | TETRAETHYL DIPHOSPHATE                             |
| TERBUTHLAZ            | TERBUTHYLAZINE                                     |
| TERBUTRYN             | TERBUTRYN  |
| TERPINEOL             | ALPHA-TERPINEOL                                    |
| TETCLA                | TETRACHLOROETHANES                                 |
| TETRALIN              | TETRALIN   |
| TETRYL                | TETRYL   |
| TFBZME                | a,a,a-TRIFLUOROTOLUENE                             |
| TFE1122               | FREON-114 (1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE) |
| TH-228                | THORIUM-228  |
| TH-230                | THORIUM-230  |
| TH-232                | THORIUM-232  |
| TH-234                | THORIUM-234  |
| THF                   | TETRAHYDROFURAN                                    |
| THM                   | TOTAL TRIHALOMETHANES                              |
| TI                    | TITANIUM   |
| TL                    | THALLIUM   |
| TL-208                | THALLIUM 208                                       |
| TLDNO                 | o-TOLUIDINE  |
| TLDNOHCL              | o-TOLUIDINE HYDROCHLORIDE                          |
| TLDNONT5              | 5-NITRO-o-TOLUIDINE                                |
| TMB124                | 1,2,4-TRIMETHYLBENZENE                             |
| TMB135                | 1,3,5-TRIMETHYLBENZENE (MESITYLENE)                |
| TNB135                | 1,3,5-TRINITROBENZENE                              |
| TNP246                | PICRIC ACID  |
| TNT                   | TNT (2,4,6-TRINITROTOLUENE)                        |
| TOC                   | TOTAL ORGANIC CARBON                               |
| TOKUTHION             | TOKUTHION (PROTHIOFOS)                             |
| TOTPHEN               | PHENOL, TOTAL                                      |
| TOXAP                 | TOXAPHENE  |
| TPH                   | TOTAL PETROLEUM HYDROCARBONS                       |
| TPHENA                | PHENOL (ACID FRACTION)                             |

IRPIMS

| <u>CLASSIFICATION</u> | <u>IUPAC NAME</u>                                      |
|-----------------------|--|
| TREMO                 | TREMOLITE  |
| TRICHBIPH             | 2,4,5-TRICHLOROBIPHENYL                                |
| TRICLPHS              | TRICHLOROPHENOLS, TOTAL                                |
| TRIFLURALIN           | TRIFLURALIN  |
| TRIPHOTH              | TRIETHYLPHOSPHOROTHIOATE O,O,O-                        |
| TRITIUM               | TRITIUM  |
| U                     | URANIUM, TOTAL   |
| U-233/234             | URANIUM-233/234  |
| U-234                 | URANIUM-234  |
| U-235                 | URANIUM-235  |
| U-235/236             | URANIUM-235/236  |
| U-238                 | URANIUM-238  |
| UDMH                  | 1,1-DIMETHYLHYDRAZINE                                  |
| V                     | VANADIUM   |
| VA                    | VINYL ACETATE  |
| VALD                  | VALERALDEHYDE  |
| VBTE                  | VINYL n-BUTYL ETHER                                    |
| VC                    | VINYL CHLORIDE   |
| VETE                  | VINYL ETHYL ETHER                                      |
| VISOBTE               | VINYL ISOBUTYL ETHER                                   |
| W                     | TUNGSTEN   |
| XLS                   | XYLENES  |
| XYL2456CLM            | 2,4,5,6-TETRACHLORO-MXYLENE                            |
| XYLENES               | XYLENES, TOTAL   |
| XYLENES1213           | XYLENES, o & m   |
| XYLENES1214           | XYLENES, o & p   |
| XYLM                  | m-XYLENE (1,3-DIMETHYLBENZENE)                         |
| XYLMP                 | m,p-XYLENE (SUM OF ISOMERS)                            |
| XYLO                  | o-XYLENE (1,2-DIMETHYLBENZENE)                         |
| XYLP                  | p-XYLENE (1,4-DIMETHYLBENZENE)                         |
| ZINOPHOS              | DIETHYL o-2-PYRAZINYL PHOSPOROTHIOATE o,o (THIONAZINE) |
| ZN                    | ZINC   |
| ZN-65                 | ZINC-65  |
| ZR                    | ZIRCONIUM  |
| ZR-95                 | ZIRCONIUM-95   |

Mr. Jerry S. Johnson  
Enclosure

**ENCLOSURE 3**

**ENVIRONMENTAL PROTECTION AGENCY'S LETTER**



UNITED STATES ENVIRONMENTAL PROTECTION  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

T / F / IHW 30459 CO  
RP  
WWC COMM # 10327253  
PROJ. MGR. K. MUSICK

September 15, 2003

Mr. Robert Musick, Pantex Project Manager  
Texas Commission on Environmental Quality  
Corrective Action Section, MC-127  
P.O. Box 13087  
Austin, TX 78711-3807

Received  
SEP 18 2003  
Remediation Division  
Corrective Action Section

Re: Comments on the *Final RCRA Facility Investigation Report (RFI) for the Burning Grounds Waste Management Group*; March 15, 2002; Pantex Plant; EPA I.D. No. TX4890110527

Dear Mr. Musick,

The U.S. Environmental Protection Agency (EPA) Region 6 office has reviewed the March 15, 2002, BWXT Pantex LLC *Final RCRA Facility Investigation Report (RFI)* [for the Pantex Plant] *Burning Grounds Waste Management Group (BGWGMG)*, and concurs with the Texas Commission on Environmental Quality (TCEQ) decision for conditional approval. The Burning Grounds WMG (WMG 13) RFI addresses soil investigations for the area surrounding and including Playa 3 (approximately 43 acres) and the area referred to as the Open Controlled Thermal Treatment Area (approximately 58 acres), both of which are located in the northern portion of the Plant.

The information in this RFI was compared to the site summaries outlined in the conceptual site model (*Pantex Evaluation Strategy*, 2002), previously developed by the Pantex Core Team. The following comments were developed in discussions between EPA and the TCEQ and restate the TCEQ terms for conditional approval of this RFI document:

- Approval is limited to those Solid Waste Management Units (SWMUs) and other investigation sites contained within the 58-acre Open Controlled Thermal Treatment Unit, corresponding to the hachured block outlined in Figure 5.1-1. For these sites, EPA agrees that the nature and extent of releases of chemical constituents to soils have been adequately delineated, and that those constituents are vertically distributed between the surface and top of the Fine-Grained Zone (FGZ). Any remaining uncertainties regarding vertical migration of constituents below the FGZ or those uncertainties inherent with landfills (SWMUs 37-44), will be further evaluated in the Ground Water RFI and addressed with long-term ground water monitoring.
- Approval does *not* include those SWMUs associated with Playa 3 or any SWMU located outside the 58-acre parcel. Specifically, TCEQ has indicated that the following sites are

considered part of WMG 13, but will not be considered part of this approval: Playa 3 (SWMU No. 3); Demolition Debris Landfill Zone 4 (SVS 7b); Firing Site 16 Surface Impoundment (SWMU No. 11); Temporary Burning Ground (SWMU No. 53); Firing Site 21 (SWMU No. 74); Firing Site 15 (SWMU No. 73).

The nature and extent determination for Playa 3 soils and the other excluded sites will be addressed in the Burning Grounds Ground Water RFI, as was discussed in a July 17, 2003, conference call with Pantex, BWXT, TCEQ, and EPA. Ecological assessments for the non-industrial areas, such as Playa 3, are proceeding under a separate document.

- Perchlorate and other contaminants have been detected in the Perched Aquifer at MW PTX01-1001, located just immediately south of the 58-acre parcel included in this nature and extent conditional approval. We agree with the TCEQ that the source for this known impact to ground water must be defined and evaluated in the Ground Water RFI.

As was agreed by Pantex, BWXT, TCEQ, and EPA on the July 17, 2003, call, the Ground Water RFIs will address those outstanding issues remaining from any conditional Soil RFI approvals and will include any additional characterization information which would further delineate potential source areas.

- The investigation sites included in the 58-acre parcel are being closed under the State's Risk Reduction Standard 3, and will go forward for further evaluation in the Baseline Risk Assessment. Those Burning Ground sites with radionuclide releases to soils will also go forward for evaluation under the Baseline Risk Assessment process. EPA agrees that closure decisions should be deferred until ground water investigations are evaluated and risk assessments completed.

Under the December 21, 1994, Memorandum of Agreement between EPA and the Texas Natural Resource Conservation Commission, now the TCEQ, EPA has lead regulatory authority for reviews and approval of radionuclide-related investigations and remedial decisions. The Burning Grounds Waste Management Group includes sites with potential releases of radionuclides and chemical constituents. Section 5.2.5 of the *BGWMG RFI* concludes that Th-232, U-234, and U-238 were identified as Constituents of Potential Concern (COPCs) and evaluated for nature and lateral/vertical extent in soils. The section also indicates that other radionuclides were screened from further evaluation based on comparison to background, process knowledge, and evaluation of screening level data versus isotopic analysis. However, more information is needed to justify the COPC screening process summarized in this section.

In response, Pantex and BWXT are developing a stand-alone document to support CERCLA-based radionuclide decisions for investigation sites located throughout the Pantex Plant site. This sitewide report will provide more details on process knowledge and sampling protocols for each investigation site, including those located at the Burning Grounds, and will also clarify how background values, and nature and extent, were defined for each potential

radionuclide of concern. The radionuclide information contained in the *BGWMG RFI* will be carried forward into this comprehensive sitewide report. An EPA approval that nature and extent has been defined for the *BGWMG* radionuclides will be deferred until review of the stand-alone document. Constituents of Potential Concern (COPCs) for the Burning Grounds will be identified by comparisons to both background and EPA screening levels for each detected radionuclide and anticipated daughter products. Any radionuclide identified as a Constituent of Potential Concern (COPC) for the Burning Grounds WMG will be further evaluated in the Baseline Risk Assessment, as this WMG will be closed to the TCEQ's Risk Reduction Standard 3.

If you have any questions concerning these comments, please contact me at (214) 665-2231.

Sincerely,

A handwritten signature in black ink, appearing to read 'Camille D. Hueni', with a large, stylized flourish extending to the right.

Camille D. Hueni  
Remedial Project Manager  
EPA Region 6 Superfund Division

cc: Mr. Jerry S. Johnson, DOE  
Mr. Dennis Huddleston, BWXT Pantex

Mr. Jerry S. Johnson  
Enclosure

**ENCLOSURE 4**

**WASTE MANAGEMENT UNITS LOCATED IN THE BURNING GROUNDS WMG**

Mr. Jerry S. Johnson  
Enclosure

**Enclosure 4 - Waste Management Units Located in WMG-13\***

| Description   | SWMU NOS.           | Location *   |
|---|---------------------|--|
| Burn Rack and Flashing Pits<br>(4 units)  | SWMU No. 52         | Burning Ground Area  |
| Burn Cage 1   | SWMU No. 45         | Burning Ground Area  |
| Burn Cage 2   | SWMU No. 46         | Burning Ground Area  |
| Solvent Evaporation Pits  | SWMU No.48-51       | Burning Ground Area  |
| Chemical Burn / Evaporation Pits  | SWMU No 47.         | Burning Ground Area  |
| Demonstration facilities<br>(4 units)   | SWMU No. Unassigned | Burning Ground Area  |
| Active Burn Trays and Old Burn Pads<br>Note: Old Burn Pads located beneath the Trays<br>and are inactive. | SWMU No. 28-36      | Burning Ground Area  |
| Explosive Burn Pads   | SWMU No. 14-27      | Burning Ground Area  |
| Landfills   | SWMU No. 43         | Burning Ground Area  |
| Landfills   | SWMU No 39          | Burning Ground Area  |
| Landfills   | SWMU No. 38         | Burning Ground Area  |
| Landfills   | SWMU No. 37         | Burning Ground Area  |
| Landfills   | SWMU No. 40-42      | Burning Ground Area  |
| Playa 3 **  | SWMU No. 78         | <b>Not part of Burning Ground,<br/>but part of WMG-13,</b> |
| Demolition Debris Landfill Zone 4 **  | SVS 7b              | <b>Not part of Burning Ground,<br/>but part of WMG-13</b>  |
| Firing Site 16 Surface Impoundment **   | SWMU No. 11         | <b>Not part of Burning Ground,<br/>but part of WMG-13</b>  |
| Temporary Burning Grounds **  | SWMU No. 53         | <b>Not part of Burning Ground,<br/>but part of WMG-13</b>  |
| Firing Site 21 **   | SWMU No. 74         | <b>Not part of Burning Ground,<br/>but part of WMG-13</b>  |
| Firing Site 15 **   | SWMU No. 73         | <b>Not part of Burning Ground,<br/>but part of WMG-13</b>  |

\* **The Waste Management Grouping is defined in the Conceptual Site Model dated January 22, 2003**

\*\* **This Waste Management Unit is not includes in the conditional approval of the Burning Ground WMA.**