

# Notation

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The following is a list of acronyms and abbreviations (including units of measure) used in this document. Certain abbreviations used only in tables, equations, and as reference callouts are not included here but are defined in the respective tables, equations, and reference lists.

## Acronyms and Abbreviations

|        |   |
|--------|---|
| AAAQS  | Alaska Ambient Air Quality Standards                        |
| AAC    | Alaska Administrative Code                                  |
| AADT   | annual average daily traffic                                |
| ACEC   | area of critical environmental concern                      |
| ACM    | asbestos-containing material                                |
| ACMA   | Alaska Coastal Management Act                               |
| ACMP   | Alaska Coastal Management Program                           |
| ACS    | Alaska Clean Seas   |
| ADEC   | Alaska Department of Environmental Conservation             |
| ADF&G  | Alaska Department of Fish and Game                          |
| ADGC   | Alaska Department of Government Coordination                |
| ADNR   | Alaska Department of Natural Resources                      |
| ADPS   | Alaska Department of Public Safety                          |
| ADT    | average daily traffic                                       |
| AFB    | Air Force Base  |
| AFFF   | aqueous film-forming foam                                   |
| AFN    | Alaska Federation of Natives                                |
| AK     | Alaska  |
| AKOSH  | Alaska Occupational Safety and Health                       |
| ALOHA  | Areal Locations of Hazardous Atmospheres                    |
| AMHS   | Alaska Marine Highway System                                |
| AMM    | asset maintenance management                                |
| ANCSA  | Alaska Native Claims Settlement Act                         |
| ANILCA | Alaska National Interest Lands Conservation Act             |
| ANSI   | American National Standards Institute                       |
| ANUA   | Alaska Native Utilization Agreement                         |
| ANWR   | Arctic National Wildlife Refuge                             |
| AO     | Authorized Officer (Joint Pipeline Office)                  |
| AOGCC  | Alaska Oil and Gas Conservation Commission                  |
| APHIS  | Animal and Plant Health Inspection Service                  |
| API    | American Petroleum Institute                                |
| APSC   | Alyeska Pipeline Service Company                            |
| AQCR   | Air Quality Control Region                                  |
| AQRV   | air-quality-related value                                   |
| ARCO   | Atlantic Richfield Company                                  |
| ARRC   | Alaska Railroad Corporation                                 |
| ARRT   | Alaska Regional Response Team                               |
| AS     | Alaska Statute  |
| ASME   | American Society of Mechanical Engineers                    |
| ATV    | all-terrain vehicle   |
| BE     | biological evaluation                                       |
| BLM    | Bureau of Land Management (U.S. Department of the Interior) |

|                  |  |
|------------------|--|
| BLS              | Bureau of Labor Statistics                                   |
| BMP              | best management practice                                     |
| BOD              | biochemical oxygen demand                                    |
| BOD <sub>5</sub> | biochemical oxygen demand measured over a five-day period    |
| BP               | British Petroleum  |
| BPXA             | British Petroleum Exploration (Alaska), Inc.                 |
| BS&W             | basic sediments and water                                    |
| BTEX             | benzene, toluene, ethylbenzene, xylene                       |
| BTT              | biological treatment tank                                    |
| BWT              | ballast water treatment                                      |
| BWTF             | Ballast Water Treatment Facility                             |
| BWTS             | ballast water treatment system                               |
|                  |  |
| CBR              | Constitutional Budget Reserve                                |
| CBRF             | Constitutional Budget Reserve Fund                           |
| CCP              | Central Processing Plant                                     |
| CDMS             | Corrosion Data Management System                             |
| CEO              | chief executive officer                                      |
| CEQ              | Council on Environmental Quality                             |
| CFC              | chlorofluorocarbon   |
| CFR              | Code of Federal Regulations                                  |
| Cir.             | Circuit Court  |
| CMP              | Coastal Management Program                                   |
|                  | or   |
|                  | Comprehensive Monitoring Program                             |
| CNG              | compressed natural gas                                       |
| CO               | carbon monoxide  |
| CO <sub>2</sub>  | carbon dioxide   |
| CP               | Contingency Plan   |
| CPF              | Central Production Facility                                  |
| CPlan            | Contingency Plan   |
| CS               | containment site   |
| CSU              | conservation system unit                                     |
| CY               | calendar year  |
| CZ               | coastal zone   |
| CZM              | coastal zone management                                      |
| CZMA             | Coastal Zone Management Act                                  |
|                  |  |
| DAF              | dissolved air flotation                                      |
| DBGC             | designated big-game crossing                                 |
| DCE              | design contingency earthquake                                |
| DDT              | dichloro-diphenyl-trichloro-ethane                           |
| DEIS             | draft environmental impact statement                         |
| DHCMA            | Dalton Highway Corridor Management Area                      |
| DOD              | U.S. Department of Defense                                   |
| DOE              | U.S. Department of Energy                                    |
| DOI              | U.S. Department of the Interior                              |
| DOT              | U.S. Department of Transportation                            |
| DOT/OPS          | U.S. Department of Transportation, Office of Pipeline Safety |
| DRA              | drag reducing agent  |
| DRO              | diesel-range organics  |
| DS               | drill site   |
| DSMA             | digital strong-motion accelerograph                          |

|                                |  |
|--------------------------------|--|
| EIA                            | Energy Information Administration                    |
| EFH                            | essential fish habitat                               |
| e.g.                           | exempli gratia (for example)                         |
| EGHP                           | exhaust-gas horsepower                               |
| EIA                            | Energy Information Administration                    |
| EIS                            | environmental impact statement                       |
| EMS                            | environmental monitoring system                      |
|                                | or   |
|                                | earthquake monitoring system                         |
| EPA                            | U.S. Environmental Protection Agency                 |
| EPCRA                          | Emergency Planning and Community Right-to-Know Act   |
| ER                             | environmental report                                 |
| ERPG                           | emergency response planning guideline                |
| ESA                            | Endangered Species Act                               |
| et al.                         | and others   |
| ETT                            | enhanced tractor tug                                 |
| FAA                            | Federal Aviation Administration                      |
| FACA                           | Federal Advisory Committee Act                       |
| FDA                            | U.S. Food and Drug Administration                    |
| FDS                            | Fire Dynamics Simulation (computer model)            |
| Fe                             | iron   |
| Fe <sub>2</sub> O <sub>3</sub> | ferric oxide   |
| FEIS                           | final environmental impact statement                 |
| FEOC                           | Fairbanks Emergency Operations Center                |
| FLIR                           | forward looking infrared                             |
| FOSC                           | Federal On-Scene Coordinator                         |
| FR                             | Federal Register                                     |
| FSIH                           | Fire Safety and Industrial Hygiene                   |
| FTE                            | full-time equivalent                                 |
| GAO                            | General Accounting Office                            |
| GC                             | Gathering Center                                     |
| GHG                            | greenhouse gas                                       |
| GIS                            | geographic information system                        |
| GMU                            | Game Management Unit                                 |
| GNOME                          | General NOAA Oil Modeling Environment                |
| GRO                            | gasoline-range organics                              |
| GSP                            | gross state product                                  |
| H <sub>2</sub> O <sub>2</sub>  | hydrogen peroxide                                    |
| H <sub>2</sub> S               | hydrogen sulfide                                     |
| HAP                            | hazardous air pollutant                              |
| HAZCORE                        | Hazardous Materials Consolidation and Redistribution |
| HAZMAT                         | hazardous material                                   |
| HAZWOPER                       | hazardous waste operations                           |
| HC                             | hydrocarbon  |
| HCFC                           | hydrochlorofluorocarbon                              |
| HCl                            | hydrogen chloride                                    |
| Hg                             | mercury  |
| HRR                            | heat release rate                                    |
| HVAC                           | heating, ventilation, and air conditioning           |

|                              |  |
|------------------------------|--|
| ICS                          | Incident Command System                                    |
| i.e.                         | that is (id est)   |
| IMPROVE                      | Interagency Monitoring of Protected Visual Environments    |
| IRIS                         | Integrated Risk Information System                         |
| IRT                          | Initial Response Team                                      |
| ISC3                         | Industrial Source Complex Model (Version 3)                |
| ISCST                        | Industrial Source Complex Short Term                       |
| IWSS                         | industrial wastewater sewer system                         |
|                              |  |
| JPO                          | Joint Pipeline Office                                      |
|                              |  |
| Ldn                          | day-night average sound level                              |
| Leq                          | equivalent steady sound level                              |
| LEFM                         | leading-edge flow meter                                    |
| LNG                          | liquefied natural gas                                      |
| LVB                          | line volume balance  |
|                              |  |
| MAP                          | Man in the Arctic Program                                  |
| MCCF                         | mobile contingency camp facility                           |
| MCL                          | maximum contaminant level                                  |
| MEI                          | maximally exposed individual                               |
| MEK                          | methyl ethyl ketone  |
| MGV                          | manual gate valve  |
| MLA                          | Mineral Leasing Act  |
| MLR                          | Mainline Refrigeration                                     |
| MMC                          | Marine Mammal Commission                                   |
| MMPA                         | Marine Mammal Protection Act                               |
| MMS                          | Minerals Management Service                                |
| MOA                          | Memorandum of Agreement                                    |
| MOU                          | Memorandum of Understanding                                |
| MP                           | milepost   |
| MSDS                         | Material Safety Data Sheets                                |
| MSFCMA                       | Magnuson-Stevens Fisheries Conservation and Management Act |
| MSGP                         | Multi-Sector General (NPDES) Permit                        |
| MSWLF                        | municipal solid waste landfill                             |
|                              |  |
| N                            | nitrogen   |
| NAAQS                        | National Ambient Air Quality Standards                     |
| NADP                         | National Atmospheric Deposition Program                    |
| NAICS                        | North American Industry Classification System              |
| NANA                         | Northwest Alaska Native Association                        |
| NEPA                         | National Environmental Policy Act                          |
| NF                           | National Forest  |
| NFRAP                        | no further remedial action planned                         |
| NGL                          | natural gas liquid   |
| NH <sub>3</sub>              | ammonia  |
| NHPA                         | National Historic Preservation Act                         |
| NMDS                         | National Missile Defense System                            |
| NMFS                         | National Marine Fisheries Service                          |
| no.                          | number   |
| NO <sub>x</sub>              | nitrogen oxides  |
| NO <sub>2</sub>              | nitrogen dioxide   |
| NO <sub>3</sub> <sup>-</sup> | nitrate  |
| NOA                          | Notice of Availability                                     |

|                   |  |
|-------------------|--|
| NOAA              | National Oceanic and Atmospheric Administration                          |
| NOD               | Notice of Disposal   |
| NOI               | Notice of Intent   |
| NORM              | naturally occurring radioactive material                                 |
| NP                | national park  |
| NPDES             | National Pollutant Discharge Elimination System                          |
| NPP               | national park and preserve   |
| NPR               | National Petroleum Reserve   |
| NPR-A             | National Petroleum Reserve-Alaska  |
| NPS               | National Park Service  |
| NRA               | national recreation area   |
| NRHP              | National Register of Historic Places                                     |
| NS                | North Slope  |
| NSB               | North Slope Borough  |
| NSC               | National Safety Council  |
| NSPTS             | North Slope Production and Transportation System                         |
| NTP               | Notice to Proceed  |
| NWR               | national wildlife refuge   |
| NWS               | National Weather Service   |
|                   |  |
| O <sub>3</sub>    | ozone  |
| O&M               | operation and maintenance  |
| OCC               | Operations Control Center  |
| OCS               | Outer Continental Shelf  |
| ODC               | ozone-depleting chemical   |
| ODP               | ozone-depleting potential  |
| ODS               | ozone-depleting substance  |
| OMB               | Office of Management and Budget  |
| OMS               | operational material site  |
| OPA               | Oil Pollution Act  |
| OPS               | Office of Pipeline Safety (U.S. Department of Transportation)            |
| ORC               | oxygen-releasing compound  |
| ORV               | off-road vehicle   |
| OSHA              | Occupational Safety and Health Administration                            |
| OSHTF             | (Alaska) Oil Spill Health Task Force                                     |
| OSPFR             | Oil Spill Prevention, Preparedness, and Response                         |
| OSV               | oil spill volume   |
|                   |  |
| P                 | phosphorus   |
| PA                | Programmatic Agreement   |
| PAH               | polycyclic aromatic hydrocarbon  |
| PAI               | Phillips Alaska, Inc.  |
| Pb                | lead   |
| PBT               | persistent, bioaccumulative, and toxic                                   |
| PCB               | polychlorinated biphenyl   |
| PDF               | pipeline design flood  |
| PELs              | permissible exposure limits  |
| PF                | Permanent Fund   |
| PG                | Pasquill-Gifford   |
| pH                | hydrogen ion concentration   |
| P.L.              | Public Law   |
| PM                | particulate matter   |
| PM <sub>2.5</sub> | particulate matter with a diameter less than or equal to 2.5 micrometers |
| PM <sub>10</sub>  | particulate matter with a diameter less than or equal to 10 micrometers  |

|                               |  |
|-------------------------------|--|
| PMP                           | probable maximum precipitation               |
| PO <sub>4</sub> <sup>3-</sup> | phosphate                                    |
| POP                           | persistent organic pollutant                 |
| POTW                          | publicly owned treatment works               |
| PPE                           | personal protective equipment                |
| PPV                           | peak particle velocity                       |
| PRT                           | prevention and response tug                  |
| PS                            | pump station                                 |
| PSD                           | Prevention of Significant Deterioration      |
| PWS                           | Prince William Sound                         |
|                               |  |
| QA                            | quality assurance                            |
|                               |  |
| RAC                           | Resource Advisory Council                    |
| RCAC                          | Regional Citizens' Advisory Council          |
| RCM                           | reliability-centered maintenance             |
| RCRA                          | Resource Conservation and Recovery Act       |
| REAA                          | Regional Educational Attendance Area         |
| RGV                           | remote gate valve                            |
| RMP                           | Resource Management Plan                     |
| ROD                           | Record of Decision                           |
| ROS                           | recreation opportunity spectrum              |
| ROW                           | right-of-way                                 |
| RRO                           | residual-range organics                      |
| RSC                           | reduced sulfur compounds                     |
|                               |  |
| SARA                          | Superfund Amendments and Reauthorization Act |
| SCADA                         | supervisory control and data acquisition     |
| SD                            | standard deviation                           |
| SDWA                          | Safe Drinking Water Act                      |
| SERVS                         | Ship Escort/Response Vessel System           |
| SHPO                          | State Historic Preservation Officer          |
| Si                            | silicon                                      |
| SIC                           | Standard Industrial Classification           |
| SIP                           | state implementation plan                    |
| SO <sub>2</sub>               | sulfur dioxide                               |
| SOSC                          | State On-Scene Coordinator                   |
| SO <sub>x</sub>               | sulfur oxides                                |
| SPC                           | State Pipeline Coordinator                   |
| spp.                          | species                                      |
| SRS                           | state recreation site                        |
| Stat.                         | statute                                      |
| SWDS                          | solid waste disposal site                    |
| SWPPP                         | Storm Water Pollution Prevention Plan        |
| SWTP                          | sanitary waste treatment plant               |
|                               |  |
| TAPAA                         | Trans-Alaska Pipeline Authorization Act      |
| TAPS                          | Trans-Alaska Pipeline System                 |
| TAGS                          | Trans-Alaska Gas System                      |
| TCA                           | 1,1,1-trichloroethane                        |
| TCC                           | Tanana Chiefs Conference                     |
| TCP                           | traditional cultural property                |
| TEEL                          | temporary emergency exposure limit           |
| TEF                           | toxic equivalency factor                     |

|       |   |
|-------|---|
| TFE   | tetrafluoroethylene                     |
| TLV   | threshold limit value                   |
| TPQs  | Threshold Planning Quantities           |
| TRI   | Toxics Release Inventory                |
| TSDF  | treatment storage and disposal facility |
| TSP   | total suspended particulates            |
| TSS   | total suspended solids                  |
| TVB   | transient volume balance                |
| TVR   | tanker vapor recovery                   |
|       |   |
| UAA   | University of Alaska-Anchorage          |
| UC    | Unified Command                         |
| UIC   | underground injection control           |
| USACE | U.S. Army Corps of Engineers            |
| USC   | United States Code                      |
| USCG  | U.S. Coast Guard                        |
| USDA  | U.S. Department of Agriculture          |
| USFS  | U.S. Forest Service                     |
| USFWS | U.S. Fish and Wildlife Service          |
| USGS  | U.S. Geological Survey                  |
| UV    | ultraviolet                             |
|       |   |
| VAHS  | Valdez Air Health Study                 |
| VHF   | very high frequency                     |
| VHS   | viral hemorrhagic septicemia            |
| VMT   | Valdez Marine Terminal                  |
| VOC   | volatile organic compound               |
| VRM   | visual resource management              |
| VSM   | vertical support member                 |
| VTS   | Vessel Traffic Service                  |
|       |   |
| WSR   | Wild and Scenic River                   |
|       |   |
| ZRAs  | Zone of Restricted Activities           |

## Units of Measure

|                 |                            |                  |                           |
|-----------------|----------------------------|------------------|---------------------------|
| acre-ft         | acre-foot (feet)           | GW               | gigawatt(s)               |
| bbl             | barrel(s)                  | h                | hour(s)                   |
| Btu             | British thermal unit(s)    | ha               | hectare(s)                |
| °C              | degree(s) centigrade       | hp               | horsepower                |
| cm              | centimeter(s)              | in.              | inch(es)                  |
| cm <sup>3</sup> | cubic centimeter(s)        | in. <sup>2</sup> | square inch(es)           |
| cSt             | centistoke(s)              | j                | joule(s)                  |
| d               | day(s)                     | K                | kelvin degree(s)          |
| dB              | decibel(s)                 | kg               | kilogram(s)               |
| dBA             | A-weighted decibel(s)      | km               | kilometer(s)              |
| °F              | degree(s) Fahrenheit       | km <sup>2</sup>  | square kilometer(s)       |
| ft              | foot (feet)                | knot(s)          | nautical mile(s) per hour |
| ft <sup>2</sup> | square foot (feet)         | kW               | kilowatt(s)               |
| ft <sup>3</sup> | cubic foot (feet)          | L                | liter(s)                  |
| g               | gravitational acceleration | lb               | pound(s)                  |
| gal             | gallon(s)                  | m                | meter(s)                  |

|                 |                          |                 |                                       |
|-----------------|--------------------------|-----------------|---------------------------------------|
| m <sup>2</sup>  | square meter(s)          | psig            | pound(s) per square inch gauge        |
| m <sup>3</sup>  | cubic meter(s)           | rpm             | revolution(s) per minute              |
| mg              | milligram(s)             | s               | second(s)                             |
| mi              | mile(s)                  | scf             | standard cubic foot (feet)            |
| mi <sup>2</sup> | square mile(s)           | scfm            | standard cubic foot (feet) per minute |
| min             | minute(s)                | wk              | week(s)                               |
| mL              | milliliter(s)            | YA              | year(s) ago                           |
| mm              | millimeter(s)            | yd              | yard(s)                               |
| mmole           | millimole(s)             | yd <sup>3</sup> | cubic yard(s)                         |
| mph             | mile(s) per hour         | yr              | year(s)                               |
| MW              | megawatt(s)              | μg              | microgram(s)                          |
| MYA             | million year(s) ago      | μg-atoms        | microgram-atom(s)                     |
| ng              | nanogram(s)              | μm              | micrometer(s)                         |
| pCi             | picocurie(s)             | μmoles          | micromole(s)                          |
| ppb             | part(s) per billion      | μR              | microroentgen(s)                      |
| ppm             | part(s) per million      | \$/bbl          | dollar(s) per barrel                  |
| psi             | pound(s) per square inch |                 |                                       |